

CipherLab User Guide

FORGE Batch Application Generator

For 8 Series Mobile Computers:
8000 / 8200 / 8300 / 8400 / 8500 / 8700

Version 3.21



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RELEASE NOTES

Version	Date	Notes
3.21	Feb. 05, 2013	<ul style="list-style-type: none">▶ Modified: Chapter 1 - Form1 screenshot updated▶ Modified: 1.2.4 Enable MSQI - screenshots updated▶ Modified: 1.3 Font Size – Font Size table updated▶ Modified: 1.8 Data Type – screenshot updated▶ Modified: 1.8.6 Real – screenshot updated▶ Modified: Chapter 2 – Menu1 screenshot updated▶ Modified: Chapter 6 – screenshot updated▶ Modified: 6.2 Font Properties – descriptions revised▶ Modified: 7.2.1 Data_Read – screenshot updated▶ New: “Appendix III LR/ELR LASER SCAN ENGINE” – Symbology Settings Table (8700) added
3.20	Oct. 18, 2012	<ul style="list-style-type: none">▶ New: 1.8.20 Serial – “Data Type” added with “Serial” option▶ New: 1.14.1 Field Data – “Compare” checkbox added▶ New: 1.14 More – “Decimal symbol” pull-down menu added▶ New: 7.2.1 Data Read – pull-down menus for file selection added▶ Modified: 7.3 MobileLink – launching MobileLink as a Windows service▶ Modified: FTP File Settings – Lookup file settings
3.11	25 th May 2012	<ul style="list-style-type: none">▶ New: Introduction Using FTP Server to Transfer Files WLAN Security Settings – WPA/WPA2: If entered passphrase falls shorter than 8 characters, a warning dialog pops up when OK button is hit to submit changes.▶ New: 1.2.4. Enable MSQI – “TRACK” input screen can be removed by adjusting key field properties.▶ New: 7.3.7. Change Data File Settings – File-naming rule with new “separator” feature and file extension customization
3.10	Apr. 24, 2012	<p>MobileLink supports more communicative interfaces. Updates involved are:</p> <ul style="list-style-type: none">▶ Modified: Introduction MobileLink Data Connection.▶ Modified: 7.3. MobileLink.
3.01	Feb. 07, 2012	<ul style="list-style-type: none">▶ Modified: Section 2.5: The option “Save the collected data for each form to separate data files” renamed to “Separate Each Data File and Edit Form Name” on Menu property page. Related update: Chapter 2 “Menu” property page screenshot▶ Modified: Section 5.2 “Function Key Setting”: Data collecting forms aren’t supported by keypad shortcuts.
3.00	Dec. 16, 2011	<ul style="list-style-type: none">▶ New: 8700 support▶ New: Introduction Getting Started Localization: Bundled font files▶ New: Introduction “Title Bar”▶ New: “Data Type” supports date/time info. Updates involved are:

- 1.5 "Date & Time Stamp" updated
- 1.8.18 "Date" newly inserted.
- 1.8.19 "Time" newly inserted.
- ▶ Modified: 5.1.5 "Upload Method"
8000, 8200, 8300 & 8400: The interface "Bluetooth SPP" is deleted and replaced by "Bluetooth SPP_Master" and "Bluetooth SPP_Slave".
- ▶ Modified: 5.1.6 "Download Method"
8000, 8200, 8300 & 8400: The interface "Bluetooth SPP" is deleted and replaced by "Bluetooth SPP_Master" and "Bluetooth SPP_Slave".
- ▶ Modified: 7.2.1 Data_Read.exe screenshot updated.
- ▶ Modified: 7.2.1 [Options] updated.
- ▶ Modified: 7.2.1 [Auto upload and delete Data and Lookup files] updated.
- 2.28 Jul. 19, 2011 ▶ Modified: 7.2.1 Data_Read — update screenshot and settings
- 2.27 Jun. 03, 2011 ▶ Modified: add "Convert to 8200" feature for AG8300
- ▶ Modified: 5.1.5 Upload Method — add "USB VCOM_CDC" for AG8200
- ▶ Modified: 5.1.6 Download Method — add "USB VCOM_CDC" for AG8200
- 2.26 May 17, 2011 ▶ Modified: Appendix IV — change Code 11 and MSI to "Disable" by default
- 2.25 Mar. 21, 2011 ▶ New: support 8200
- ▶ Modified: Using FTP Server to Transfer Files — update screenshots
- ▶ Modified: 7.3.7 Change Data File Settings — add log file settings
- ▶ Modified: 7.3.8 Manage Devices & 7.3.9 Manage Your Rules — update screenshots
- ▶ Modified: Appendix I~II — support UPC-E1 for CCD/Laser
- ▶ Modified: Appendix I~II — support Coop 25 for CCD/Laser (8000/8200/8300/8400)
- ▶ Modified: Appendix II — add Aiming Duration (8000/8200/8300/8400)
- ▶ Modified: Appendix III — add Scan Mode options (8300 Only) and Time-out
- ▶ Modified: Appendix II~IV — change Time-out range to 0~255 sec.
- ▶ Modified: Appendix III~IV — change Aiming Duration range to 1~255 sec.
- ▶ Modified: Appendix IV — change Codabar, Code 93 and MSI to "Enable" by default
- 2.24 Jan. 04, 2011 ▶ Modified: 1.8.16 Large Data — for collecting data via 2D scan engine
- ▶ Modified: 1.8.17 Read from 2D
- ▶ Modified: 7.1.3 ProgLoad — add support for command line
- ▶ New: Appendix V Command Line Syntax (for utilities)
- 2.23 Dec. 15, 2010 ▶ New: Introduction — add System Requirements
- ▶ Modified: Introduction — Getting Started, add "Using MobileLink to Transfer Files over Network"
- ▶ Modified: 5.3 Security Setting
- ▶ New: 7.3.8 Manage Devices

- | | | |
|------|----------------|---|
| 2.22 | Nov. 01, 2010 | <ul style="list-style-type: none"> ▶ New: 7.3.9 Manage Rules ▶ Modified: Introduction — Getting Started, add “Using FTP Server to Transfer Files” ▶ Modified: Introduction — Menu Bar, add “FTP Communication Settings”, “WLAN Communication Settings” and “FTP File Settings” ▶ Modified: 1.8.15 Counter ▶ Modified: 7.3 Mobile Link — update screenshots ▶ Modified: 7.3.3 View Link Status — 8000/8300 supports Auto Upload ▶ Modified: 7.3.7 Change Data File Settings — update Auto File Name ▶ Modified: Appendix II — change Negative Barcode to “Enable” by default |
| 2.21 | Sep. 13, 2010 | <ul style="list-style-type: none"> ▶ Modified: Getting Started, Upload Data — describe icons indicating support of auto upload ▶ Modified: 3.2.4 DBF File Location (8400 Only) ▶ Modified: 3.8 Action When the Format of Record Is Wrong ▶ New: 7 Utilities ▶ Modified: 7.4 SD DBF Converter (8400 Only) |
| 2.20 | Apr. 02, 2010 | <ul style="list-style-type: none"> ▶ Modified: Appendix I~IV — add more GS1 DataBar symbologies ▶ Modified: Introduction — Getting Started, Menu Bar, Toolbar and Menu Tree ▶ Modified: Installing FORGE Application Generator — DATA_READ utility also synchronizes date/time on every host connection. ▶ Modified: Getting Started — (1) add Upload Application Template (2) Download Lookup Files (file path changed to “\AG\DBF” for lookup files) ▶ Modified: Menu Bar — (1) DBF Converter (file path changed to “\AG\DBF” for lookup files) (2) DATA_READ utility also synchronizes date/time on every host connection. ▶ Modified: 1.14.1 Field Data — Decimal Places ▶ Modified: 1.2.4 Enable MSQI ▶ Modified: 3.3.3 Trim Space When Lookup Data Can Be Uploaded ▶ Modified: 5.1.6 Download Method — AG8400 (file path changed to “\AG\DBF” for lookup files) ▶ Modified: 5.2 Function Key Setting — update screenshot, etc. ▶ Modified: 5.3.1 Upload .AGX — change 6-digit password to 5-digit ▶ Modified: Appendix IV 2D Scan Engine — update |
| 2.19 | Nov. 19, 2009 | <ul style="list-style-type: none"> ▶ New: support 8400-2D ▶ Modified: 5.1.5 Upload & Download Settings — Buzzer Volume changed to LARGE_VOL ▶ Modified: Appendix IV — Chinese 25, Matrix 25, Picklist Mode, 1D Inverse, 2D Inverse, UPU FICS Postal and USPS 4CB/One Code/Intelligent Mail |
| 2.18 | June. 25, 2009 | <ul style="list-style-type: none"> ▶ Modified: 3.2.4 “DBF File Location” and section 6.3.3 “DAT File Location” features are added. ▶ Modified: 5.1.5 — add DBF Converter, download and upload information |
| 2.17 | May. 07, 2009 | <ul style="list-style-type: none"> ▶ Modified: “Convert to 8300” and other 8400 supported features are |

- added.
- 2.16 Jan. 19, 2009 ▶ Modified: 8400 supported features are added.
 - 2.15 Nov. 26, 2008 ▶ Applied new GUI screen shots and modified the relative contents.
 - 2.14 July 30, 2008 ▶ Modified: 6.3 — add “Use Large Font for Data Browsing” for AG8000 and AG8300
 - ▶ Modified: Appendix II~III support replacement of EAN-128 field separator for all scan engines
 - 2.13 Jun. 26, 2008 ▶ Modified: 1.6 Record — add “remove from lookup” and “save & remove” options
 - ▶ Modified: 3.11 Action When the Input Data Has No Match — add “remove from lookup” and “save & remove” options
 - ▶ Modified: 4.1.2 RFID Reader — Automatically enabled after initialization (checkbox removed from UI)
 - ▶ New: Long Range Laser option available for 8300
 - 2.12 Nov. 06, 2007 ▶ Modified: 4.1.2 RFID Reader — RFID tags in proximity will be read automatically by 8300/8500 when RFID reader is enabled
 - 2.11 Oct. 18, 2007 ▶ Modified: Features
 - 2.10 Sep. 19, 2007 New Word template applied
 - 2.07 June 20, 2006 ▶ Company name changed to CIPHERLAB CO., LTD. since April 2006
 - ▶ Modified: 5.3 Barcode & Parameters
 - 2.06 Apr. 14, 2006 ▶ Modified: 1.2.2 — Font_12x12 not supported
 - ▶ Modified: 5.1 & 5.2.6
 - ▶ Modified: 6.2, 6.4 & 6.5
 - 2.05 Apr. 10, 2006 AG for CPT-8500 is included

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INTRODUCTION

Easy-to-use and quick-to-apply, FORGE Batch Application Generator designed for CipherLab 8-Series Mobile Computers (8000/8200/8300/8400/8500/8700) enables users to develop the custom templates that work with the AG runtime preloaded on the mobile computers. Users are in the position to define their own application templates on any desktop computer without writing any program code.

FORGE Batch Application Generator develops the templates for various applications such as the following:

- ▶ Receiving in Retail
- ▶ Price Check
- ▶ Product labeling & Tracking
- ▶ Shelf Product Replenishment
- ▶ Mobile Point of Sale (POS)
- ▶ Mobile Inventory Management
- ▶ Order Picking & Staging
- ▶ Work-In-Process Tracking
- ▶ Material Flow Control
- ▶ Transportation & Distribution
- ▶ Warehousing
- ▶ Asset Management

FORGE Batch Application Generator simulates the program's running sequences on the actual mobile computer and allows you to design a new application template on your personal computer in minutes. Offload the application template you design and your lookup file(s) to the mobile computer so the data collection can commence immediately.

This manual provides users with a comprehensive guide to FORGE Batch AG for 8-Series Mobile Computers by relating the approaches while interspersing the examples for various applications. We recommend that you read the document thoroughly before use and keep it at hand for quick reference.

Thank you for choosing CipherLab products!

SYSTEM REQUIREMENTS

To run the program, one of the Windows operating systems is required:

- ▶ Windows 2000
- ▶ Windows XP
- ▶ Windows Vista
- ▶ Windows 7

INTENDED PURPOSE

Data collection mainly consists of three elements: input (scanning or key-in), data processing, and output (or updating database). FORGE Batch Application Generator for 8000/8200/8300/8400/8500 Series Mobile Computers is specifically designed to deal with the sequences of data processing inside the mobile computers.

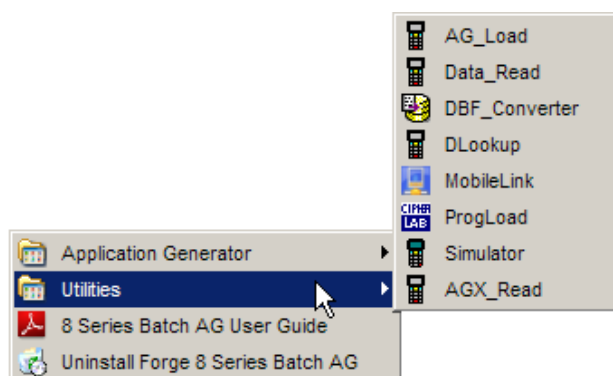
You may use the Batch AG program and runtime with any wireless mobile computer if wireless connectivity is not desired. In particular, when you use a Bluetooth mobile computer, say 8062 or 8330, you will be able to use Bluetooth SPP for download and upload by selecting "RS-232/IrDA/USB VCOM".

FEATURES

- ▶ Definition of program flow
- ▶ Editing of screens and data
- ▶ Managing barcode reader and RFID reader
- ▶ Font size options and program localization
- ▶ Simple program simulation for debugging
- ▶ Password-protected user settings to prevent unauthorized user intervention
- ▶ Hot key selection for tasks or user settings' menus
- ▶ Definition of system initial settings for a quick start
- ▶ Easy cloning by downloading the template file
- ▶ Integrated interface for downloading lookup files and uploading data
- ▶ FTP client configuration for wireless mobile computers, as well as for 8200/8400 used with Ethernet Cradle

INSTALLING FORGE BATCH AG

Install FORGE Batch AG for 8000/8200/8300/8400/8500/8700 Series Mobile Computers from the Product CD. The Batch AG will be installed to the prompted "C:\CipherLab\Forge\Batch\" directory if you don't change the path to somewhere else.



- ▶ Shortcuts to the AG program is created and placed in **Start | All Programs | CipherLab | Forge | Batch | Application Generator**.
- ▶ Shortcuts to the utilities are created and placed in **Start | All Programs | CipherLab | Forge | Batch | Utilities**. Refer to [Utilities](#).

Shortcut Name of Utility	Program Name	Usage
AG_Load	AG_Load.exe	To download the current application template to the mobile computer.
Data_Read	Data_Read.exe	To receive data via Data_Read utility. It also synchronizes date/time on every host connection.
DBF_Converter	DBF_Converter.exe	To convert text file into DBF file.
DLookup	DLookup.exe	To download associated lookup file(s) to the mobile computer
MobileLink	MobileLink.exe	To receive data from the mobile computer via Mobile Link utility.
Prog_Load	ProgLoad.exe	To download the AG runtime or font file (.SHX) to the mobile computer.
Simulator	Simulator.exe	To launch the simulator.
AGX_Read	AGX_Read.exe	To upload the current application template from the mobile computer.

GETTING STARTED

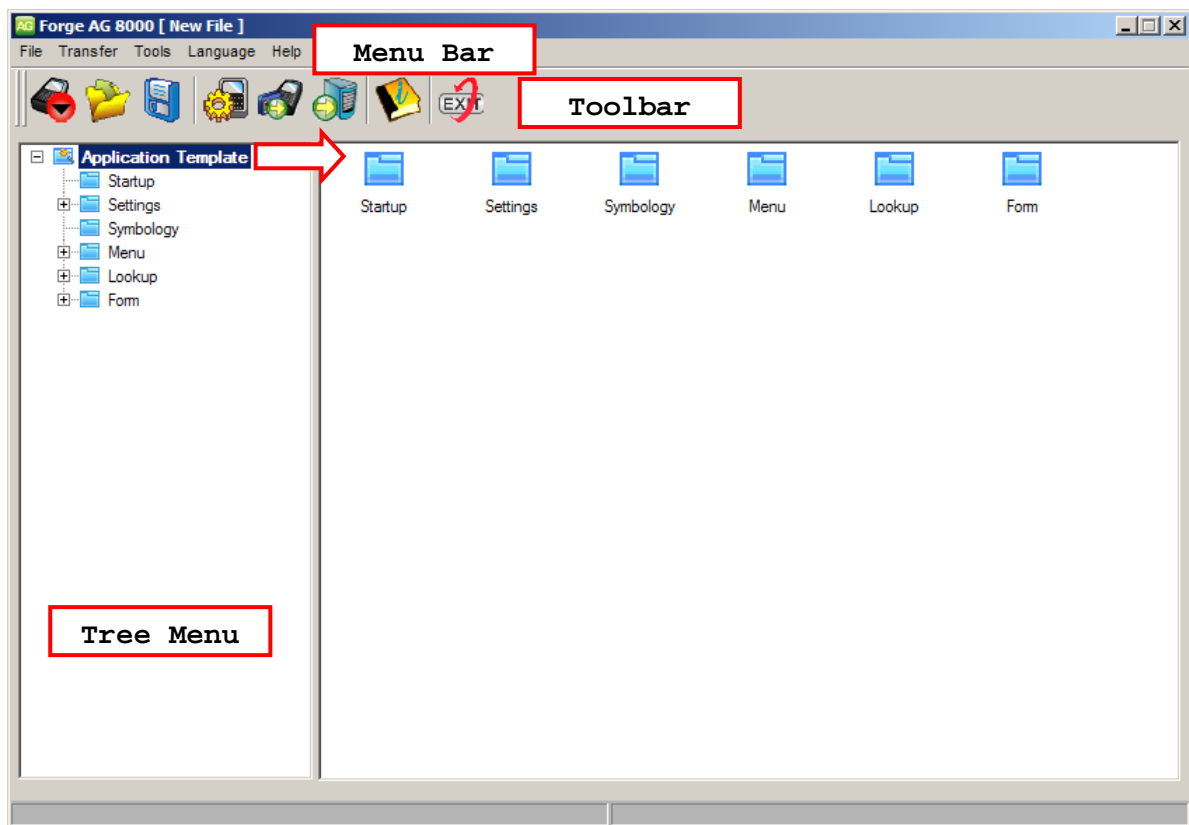
To make use of an 8-Series mobile computer, you need to set up the working environment for it. Send the following files to the mobile computer to establish the working environment: an AG runtime, an application template and some other files such as lookup files to the mobile computer.

The 8-Series Batch AG enables the data exchange between a mobile computer and a host computer such as your PC. The aforesaid files required for the mobile computer's working environment are deliverable through such Batch AG.

Here in this chapter you will be guided to make the mobile computer ready for work by distributing the necessary programs and files to the mobile computer as well as to start with the data collection with the mobile computer.

- 1) Run the 8 Series Batch AG program on your PC.

The work area appears as the picture shown below:



DOWNLOAD AG RUNTIME

- 2) On the mobile computer, press [7] + [9] + [Power] simultaneously to enter **System Menu**. Select a desired interface to receive the AG runtime.
- 3) On the menu bar of the Batch AG, click **Transfer | Send Program**. In the [Program download] dialog box, configure the communication settings that are consistent with the settings on the mobile computer. Select the AG runtime program (U8*.SHX) to send.

Note: If you have installed the Batch AG to the default directory prompted by the installation wizard, the AG runtime programs for 8-Series models can be accessed in the "C:\CipherLab\Forge\Batch\8 Series\RunTime\" directory. If not, browse to where you have installed the Batch AG.

4) Click the OK button to trigger the transmission.


Note: To send a font file to the mobile computer, see [Localization](#).

DOWNLOAD APPLICATION TEMPLATES

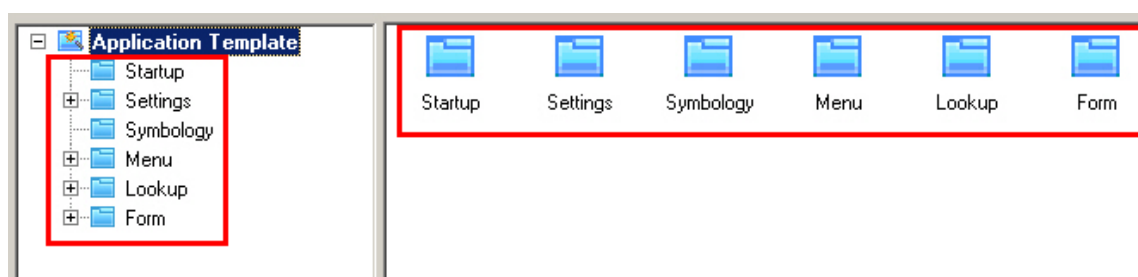
After the downloaded runtime is set up in the mobile computer, a user's application template is further needed to enable the mobile computer to collect data. Such template that carries application menus and data collecting forms makes it possible for users to collect data and edit/manage data.

In order to have an "application template" for the mobile computer, you need to customize/design one by the Batch AG.

DESIGN APPLICATION TEMPLATES

- 5) From the menu bar of the Batch AG, click **File | New** or **File | Open** to open a new or an existing application template. An application template is composed of six pages. Each contains the properties of a template theme.
- 6) In the left pane of the Batch AG, click on the plus sign of the "**Application Template**" to see the drop-downs. From the drop-downs, click  **Startup** to start your customization of a new or a lately edited application template.

Warning: The reader type setting is essential for sending the template file to the mobile computer. On the **Initial** tabbed page under **Settings** theme, select the barcode reader type that is consistent with the reader actually integrated with the mobile computer; otherwise you will be alerted with the message "wrong reader type".



Property Pages

Startup	Configures the program sequences and customizes the user interface that are to be presented on the mobile computer.
Settings	Configures system settings so that they work when initialized on the mobile computer.
Symbology	Configures symbologies and barcode parameters.
Menu	Customizes the hierarchical menus to be accessed under the main menu of user's application, e.g. 1. Collect Data Menu 1 (Menu 2) Form 1.
Lookup	Configures the data structures for the lookup files to be referred to by user's application. Up to 3 lookup files are supported.
Form	Is a data collecting form covering multiple input fields that accept the data input by the user. It may be arranged following up a menu. For example: 1. Collect Data (Menu 1) Form 1.

- 7) When completing template customization, click **File | Save** or **File | Save As** to save the currently edited template to an .AGX file. You may run program simulation by selecting **Tools | Simulator** from the menu bar to verify if the program sequences meet your requirements. Refer to [7.5 Program Simulation](#).

PROCEED TO DOWNLOAD

To have the Batch AG send the application template to the mobile computer:

- 8) Establish a proper connection between the mobile computer and the host computer such as your PC.
- 9) Power on the mobile computer by pressing the Power Button for more than 1.5 seconds. The mobile computer boots into the user application main menu.
- 10) On the mobile computer, configure the appropriate download interface by **3. Utilities | 1. Program Settings | 2. Download Program Interface.**
- 11) From the user application main menu, select **3. Utilities | 6. Load Application.** The mobile computer will enter connecting mode.
- 12) On your PC, run Batch AG. Select **Transfer | Send Application** from the menu bar. A [Download AG] dialogue box displays. Configure the transmission interface that is consistent with the download interface set on the mobile computer. Click the OK button. The Batch AG will proceed to send the template file (*.AGX) to the mobile computer.
- 13) When the mobile computer finishes the download, the main menu of the new user application will display on the screen of the mobile computer.

Note: (1) As the template file includes the settings of the mobile computer's upload/download interface, those on the mobile computer will be overwritten after the template files is sent to the mobile computer.

(2) SD Card option is provided for 8200/8400/8700 to download template files (.AGX) from. The default import directory is "\AG\IMPORT", which is created on SD card automatically.

(3) When your Batch AG is a version of 1.00.0005 or later, you are able to configure if allowing the template file to be output from the mobile computer later. Refer to [Upload Application Template](#) and [5.3.2 Upload .AGX](#).

DOWNLOAD LOOKUP FILES

If you have assigned a lookup file for the application template to refer to, the mobile computer needs to have that lookup file (Refer to [1.4 Lookup \(File\)](#) and [Chapter 3. Lookup](#)). For the mobile computer to download lookup files from your PC:

14) On the mobile computer, select **3. Utilities | 8. Load Lookup File**. The mobile computer enters download lookup mode.

Note: There are cases when the command **8. Load Lookup File** is absent from the submenu **3. Utilities**. These cases come up when an application template doesn't refer to any lookup file.

15) Run Batch AG on your PC, click **Transfer | Send Lookup**. You can send up to three lookup files to the mobile computer. You may alternatively run the "DLookup.exe" utility to send the lookup files.

16) Upon the completion of download, the main menu displays.

Note: (1) Users need to resend their lookup files every time they renew the application templates even if the lookup files are the same.

(2) 8200/8400/8700 supports to store the lookup files in the inserted SD Card where they can be referred to by the effective template file on the mobile computer. When a lookup file is stored in the SD card, its directory path would be "\AG\DBF", a directory automatically created on the SD card. Refer to [7.4 SD DBF Converter \(8200/8400/8700 Only\)](#).

(3) Before the lookup files are sent to the mobile computer, they need to be converted to DBF format (.DB0) by the DBF converter tool. Run DBF converter by selecting **Tools | DBF Converter** from the menu bar of the Batch AG. In the DBF converter tool window, you can select to copy the converted lookup files either to the SRAM of the mobile computer or the directory "\AG\DBF" on the SD card inserted in the mobile computer.

COLLECT & EDIT DATA

17) To collect data with the mobile computer, select **1. Collect Data** from user's application main menu on the mobile computer.

18) To edit the collected data, select the following submenus from user's application main menu on the mobile computer –

3. Utilities | 2. Browse Data

3. Utilities | 3. Delete Data (Refer to [5.1.1 Data Manipulation](#).)

UPLOAD DATA

To upload the data collected by the mobile computer to your PC:

19) On the mobile computer, select **2. Upload Data**. The following options will be presented when lookup files are used.

- ▶ Data file(s)
- ▶ Lookup file(s), if any in use
- ▶ All (one by one)
- ▶ All (append), that is, all-in-one

20) On your PC, from the menu bar of the Batch AG, select **Transfer | Direct-Link Data Transfer** or **Transfer | MobileLink Data Transfer**.

See [7.2.1 Data Read](#) for **Direct-Link Data Transfer**.

See [7.3 MobileLink](#) for **MobileLink Data Transfer**.

Note: (1) Batch AG supports automatically uploading data to a host computer when the upload interface is properly configured. Once the mobile computer is seated in the cradle or connected via the RS-232 or USB Virtual COM cable, a running dot or a hourglass icon displays on the upper-right corner of the screen indicating the mobile computer is ready for auto upload. Refer to [7.2.1 Data Read](#).

(2) SD Card option is provided for 8200/8400/8700 to store DAT files and DBF files in the SD card. The files will be saved to the default directory “\AG\EXPORT” on the SD card that is created automatically.

UPLOAD APPLICATION TEMPLATES

To output the mobile computer’s application template to a host computer such as your PC:

- 1) Establish a connection between your mobile computer and your PC.
- 2) For the transmission interface, make consistent settings on both your PC and the mobile computer. On the mobile computer, go by **3. Utilities | 1. Program Settings | 1. Upload Interface** to configure the interface.
- 3) On your PC, run Batch AG. Select **Transfer | Receive Application** from the menu bar. The [AGX_Read] dialog box displays. Make related settings in this dialog box and fetch the application template from the mobile computer.

Note: In the [AGX_Read] dialogue box, provide the password that is previously set up for the template file. Such password was set up when the template file is created by Batch AG (version 1.00.0005 or later) on a host computer. Refer to [5.3.2 Upload .AGX](#).

- 4) Your PC will start to receive the template file (*.AGX) from the mobile computer.
- 5) If your Batch AG is a version of 1.00.0005 or later, when you create a template file, you are able to configure if to allow the template file to be uploaded from the mobile computer later. Refer to [5.3.2 Upload .AGX](#).

Note: You need not issue any command on the mobile computer; the PC is able to receive the template file from the mobile computer as long as the mobile computer is running the application template.

LOCALIZATION

If you feel the need to localize the entire application of the mobile computer, you must: 1) translate the text on the UI of Batch AG, 2) translate the menu prompts/messages of the application template, 3) Send a font file (*.SHX) to the mobile computer.

- 1) to localize the user's interface of the Batch AG
 1. Go to the directory where the Batch AG is installed on your PC. Find the language folder.
 2. If you haven't selected an alternative directory when installing the Batch AG, the language folder can be found inside C:\CipherLab\Forge\Batch\8 Series.
 3. In [Language] folder, save the original language file (.lng) as a new file. Open the newly saved language file with a text editor, and translate the text (the text of Batch AG's user interface) from English into another language.
 4. Run Batch AG on your PC. From the menu bar of the Batch AG, select **Language** to drop down the commands that present the available languages. You will see the newly saved language included in the submenu.
 5. Select the new language. The user's interface of the Batch AG shifts to the new language.
- 2) to re-define/translate the menu (prompts and messages) of the template file
 1. The template can only be re-defined / translated in the Bath AG.
 2. Run the Batch AG on your PC. In the left pane, unfold [Application Template]. Find **Startup** property page among the drop-downs.
 3. On **Startup** property page, re-define or translate the menu prompts/messages of the template file.
 4. Send the re-defined / translated template file (*.AGX) to the mobile computer. See Download Application Templates > Proceed to Download to send the template file to your mobile computer.
 5. Restart the mobile computer to apply the new application template.

Note: For 8000/8300, to apply double-byte characters such as Japanese, Chinese, etc., the menu prompts/messages of template file need to be re-defined / translated in the **Form** and **Menu** property pages by Batch AG, so that characters can display properly on the screen of the mobile computers. And note, for an input field, the elements other than menu prompts and messages can only display in alphanumeric characters.

3) Send a font file (*.SHX) to the mobile computer.

A set of font files are bundled with the Batch AG to support a few languages on 8000, 8200, 8300, 8400, 8500 and 8700 models. If you haven't selected an alternative directory when installing the Batch AG, these font files are accessible in the "C:\CipherLab\Forge\Batch\8 Series\Font Files" directory.

To send a copy of the desired font file to the mobile computer:

1. On the mobile computer, press [7], [9] and [Power] simultaneously to boot the mobile computer into **System Menu**. Select **6. Load Program**. And select a download interface.
 2. Run Batch AG on your PC. From the menu bar, select **Transfer | Send Program** to send a desired font file (.SHX) to the mobile computer.
-

Note: Be sure to make consistent settings for the transmission interface on both your PC and the mobile computer.

USING FTP SERVER TO TRANSFER FILES

Creating template files by the Batch AG version 1.00.0008 or newer, a remote FTP server is readily available to which the mobile computer is allowed to log in and transfer files whether wirelessly through Wi-Fi or wired by Ethernet Cradle.

FTP stands for File Transfer Protocol and is built on a client-server architecture. The mobile computer accesses an FTP server to carry out the following:

- ▶ Update the script file
- ▶ Upload or download lookup files (featuring version control)
- ▶ Upload data files

Note: If you don't make FTP communication settings in the template file, you can still do it later on the mobile computer's user application main menu. Select **3. Utilities | 1. Program Settings | 10. FTP Settings**.

FTP COMMUNICATION SETTINGS

Run Batch AG on your PC. Select **Transfer | FTP Communication Setting** from the menu bar to have the [FTP Communication Setting] dialogue box:

The screenshot shows a dialog box titled "FTP Communication Setting". It contains the following fields and controls:

- Server IP or Name:** A text input field containing "0.0.0.0".
- Port:** A spin box containing "21".
- User Name:** A text input field with a placeholder "- Maximum characters:64".
- Password:** A text input field with a placeholder "- Maximum characters:64".
- FTP Communication Interface:** A dropdown menu currently set to "WLAN".
- Buttons:** "OK" and "Cancel" buttons at the bottom.

In this dialog box, make the settings one by one as detailed below:

Server IP or Name

Specify the IP address or the name of the FTP server.

Port

Specify the port number of the remote FTP server.

- ▶ By default, TCP port 21 is used on the server for the control connection.

User Name

Specify the user name for logging onto the remote FTP server. (64 characters maximum)

Password

Specify the password for logging onto the FTP server. (64 characters maximum)

FTP Communication Interface

Among 8-Series mobile computers, their communication with FTP servers are supported through the following interfaces:

Options	8071	8200	8230	8330	8370	8400	8470	8770	8790
WLAN	✓	✗	✓	✓	✓	✗	✓	✓	✓
Ethernet Cradle	✗	✓	✓	✗	✗	✓	✓	✗	✗

FTP FILE SETTINGS

After completing the configuration of an FTP server, you need to configure which files should be copied to and from the mobile computer.

From the menu bar of the Batch AG, select **Transfer | FTP File Setting** to bring up the [FTP File Setting] dialogue box. This dialogue box features the following settings:

Download Script File

Tick this checkbox to enable the mobile computer to download, from the FTP server, any update to the script file "FTP.dat".

Create a Script File (FTP.dat)

Tick this checkbox to create a script file "FTP.dat" on your PC and save the other FTP-related settings into this file.

- ▶ The file name "FTP.dat" is reserved for the script file. The file name must be uppercase while the file extension is lowercase.

Data File Settings

In this group box, select which data files will be uploaded to the FTP server. Instead of using the default file name "DATAF1~DATAF10", you may change it if necessary.

- ▶ The length of the file name plus the full directory path on the FTP server is maximum 255 characters.
- ▶ When no directory path is specified, the data file will be uploaded to the root directory of the FTP server.

Lookup File Settings

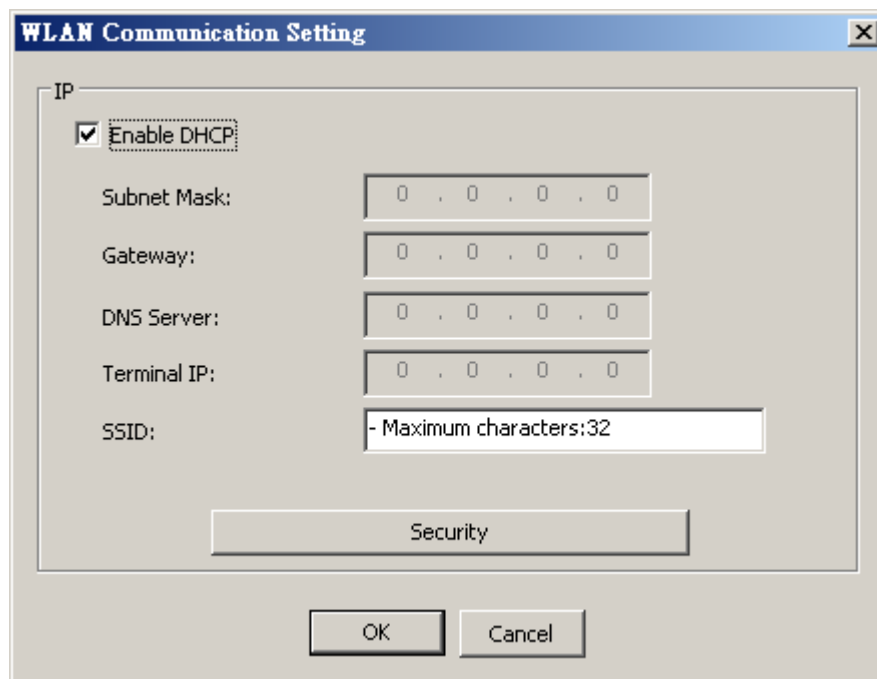
Select if to download or upload any lookup files.

- ▶ When a "Download" checkbox is ticked for a particular lookup file, the "Upload" checkbox is then ticked automatically. You can remove the tick if necessary. Note that there is only one set of Download and Version Control boxes for SRAM lookup file settings.
- ▶ When the "Download" checkbox is selected for a particular lookup file, you may apply version control by ticking the "Version Control" checkbox if necessary. The system will show a message dialog box to prompt you whether to check the lookup file only when the lookup file is downloaded to the terminal for the first time.
- ▶ The uploads will be saved in the root directory of the FTP server with file names of "DBF1.txt~DBF3.txt" respectively.
- ▶ The downloads will be saved to the SRAM or SD Card in DBF format, depending on the Lookup settings.

WLAN COMMUNICATION SETTINGS

Some of CipherLab's 8-Series models support Wi-Fi networking. The configuration of Wi-Fi connection is necessary for the mobile computer to log in to a WLAN network.

Run Batch AG on your PC. Select **Transfer | WLAN Communication Setting** from the menu bar. A [WLAN Communication Setting] dialogue box displays:



In this dialogue box, make the following settings:

Enable DHCP

DHCP server is enabled by default and all settings can be obtained from it. If DHCP server is disabled, you must provide the following information —

- ▶ Subnet Mask
- ▶ Gateway
- ▶ DNS Server
- ▶ Terminal IP

SSID

“SSID” refers to “Service Set Identifier”, which is the name of a wireless local network (WLAN) to uniquely identify a group of wireless network devices used in a given “Service Set”. For example, you need to specify the SSID being used by the access points so that the mobile computer can associate to the access points.

- ▶ SSID can be made up of 32 characters maximum.

Security

Authentication and encryption help provide data protection on the 802.11b/g network. Refer to [WLAN Security Settings](#).

WLAN SECURITY SETTINGS

In order to prevent information theft, IEEE 802.11 standard has defined two authentication processes to provide Wi-Fi security. They are "Open System Authentication" (OSA) and "Shared Key Authentication (SKA)". Make valid security settings here to enable the mobile computer to access a WLAN network.

Click the **Security** button in the [WLAN Communication Setting] dialogue box. The [WLAN Security Setting] dialogue box displays. Make the following settings:

The screenshot shows the 'WLAN Security Setting' dialog box. Under the 'Security' header, the 'Authentication' section has two radio buttons: 'Share Key' (selected) and 'Open System'. Below this, the 'EAP' section has an unchecked checkbox. The 'WEP' section has a checked checkbox, with a 'Key Length' dropdown menu set to '128 Bits(13 bytes)' and an 'Active' checkbox checked. There are four 'Key' input fields (Key 1 to Key 4), each with a radio button to its right. The 'WPA' and 'WPA2' sections have unchecked checkboxes. A 'Passphrase' field is located below the WPA/WPA2 section. At the bottom are 'OK' and 'Cancel' buttons.

Authentication

Selects between **Open System** and **Shared Key**.

Setting	Remark
<i>Open System</i>	<p>By "Open System Authentication", any wireless device can access any WEP network and receive files that are not encrypted. When a client computer attempts to connect to a WLAN AP, it sends out an authentication request to that AP. The AP authenticates the request and the client gets to connect to the network.</p> <ul style="list-style-type: none"> ▶ "Open System Authentication" allows any device network access. If no encryption is enabled on the network, any device that has the SSID of the access point can gain access to the network.
<i>Shared Key</i>	<p>By "Shared Key Authentication", when a client computer attempts to connect to a WLAN AP, it sends out an authentication request to that AP. Then a</p>

	<p>challenge-response handshake by encrypting/decrypting a challenge text using the pre-configured WEP keys takes place between the client computer and the AP. If the AP finally justifies the challenge text it decrypts, it will send back a positive response to the client computer. Then the client gets to connect to the network.</p> <ul style="list-style-type: none"> ▶ “Shared Key Authentication” requires a static WEP key configured in the mobile computer. The mobile computer’s access request can only be granted when it passed the challenge based authentication of the access point.
--	--

Note: For “Shared Key Authentication”, the active WEP key is used for authentication.

EAP

Select it to activate the authentication of Extensible Authentication Protocol (EAP). It requires user name and password so that the mobile computer can be identified when connecting Cisco® access points.

Setting	Remark
<i>Identity</i>	Specify a user name. (32 characters maximum)
<i>Password</i>	Specify a password. (32 characters maximum)

WEP Key

Select it to apply Wired Equivalent Privacy or Wireless Encryption Protocol (WEP) for the mobile computer’s data encryption.

Setting	Remark
<i>Key Length</i>	<p>Encryption type can be 64 bits (5 bytes) or 128 bits (13 bytes).</p> <ul style="list-style-type: none"> ▶ Using 64-bit encryption, the password phrase can be 5 characters long. ▶ For 128-bit encryption, the password phrase can be 13 characters long.
<i>Key 1 ~ 4</i>	Up to four WEP keys can be configured. Up to 5/13 characters (ASCII codes) for the WEP key can be specified in a particular key field depending the key length you selected.
<i>Active</i>	Only one key (the active one) can be used at a time.

Note: Make the consistent settings as configured on the devices of the wireless network that the mobile computer is connecting to, e.g. the access points.

WPA-PSK/WPA2-PSK Passphrase

WPA-PSK supports to enhance security over wireless networks. It is a Pre-Shared key for authentication that requires a passphrase to access the network. The passphrase must be 8 to 63 characters (ASCII codes) to auto-generate a WEP key. If entered passphrase falls shorter than 8 characters, a warning dialog pops up when OK button is clicked to submit changes.

- ▶ For 8200/8400/8700, WPA2-PSK is also supported.

MOBILELINK DATA CONNECTION

MobileNetwork harnesses a Windows-based PC (host) to one or more mobile computers (clients) so the host is able to retrieve data files from the client(s) and exchange lookup files with them. See [7.3 MobileLink](#) for more details.

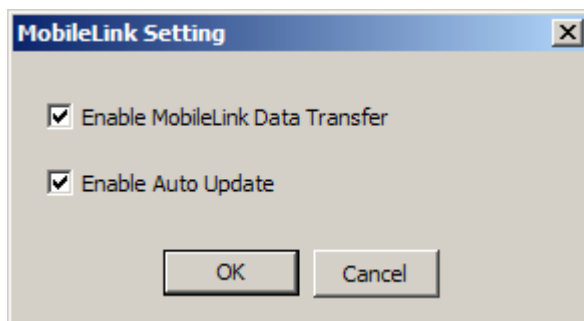
MobileLink is capable of data connection through various interfaces, especially Local Area Network (TCP/IP).

MOBILELINK SETTINGS

To be able to launch **MobileLink**, make the following settings in Batch AG:

- 1) From Batch AG menu bar, select **Transfer | MobileLink Setting**.

A **MobileLink Setting** dialog opens.



- 2) Make suitable settings by referencing the following:

Setting	Description
Enable MobileLink Data Transfer	Makes MobileLink available.
Enable Auto Update	Makes client mobile computer(s) auto-start outputting data to host computer once connection is up. <ul style="list-style-type: none"> ▶ This item is selected by default. ▶ To offload a lookup file to the client(s), assign the lookup file by MobileLink menu bar System Rule Maintenance. Refer to 7.3 MobileLink.

TITLE BAR

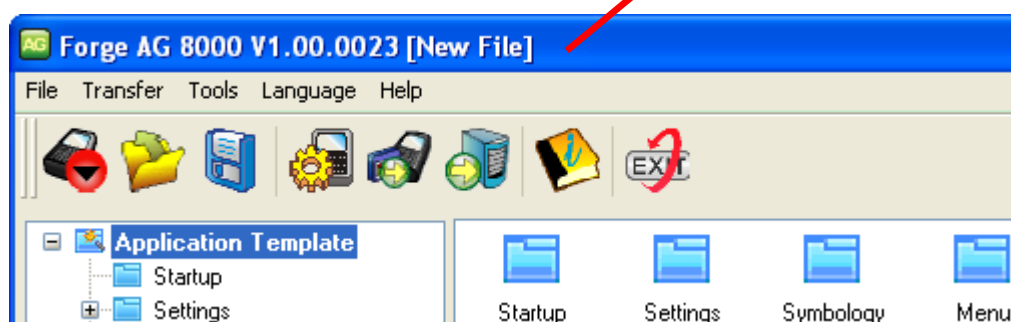
The latest release of Batch AG supports two pieces of info on Title Bar. They are:

- 1) the version info of the software, and
- 2) the version info of the application template file the Batch AG opens.

Update the Batch AG to the latest available version on your PC to have this new support.

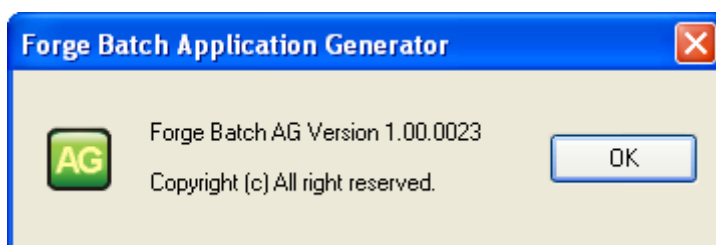
SOFTWARE VERSION INFO

When Batch AG is launched without opening any application template file, Title Bar shows information with Batch AG's name and the software version.



Delivers the software's version info.

Without any application template opened, the software version delivered on the Title Bar agrees with the info given by clicking **Help** from menu bar. See also [Menu Bar](#).



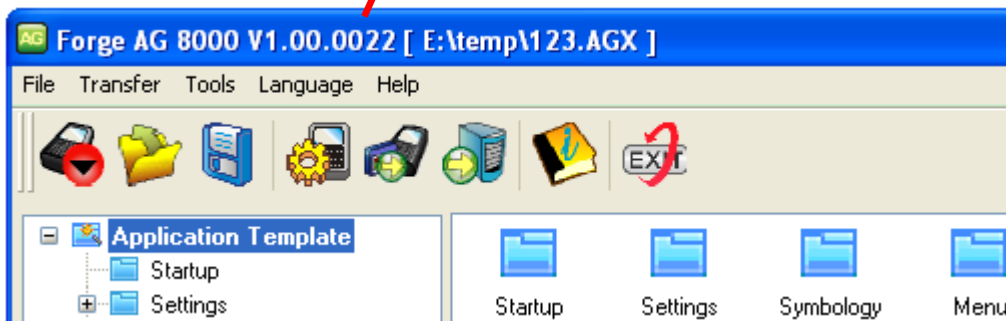
The software's version info delivered by the Help Menu.

APPLICATION TEMPLATE'S VERSION INFO

After the Batch AG opens an application template file (*.AGX), the Title Bar shows the version info about the Batch AG that created the application template file.

The screenshot below displaying an 8000 application template file created by a previous version of Batch AG software is now opened by the Batch AG.

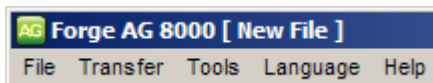
Delivers the version of the Batch AG that created the currently opened application template file.



Note when the opened application template file is too dated to carry the creator's version info, the Title Bar shows the software's version info.

MENU BAR

The Menu Bar contains a number of menus that specify which task you want the system to perform. Each menu contains a list of commands and sometimes sub-menus. For the provided tools, refer to [Utilities](#).



Menu	Command	Action...
<i>File</i>	<i>New</i>	Creates a new application template by selecting model name.
	<i>Open</i>	Opens an existing template file. Browse where the file locates on the local disk.
	<i>Save</i>	Saves the currently edited template file.
	<i>Save As</i>	Saves the currently edited template file to a new one.
	<i>Preference</i>	Configures how the Batch AG will act whenever it is used. Refer to Preference.
	<i>Convert to 8xxx</i>	Converts the currently edited template file to another 8-series model. Refer to AGX Template Conversion.
	<i>Recent File List</i>	Opens the recently opened template files. Refer to Recent File List.
	<i>Exit</i>	Quits the Batch AG.
<i>Transfer</i>	<i>Send Program</i>	Sends an AG runtime or font file (.SHX) to the mobile computer.
	<i>Send Application</i>	Sends the currently opened template file to the mobile computer.
	<i>Receive Application</i>	Fetches the application template files from the mobile computer. A password needs to be provided. Refer to Upload Application Template and 5.3.2 Upload .AGX.
	<i>Send Lookup</i>	Sends associated lookup file(s) to the mobile computer.
	<i>Direct-Link Data Transfer</i>	Fetches data via Data_Read utility. It also synchronizes date/time on every host connection.

	<i>MobileLink Data Transfer</i>	Fetches data from the mobile computer via Mobile Link utility.
	<i>FTP Communication Settings</i>	Assigns the IP and port number of a remote FTP server as well as the username and password for the mobile computer to log in. Refer to FTP Communication Settings.
	<i>WLAN Communications Settings</i>	Specifies the wireless networking settings for 8071, 8330/8370, 8470 or 8770/8790. Refer to WLAN Communication Settings.
	<i>MobileLink Settings</i>	Specifies if to enable MobileLink Data Transfer and if to enable auto update. Refer to 7.3 MobileLink.
	<i>FTP File Settings</i>	Specifies the files to be copied to and from the mobile computer. Refer to FTP File Settings.
<i>Tools</i>	<i>Simulator</i>	Launches the simulator of the mobile computer.
	<i>DBF Converter</i>	Converts text file to DBF format that is used on the SD card on 8200/8400/8700.
<i>Language</i>		Selects a preferred language for the Batch AG's user's interface. Refer to Language.
<i>Help</i>	<i>About Forge Batch AG</i>	Shows the information about the Batch AG.

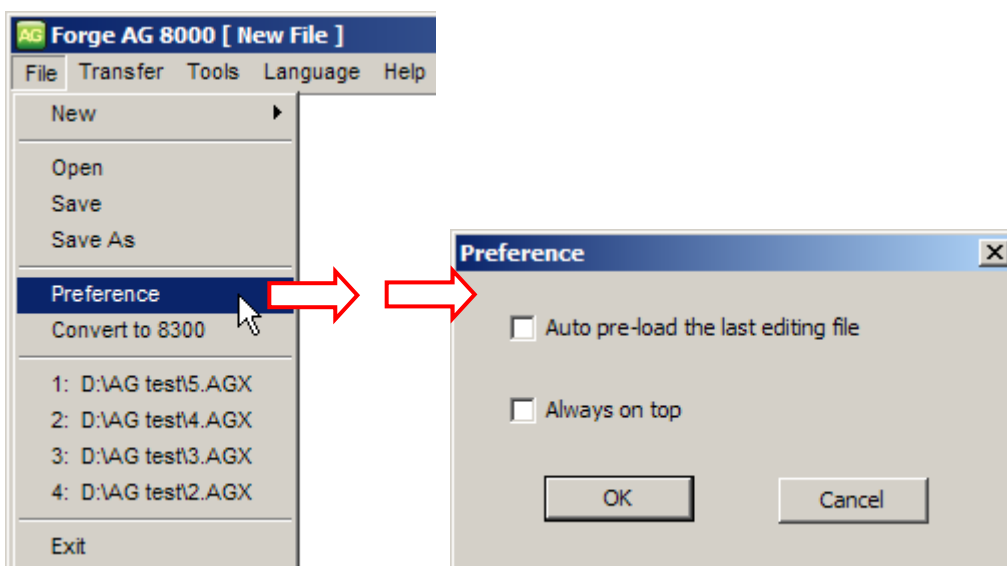
FILE MENU

Batch AG's **File** menu contains the commands relating to the handling of files, such as open, save, save as, etc. It also includes a list of recently opened files and the **Exit** command to quit the Batch AG.

The **File** menu and its commands are detailed in the following content of this section.

PREFERENCE

Select **File | Preference** from the menu bar to pop up the [Preference] dialog box, which configures how the Batch AG acts each time it is launched. The featured selections are detailed as follows. Make the settings that meet your needs.



Auto pre-load the last editing file

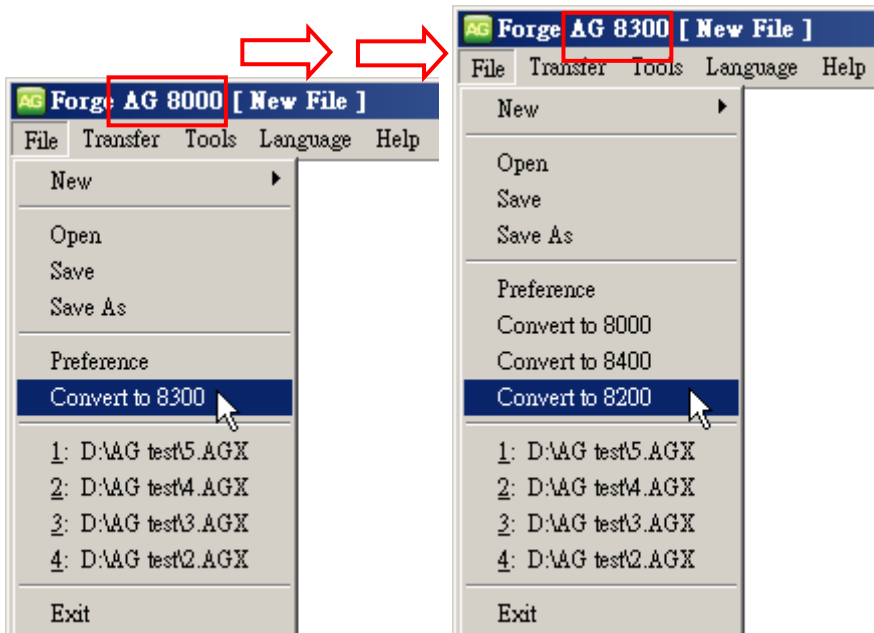
Select this item to load the last edited template file as soon as the Batch AG is run.

Always on top

Select this item to have the Batch AG (*ForgeAG.exe*) and the utilities remain on the top of any other windows opened.

AGX TEMPLATE CONVERSION

This command converts the currently edited template file to a template for another 8-series model. Select **File | Convert to 8xxx** from the menu bar of the Batch AG to achieve the conversion.



The template conversion involves the change of these 2 elements of a template:

- ▶ The changes of upload/download interface.
- ▶ The changes of the prompts & messages.

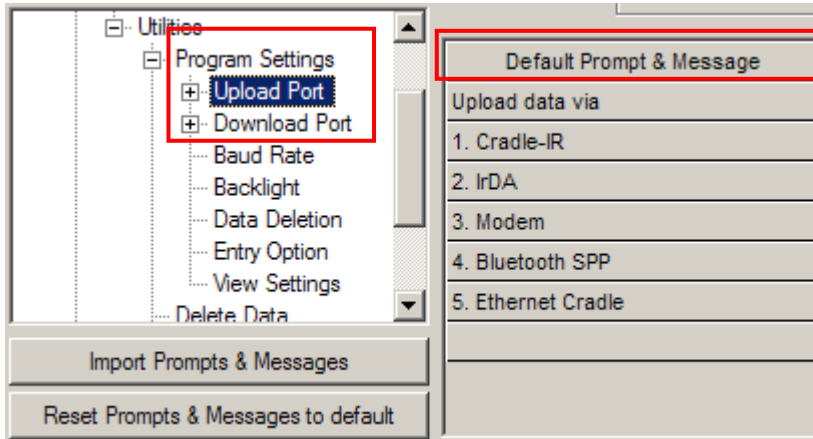
The following table gives an account of the upload/download interface conversion between 8-series models.

Conversion between Devices		Upload Interface		Download Interface		
Original	Target	Original	Target	Original	Target	
8200	8700	Modem	RS232	Modem	RS232	
		Ethernet Cradle				
8300	8000	Direct-RS232	Cradle IR	Direct-RS232	Cradle IR	
		Keyboard Wedge				
	8400	8400	Direct-RS232	RS232	Direct-RS232	RS232
			Cradle IR		Cradle IR	
			IrDA		IrDA	
			Keyboard Wedge	USB HID		
	8200	8200	Direct-RS232	RS232	Direct-RS232	RS232
			Cradle IR		Cradle IR	
			IrDA	USB HID	IrDA	
			Keyboard Wedge			
	8330/8370	8071	Direct-RS232	Cradle IR	Direct-RS232	Cradle IR
			Keyboard Wedge			
8470		8470	Direct-RS232	RS232	Direct-RS232	RS232
			Cradle IR		Cradle IR	
			IrDA		IrDA	
			Keyboard Wedge	USB HID		
8400		8700	Modem	RS232	Modem	RS232
			Ethernet Cradle			
8500	8200	Cradle IR	RS232	Cradle IR	RS232	
		IrDA		IrDA		
	8400	8400	Cradle IR	RS232	Cradle IR	RS232
			IrDA		IrDA	
	8700	8700	Cradle-IR	RS232	Cradle-IR	RS232
			IrDA		IrDA	
			Modem		Modem	
			Ethernet Cradle			
	8700	8400	USB VCOM_CDC	RS232	USB VCOM_CDC	RS232

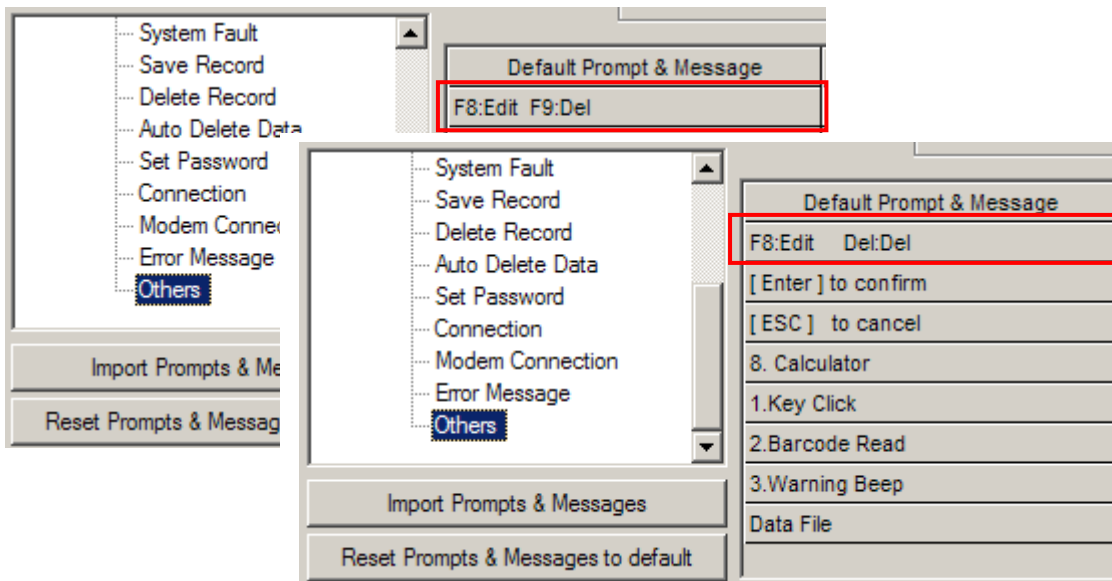
The prompts/messages conversion between 8-series models are summarized as follows:

Prompts/Messages Conversion

- ▶ The prompts of upload/download ports are reset to the defaults of the target device. Check it up on the **Startup** property page.



- ▶ For 8500 series, when you select “Convert to 8400”, the prompt “F8:Edit F9:Del” will change over to 8400’s “F8:Edit Del:Del”.



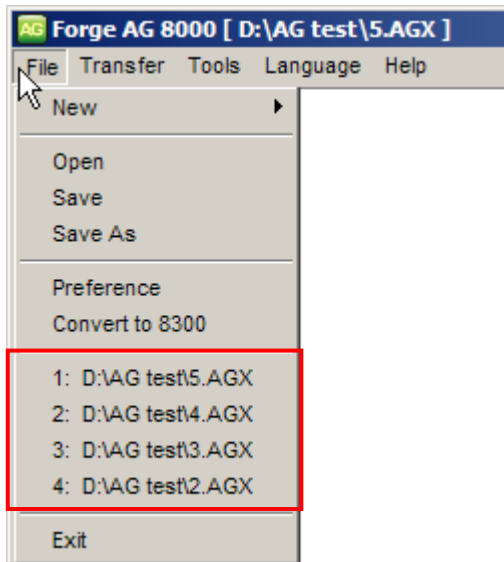
- ▶ If you convert an 8300 template file to an 8000 template file, the prompts which are considered too long will be truncated automatically.

Note: For the prompts on **Form** property page and Menu Caption/Item Name on **Menu** property page, long strings will be truncated when the template file is converted from 8300 to 8000.

RECENT FILE LIST

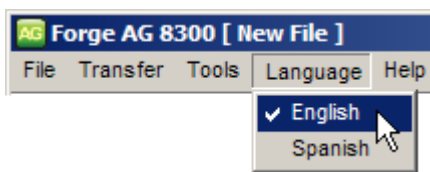
The **File** menu shows the recently opened templates when it is dropped down. Up to 4 recently opened template files are displayed for your quick access. The most recently opened one is placed on the top.

Click **File** from the menu bar to see them.



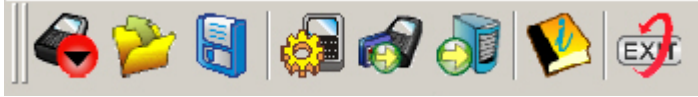
LANGUAGE









When there is any language file (*.lng) saved into the directory where the Batch AG is installed, it will be added to the commands in the **Language** menu and becomes available. In the menu bar of the Batch AG, select **Language** and then select the language you prefer for the Batch AG's user interface. Refer to [Localization](#).



TOOLBAR

The toolbar offers most of the functions provided in the menu bar. An icon is a button clicked to trigger Batch AG to take an action.



Icons	Command	Description
	New	Creates a new application template.
	Open	Opens an existing application template. File path needs to be specified.
	Save	Saves the current editing template.
	Send Application	Sends the currently edited template file to the mobile computer.
	Send Lookup	Sends associated lookup file(s) to the mobile computer.
	Get File via Direct-Link	Fetches data from the mobile computer.
	About	Shows the information about the program Batch AG.
	Exit	Quits the Batch AG.

TREE MENU

In the work area of the Batch AG, a tree menu is featured in the left pane for user's navigation through various theme-grouped property pages that enable user's configuration for an application template.

- ▶ Click on the "+" sign to expand the tree menu or the "-" sign to collapse it.
- ▶ Click on an expanded item from the tree menu. The configuration it features will display on the right pane.

FORM

A form means a data collecting form that covers a series of input fields for users to enter the data. One or more data collecting forms can be arranged in a menu, and multiple menus are definable for an application template. Forms and menus can be set to connect to each other for user's data collecting needs.

Each input field in a data collecting form will occupy one line on the screen of the mobile computer when the data collecting form is run on the mobile computer. Once all the input fields on a data collecting form are completed, the input data will be kept as a transaction record and saved into a "data file" on the mobile computer. The transaction record can be added to the lookup database that the form refers to, or directly output to a printer, etc.

The Batch AG enables users to customize their own data collecting forms. To customize one of your own:

Run the Batch AG on your PC. In the left pane, expand the [Application Template] tree menu. From the expanded items, select **Form**. You will see:

- ▶ Up to 10 forms definable.
- ▶ Maximum eight input fields supported by each form

In the following content of this chapter, you will be guided to how data collecting forms are customized by the **Form** property pages.

The screenshot shows the configuration interface for 'Form 1'. The left pane shows the 'Application Template' tree with 'Form 1' selected. The main area contains several configuration sections:

- Properties:** Esc: Main, Next: Form 1, Record: Save, Enable MSQI (checkbox).
- Lookup:** No Lookup (selected), 1st Lookup, 2nd Lookup, 3rd Lookup.
- Date & Time stamp:** No Time Stamp (selected), Add to front of record, Append to end of record, Date & Time Format.
- Branch:** Function key: FN + 1, FN + 2, FN + 3, FN + 4; Branch to: Disable (selected for all).
- Font Properties:** Selected Font File: English, Small (16 characters x 8 lines) (selected), Large (12 characters x 8 lines).
- Reset Current Form** button.

The table below shows the input fields configuration:

No	Data Type	Prompt	Input Type	Min Length	Max Length	Variables	More
1	Nil		E	0	80	Nil	More
2	Nil		E	0	80	Nil	More
3	Nil		Both	0	80	Nil	More
4	Nil		Both	0	80	Nil	More
5	Nil		Both	0	80	Nil	More
6	Nil		Both	0	80	Nil	More
7	Nil		Both	0	80	Nil	More
8	Nil		Both	0	80	Nil	More

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1.1 SELECT A FORM

- ▶ Ten forms are definable, Form 1 ~ 10. Select one to start with, usually "Form 1".
- ▶ Each **Form** property page carries a certain amount of group boxes in the upper half for configuring attributes of a particular data collecting form, including [Properties], [Font Properties], [Lookup], [Date & Time stamp], [Branch], and a Reset Current Form button.
- ▶ In the bottom half of the **Form** property page, an eight-row table presents. Such table is designed for users to configure settings of the eight input fields of a data collecting form respectively.

1.2 PROPERTIES

[Property] group box covers the configurations labeled with **Esc**, **Next**, **Record** and **Enable MSQI**. Together they specify how a data collecting form behaves when it is run on the mobile computer. The following contents of this section will walk you through these configurations one by one.

1.2.1 ESC

Click the **ESC** drop-down item to determine a form/menu to display when the [ESC] key is pressed to the form running on the mobile computer. Options available are:

- ▶ Main Menu
- ▶ Form 1 ~ 10
- ▶ Menu 1 ~ 10

For the "Menu" options, refer to the [Menu](#) property page.

Note: Normally, the [ESC] key is used to return to a previous form or menu.

1.2.2 NEXT

Click the **Next** drop-down item to determine a form/menu to display when the last input field of the data collecting form is completed. Options available are:

- ▶ Main Menu
- ▶ Form 1 ~ 10
- ▶ Menu 1 ~ 10

For the menu options, refer to the [Menu](#) property page.

The mobile computer takes the action of "**Next**" as soon as the key value of [Enter] is sent to report the completion of the last input field. However, how [Enter] key value is produced depends on the input device that does the last data entry. See [1.10 Input Type](#) for details.

The following table summarizes how the completion of the last input field is reported to the system when the input devices are different:

Last Field Input Device	Last Input Field Completion Report
Reader	The [Auto Enter] item in the More properties of the input field must be set to "Scan + ENTER". Refer to 1.14 More .
Keypad	The [Enter] key on 8000/8200/8300/8400/8500/8700 models needs to be pressed.
Both of the above	See the two above.
RFID	The [Enter] key on 8300/8500/8700 models needs to be pressed.
All	See all of the above mentioned.

1.2.3 RECORD

Record configures which action to take when all the input fields of a form is completed.

Options	Action...
<i>Save</i>	Saves the record to a sequential data file.
<i>Update lookup</i>	Updates the lookup file associated with the form.
<i>Save & update</i>	Saves the record to a sequential data file, and updates the lookup file.
<i>Pass down</i>	Passes down the data to the next form or menu without saving.
<i>Output record</i>	Outputs the record directly to a printer through COM port instead of saving it to a file.
<i>Output screen</i>	Similar to "output record". This option outputs what is displayed on the screen such as the prompts and data collected.
<i>Save & output record</i>	Saves the record to a sequential data file and outputs it directly to a printer through COM port.
<i>Save & output screen</i>	Saves the record to a sequential data file and outputs what is displayed on the screen.
<i>Remove from lookup</i>	Removes the record from the lookup file.
<i>Save & remove</i>	Saves the record to a sequential data file and removes it from the lookup file.

Note: Instead of saving all the collected data to a single data file, you may select to save the collected data for each form to separate data files on the Menu property page.

By the **Record** item on **Form** property page and the **Lookup data can be uploaded** checkbox on **Lookup** property page, you can select if to upload the data file(s) or lookup file(s), or both files ("All, one by one") to a host computer. You can also select to merge them to a new file ("All, append") for the upload. See also [3.3.2 Lookup Data Can Be Uploaded](#).

Note: The uploaded file is a sequential file.

The files retrievable from the mobile computer are:

▶ Data file:

Such "data file" is generated on the mobile computer only when you have selected "Save", "Save & update", "Save & output record", "Save & output screen", or "Save & remove" options from the **Record** drop-down menu.

▶ Lookup file:

A lookup file would be available on the mobile computer when you have chosen to use a lookup file for your data collection and have allowed it to be uploaded.

When there is collected data on the mobile computer to be uploaded to a host computer, select **2. Upload Data** from the user application main menu on the mobile computer after a connection is established between the mobile computer and your PC to follow through the uploading.

Warning: If you select "output record" or "output screen" for the **Record** mode, **2. Upload Data** on the mobile computer will become unavailable.

1.2.4 ENABLE MSQI

Multiple Scan Quantity Incrementing (MSQI) enables a form to be performed repeatedly until [ESC] key is pressed, whereupon the data collected is saved to a data file.

With **MSQI** selected in a **Form** property page, the first 2 input fields of the data collecting form are set to the following statuses:

- ▶ The 1st input field data type is set to "Text". In the **Lookup** group box, the available lookup options rely on how many lookup files you have configured in the **Lookup** property page.
- ▶ The 2nd input field data type is set to "MSQI" by which the input value increases to the next higher value (normally increases by 1) when the same barcode is continuously scanned.

The initial value/text of a MSQI field is set to "0" by default. Users can click the More button to bring up the dialog box and then specify a value instead. And if the MSQI field is set to fetch any lookup value, the lookup value applies.

No	Data Type	Prompt	Input Type	Min Length	Max Length	Variables	More
1	Text		Both	0	80	Nil	More
2	MSQI		Both	0	80	Nil	More
3	Nil		Both	0	80	Nil	More

With MSQI enabled, if you choose to use a lookup file, the input fields up the 3rd will become available for you to import more information from the lookup file.

Form 1

Properties
 Esc : Main
 Next : Form 1
 Record : Save
 Enable MSQI

Font Properties
 Selected Font File:
 English
 Small (16 characters x 8 lines)
 Large (12 characters x 8 lines)

Lookup
 No Lookup 1st Lookup
 2nd Lookup 3rd Lookup

Date & Time stamp
 No Time Stamp
 Add to front of record
 Append to end of record
 Date & Time Format

Branch
 Function key : Branch to :
 FN + 1 : Disable
 FN + 2 : Disable
 FN + 3 : Disable
 FN + 4 : Disable
 Reset Current Form

No	Data Type	Prompt	Input Type	Min Length	Max Length	Field	More
1	Text	Item:	Both	0	80	Field1	More
2	MSQI	Qty:	Both	0	80	Nil	More
3	Nil		Both	0	80	Nil	More
4	Nil		Both	0	80	Nil	More
5	Lookup		Both	0	80	Nil	More
6	Nil		Both	0	80	Nil	More
7	Nil		Both	0	80	Nil	More
8	Nil		Both	0	80	Nil	More

By the example of the screenshot above, the data collecting process will repeat as long as you shall go on scanning barcodes. Such **Form 1** also features the following:

- ▶ When a barcode is repeatedly scanned, the value in the "Qty" field whose data type is set to MSQI will increase to the next higher value each time the barcode is scanned.
- ▶ When you change over to scan another barcode, the quantity starts over to accumulate for the new barcode scanned. Data for the previous barcode scanned will be saved as a transaction record.

How MSQI works:

- 1) The input field that is set to "key field" admits a piece of data (line #1 on the screen of the mobile computer).
- 2) The succeeding MSQI input field fetches the corresponding lookup value as the initial quantity value (line #2 on the screen of the mobile computer). If no lookup file is assigned, the pre-defined initial value will be applied.
- 3) The input field set to "key field" admits the same barcode again. The value in the MSQI input field increases to the next higher value; say increasing by "1".
- 4) The input field set to key field admits a different data. Repeating step 2 and step 3.

Data for the previous item will be saved automatically. Take step 3 for example, data for the quantity field saved with this transaction record is the value displayed on the screen, say "3" for this case.

- 5) Press [ESC] to quit scanning and exit the MSQI-enabled data collecting form. Right before exit, a screen shows up to present a "TRACK" input field for your better documentation of track number.

If you don't feel the need for such "TRACK" input screen, disable it by deselecting **Save Track** from the key field's **Properties** dialog. Click the **More** button of the key field to open its **Properties** dialog. See the screenshots below:

Key field

No	Data Type	Prompt	Input Type	Min Length	Max Length	Field	More
1	Text	Item:	Both	0	80	Field1	More
2	MSQI	Qty:	Both	0	80	Nil	More
3	Nil		Both	0	80	Nil	More
4	Nil		Both	0	80	Nil	More
5	Lookup		Both	0	80	Nil	More
6	Nil		Both	0	80	Nil	More
7	Nil		Both	0	80	Nil	More
8	Nil		Both	0	80	Nil	More

Click the **More** button to bring up the Properties dialog box.

Properties dialog opens.

Deselect to disable "TRACK" input screen

To get this support, update the mobile computer's AG Runtime to the latest release and update the Batch AG on your PC to the latest release.

Note: If the quantity of a barcode scanned is too large a number to scan, manually input the quantity. Such input number will override the previous scanned quantity of this barcode scanned.

1.3 FONT SIZE

In [Font Properties] group box, select between the small and large font sizes for the data collecting form. Large font is only applicable to the double-byte languages such as Chinese, Japanese, etc.

For a data collecting form, configure the font size for various models as tabulated below. And see also [Localization](#) and [2.3 Font Size](#).

Mobile Computer	Small Font (6x8)	Large Font (8x16)
8000 Series	16 characters by 8 lines (default)	12 characters by 8 lines
8300 Series	20 characters by 8 lines (default)	15 characters by 8 lines
8500 Series	N/A	20 characters by 8 lines

Mobile Computer	Small Font (8x16)	Large Font (12x16)
8200/8400/8700 Series Single-byte	20 characters by 8 lines (8x16)	13 characters by 8 lines (12x16)

Mobile Computer	Character Type	Small Font (8x16, 16x16)	Large Font (10x20, 20x20)
8200/8400/8700 Series Double-byte	Alphanumeric	20 characters by 8 lines (8x16)	16 characters by 7 lines (10x20)
	Double-byte Language Characters	10 characters by 8 lines (16x16)	8 characters by 7 lines (20x20)

Note: The [Font Properties] group box isn't available on the **Form/Menu** property pages for 8500 templates which can only display information in small font size.

1.4 LOOKUP (FILE)

In [Lookup] group box, select if the data collecting form should refer to a lookup file, i.e. a database array, so that when that form runs on the mobile computer, it is able to fetch values from that lookup file. To be able to assign one or more lookup files in the [Lookup] group box, you need to provide the information about the data structure of the lookup file(s) that you are going to use in the **Lookup** property page first. See [Chapter 3. Lookup](#) for details.

A lookup file is a database. Select whether or not a lookup file is associated with the form. If a lookup file is used, its data format must be defined on the [Lookup](#) property page.

Note: The associated lookup file(s) must be duplicated to the mobile computer.

For a data collecting form, as long as a lookup file is assigned in the [Lookup] group box with the **Data Type** "Lookup" selected, the element "Field" will be activated for the input fields. See [1.8.11 Lookup](#) and [1.13.1 Field](#) for more details.

1.5 DATE & TIME STAMP

The [Date & Time Stamp] group box encloses a set of options that control affixing date/time info to a form's transaction entry. By and large, the date/time info helps you with better analysis of the collected data.

Options provided are [No Time Stamp], [Add to front of record], and [Append to end of record]. [No Time Stamp] is selected by default, which means the software disables the date/time info if users don't select an alternative.

Writing date/time info to lookup files relies on the data types [Date] and [Time]. Update your Batch AG (for the host) and the AG Runtime (for the mobile computer) to the latest version available to get your hands on the support (except 8500). See [1.8.18 Date](#) and [1.8.19 Time](#) for more details.

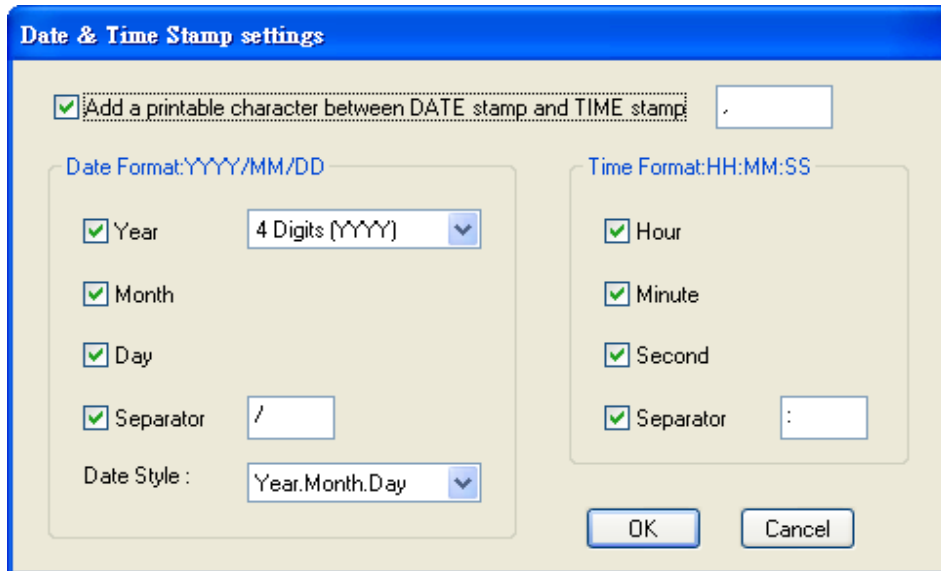
▶ Stamp Position

[Add to front of record] and [Append to end of record] set whether the date/time info appear to the left or right of a transaction entry. The comma "," is the default character that separates the date info and time info.

► Date & Time Format

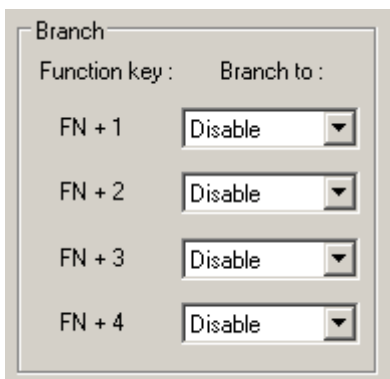
When the date/time stamp is enabled, the [Date & Time Format] button becomes available. Click it to pop up the [Date & Time Stamp settings] window to define the appearance you want for the date/time info in the data file.

All options on the [Date & Time Stamp settings] window are selected by default. Deselect one to disable a piece of date/time info element.

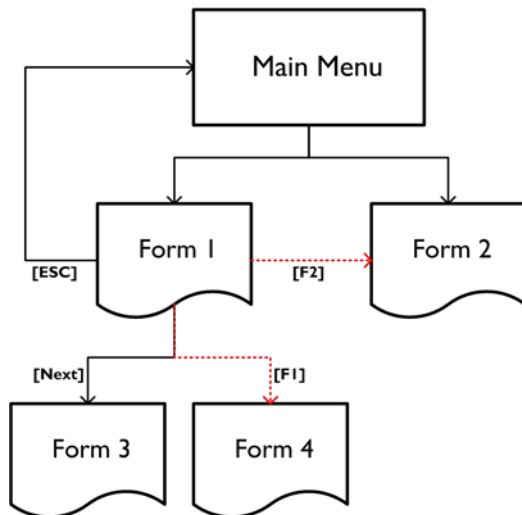


1.6 BRANCH

On 8-series mobile computers, a data collecting form is usually followed by either another form or menu. The [Branch] group box features the options required for a data collecting form that is designed to lead to more than one other form. It also configures the keypad shortcut for the mobile computer to switch between the forms and menus. Up to four shortcuts can be configured.



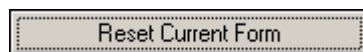
Take the following illustration for example.



Note: Data cannot be passed down through branches.

1.7 RESET CURRENT FORM

The "Reset Current Form" button brings the current form back to default state when it is clicked.



1.8 DATA TYPE

At the bottom half of a data collecting form, there is a table that configures the elements of the input fields in a data collecting form. Every row constitutes an input field while each column represents an element of an input field that needs your configuration.

The screenshot shows the 'Form 1' configuration window. It includes sections for Properties (Esc, Next, Record, Enable MSQI), Font Properties (Selected Font File, Small/Large font sizes), Lookup (No Lookup, 1st-3rd Lookup), Date & Time stamp (No Time Stamp, Add to front/end of record), and Branch (Function key, Branch to). A table at the bottom lists input field configurations:

No	Data Type	Prompt	Input Type	Min Length	Max Length	Variables	More
1	Text		Both	0	160	Nil	More
2	MSQI		Both	0	160	Nil	More
3	Nil		Both	0	160	Nil	More

The available selections for input data type:

Data Type	Prompt		Input Source	Length	Lookup	Properties
	<i>on-screen</i>	<i>saved in record</i>		<i>Min / Max</i>	<i>Field</i>	<i>More...</i>
Nil						
Text	✓		✓	✓	✓	✓
Letter	✓		✓	✓	✓	✓
Alphanumeric	✓		✓	✓	✓	✓
Integer	✓		✓	✓	✓	✓
Real	✓		✓	✓	✓	✓
Auto (+/-)	✓		✓	✓	✓	✓
Extension						
Pass down	✓					
Boolean	✓		✓		✓	✓
Lookup	✓	User-definable			✓	✓

Fixed data	✓	✓				✓
Prompt	✓					
Pause	✓					
Counter	✓					
Large data	✓			✓	✓	✓
Read from 2D	✓			✓		✓
Date	✓					✓
Time	✓					✓
Serial	✓					

The following contents of this section will walk you through all the data types supported for an input field in a data collecting form.

1.8.1 NIL

When “Nil” is set to the data type of an input field, the input field doesn’t accept any data whatever the format is.

- ▶ “Nil” is the default setting. An input field set to “Nil” in a data collecting form would present a totally blank area (line) on the screen of the mobile computer.

1.8.2 TEXT

When “Text” is set to the data type of an input field, the input field accepts any ASCII character. For example, \$1a2b3c=-*/...

1.8.3 LETTER

When “Letter” is set to the data type of an input field, the input field accepts any letter, either upper or lower case (from Aa to Zz).

1.8.4 ALPHAMERIC

When “Alphameric” is set to the data type of an input field, the input field accepts any alphabetic, numeric, or alphanumeric characters. For example, ABC123xyz.

1.8.5 INTEGER

When “Integer” is set to the data type of an input field, the input field accepts the whole numbers such as ... -2, -1, 0, 1, 2 ... but not 3.5.

1.8.6 REAL

When “Real” is set to the data type of an input field, the input field accepts any number that features a decimal whether it is rational or irrational. For example, 4.56.

The following contents of this section will describe how a data collecting form interacts with the specified lookup file when either “**Real**” or “**Integer**” is selected as the “Data Type” for an input field.

No	Data Type	Prompt	Input Type	Min Length	Max Length	Field	More
1	Text		Both	0	160	Field1	More
2	Integer		Both	0	160	-Field2	More
3	Nil		Both	0	160	Nil	More
4	Nil		Both	0	160	Nil	More
5	Nil		Both	0	160	Nil	More
6	Nil		Both	0	160	Nil	More
7	Nil		Both	0	160	Nil	More
8	Nil		Both	0	160	Nil	More

- ▶ In a data collecting form that refers to a lookup file, when an input field is set to **integer/real** and associated with a certain lookup field (by the “Field” element), it will first fetch the value in the associated lookup file when the data collecting form runs on the mobile computer. However, you can choose to ignore such fetched value and input your data into the input field.
- ▶ In the case you choose to input your own data, if the **Record** mode of the data collecting form is set to “**Save & Update**”, the value you input will trigger different arithmetic performed to the lookup values depending on the “**Field**” element setting. The following table summarizes the arithmetic performed:

Field Setting (Lookup File)	Arithmetic Performed
Field 1 ~ 8	The input value will overwrite the associated lookup value. No arithmetic would be performed.

+Field 1 ~ 8	The value you input will be added to the value in the associated lookup field automatically.
- Field 1 ~ 8	The value you input will be deducted from the value in the associated lookup field automatically.

Hereunder is an example:

```

Product Code:9950
Description:Coke
Bin:A1B01
Quantity:4000

```

The input field first fetches the associated lookup value, say "4000".

```

Product Code:9950
Description:Coke
Bin:A1B01
Quantity:5

```

You can proceed to input your own data, say "5".

By this example, when different "Field" element is set, the arithmetic performed would be:

"Field" Setting

Arithmetic performed

field (no arithmetic sign)

If you input "5", the value "5" will be saved in the transaction record on the mobile computer and overwrite the value in the associated field of the specified lookup file. The value saved in the lookup file will be "5". You can check the updated lookup file by selecting **3. Utilities** | **2. Browse Data** from the user application main menu.

+field (with a plus sign)

If you input "5", the value "5" will be saved in the transaction record on the mobile computer, and 5 will be added to the associated lookup value. The value saved into the lookup file will be 4005. You can check the updated lookup file by selecting **3. Utilities** | **2. Browse Data** from the user application main menu.

-field (with a minus sign)

If you input 5, the value "-5" will be saved in the transaction record on the mobile computer, and 5 will be deducted from the value in the associated field of the specified lookup file. The value saved into the lookup file will be 3995. You can check the updated lookup file by selecting **3. Utilities** | **2. Browse Data** from the user application main menu.

1.8.7 AUTO (+/-)

When **"Auto (+/-)"** is set as the data type of an input field, it produces similar arithmetic as the **"Integer"** or **"Real"** does when a lookup file is specified. However, **"Auto (+/-)"** distinguishes from **"Integer"** and **"Real"** by showing the lookup value ahead of the input field. Depending on the **"Field"** element setting, a plus sign (+) or a minus sign (-) will display ahead of the input field.

Similar as **"Integer"** and **"Real"**, for an input field set to **"Auto (+/-)"**, when you input your data, the arithmetic performed differs by the **"Field"** setting. The following example shows the arithmetic performed when different **"Field"** element is set:

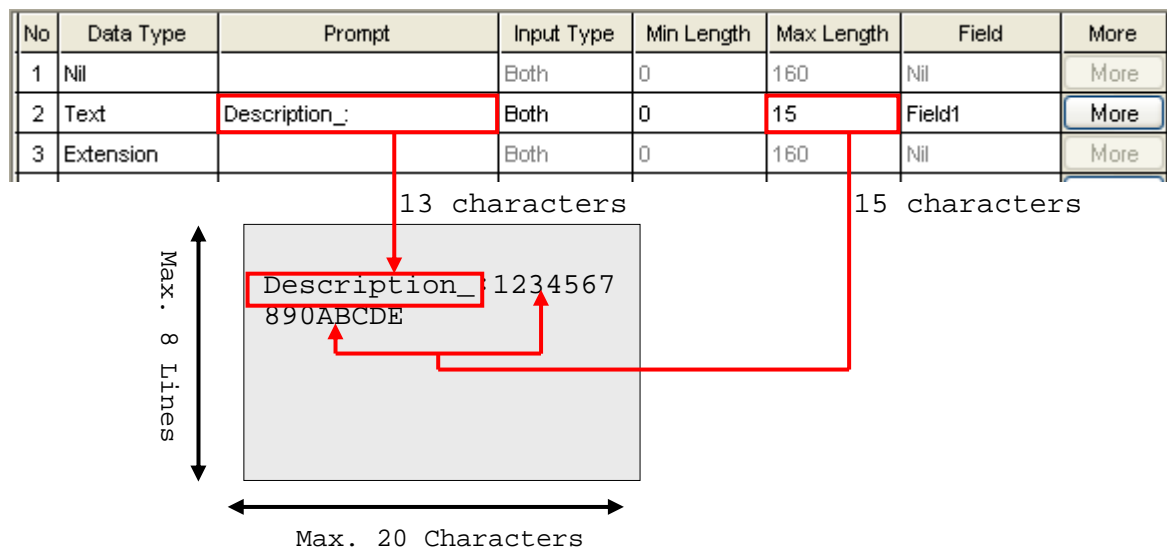
"Field" Setting	Arithmetic Performed	
field (no sign)	<pre>Product Code:9950 Description:Coke Bin:A1B01 Quantity:1000 ■</pre>	<p>If input value is 5, the value saved in transaction record is 5, and the value saved to the lookup file is 5 too.</p>
+field	<pre>Product Code:9950 Description:Coke Bin:A1B01 Quantity:1000 + ■</pre>	<p>If input value is 5, the value saved in transaction record is 5, and the value saved to the lookup file is 1005.</p>
-field	<pre>Product Code:9950 Description:Coke Bin:A1B01 Quantity:1000 - ■</pre>	<p>If input value is 5, the value saved in transaction record is -5, and the value saved to the lookup file is 995.</p>

1.8.8 EXTENSION

When "**Extension**" is set to the data type of an input field, the input field doesn't accept data input but reserves field space for an input field above it that is so extended as to require additional field space of a second input field to completely display on the screen of the mobile computer.

Note: How many extension fields are required depends on the maximum length of your data and the screen size of the mobile computer.

Taking a mobile computer with the screen that allows 20 small-font characters per line for example:



- ▶ When the prompt string ("Description_:" in line 2) takes up the space of 13 characters, and the data length is maximum 15 characters...
- ▶ Together they make the length reaching 28 characters, which requires the field space of more than one line.
- ▶ As a result, the data type of line 3 needs to be set to "**Extension**" if you want to fully display the input data.

1.8.9 PASS DOWN

When "**Pass down**" is set to the data type of an input field, the input field doesn't admit manual data input but imports the data collected by the previous form that is set to "Pass down" for the **Record** mode.

- ▶ When one line isn't enough to display the imported data, the input field needs one or more input fields succeeding it set to "**Extension**".
- ▶ A "Pass down" input field also imports the data from a menu. See also [2.4.3 Pass Down](#).

Note: An input field set to "**Pass down**" is able to combine the data collected by multiple preceding forms to one record.

1.8.10 BOOLEAN

When **Boolean** is set to the data type of an input field, the input field accepts only one of the following sets: "0 or 1", "Y or N" and "T or F".

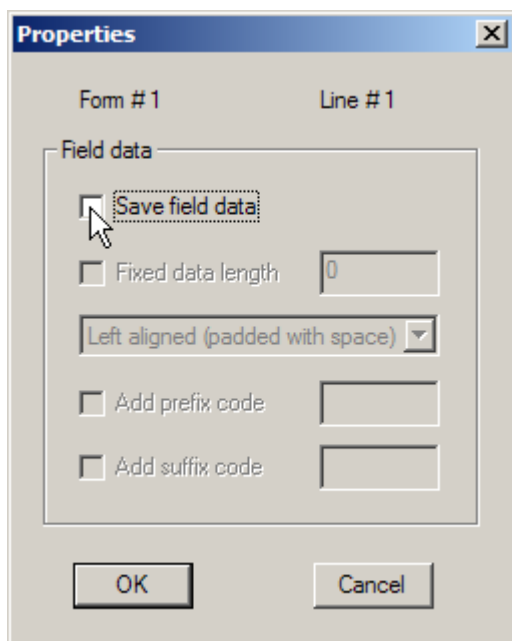
If you input any value other than the above, a message will display on the mobile computer indicating "Data type is wrong!"

1.8.11 LOOKUP

When **Lookup** is set to the data type of an input field, the input field doesn't accept data input but fetches the associated lookup value. **Lookup** data type is particularly applicable to the case as exemplified below:

An input field #2 is preceded by an input field #1 that contains the data matching the [key field](#), i.e. the "indexed" field, of the associated lookup file. Then the input field #2 will fetch the value in the corresponding field in that lookup file.

Note: By default the fetched lookup value won't be saved into the transaction record unless you enable **Save field data** in the advance property page (by clicking the **More** button). See [1.14 More](#) for details.



Note: The lookup value is fetched for reference. No change is allowed.

1.8.12 FIXED DATA

When “**Fixed Data**” is set to the data type of an input field, the line it occupies on the screen of the mobile computer doesn’t accept data input but shows a pre-defined data string to the data collectors and needs to be included into the data file. Define the data string in the “**Prompt**” element setting.

- ▶ “**Fixed Data**” will be saved as part of the transaction record.

1.8.13 PROMPT

When “**Prompt**” is set to the data type of an input field, the line it occupies on the screen of the mobile computer doesn’t accept data input but shows a pre-defined prompt string on the screen of the mobile computer. Define the prompt string in the “**Prompt**” element setting.

- ▶ It distinguishes “**Prompt**” from “**Fixed Data**” that “**Prompt**” won’t be saved as part of the transaction record.

1.8.14 PAUSE

When “**Pause**” is set to the data type of an input field, the line it occupies on the screen of the mobile computer doesn’t accept data input but shows an alert string to call the attention of the data collectors to something. Define the alert string in the “**Prompt**” element setting.

- ▶ The prompt string will not be saved. However, it will be highlighted and blink constantly on the mobile computer.

1.8.15 COUNTER

When “**Counter**” is set to the data type of an input field, the line it occupies on the screen of the mobile computer doesn’t accept data input but registers the count of user’s data collecting process. It counts each time the “**Counter**” field is executed.

Normally, the record count starts from 0000000 (7 digits for 8000, 8200, 8300, 8400, and 8700 but only 5 digits for 8500). However, when a menu is arranged before a form, and you have configured to save the menu caption, the count will start from “1” instead of “0”.

To save the count record to the data file, click the “**More**” button of the input field for the advanced settings.

You may find the record count in other places:

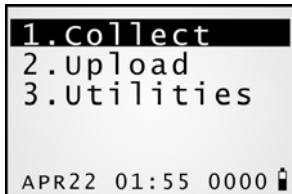
- ▶ The record count also displays at the bottom of user’s application main menu (next to date and time).
- ▶ The record count also displays upon the completion of data input. Refer to [5.1.1 Data Manipulation](#) for “Entry Options”.

8000

For 8000, when a field (a line on the screen of the mobile computer) is set to show counter, the current count will be saved and displays in the format of seven digits starting from 0000000. However, due to the space constraint, the counter displaying in user application main menu would appear slightly different from the one in a field of a data collecting form and in the data file. The following example shows what difference it makes:

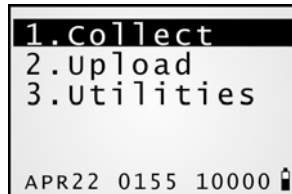
Record Count Range:

0000 ~ 9999



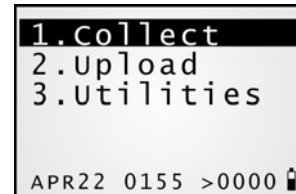
Record Count Range:

10000 ~ 99999



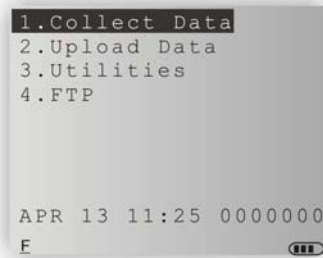
Record Count Range:

>0000 ~ (= 100000 ~)



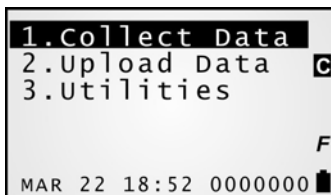
8200

For 8200, when a field (a line on the screen of the mobile computer) is set to show counter, the current count will be saved and displayed in the format of seven digits starting from 0000000. The counter is displayed on the user application main menu as the picture shown below:



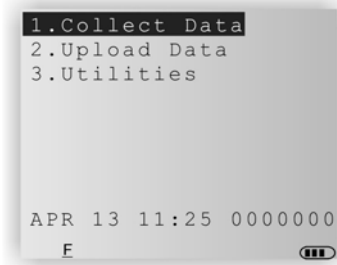
8300

For 8300, when a field (a line on the screen of the mobile computer) is set to show counter, the current count will be saved and displayed in the format of seven digits starting from 0000000. The counter is displayed on the user application main menu as the picture shown below:



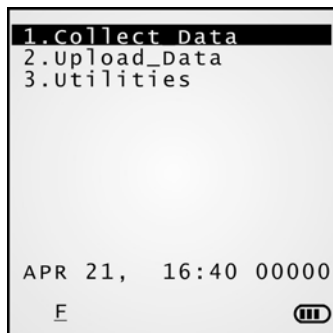
8400

For 8500, when a field (a line on the screen of the mobile computer) is set to show counter, the current record count will be saved and displayed in the form in five digits, starting from 00000. The counter is displayed on the user application main menu as the picture shown below:



8500

For 8500, when a field (a line on the screen of the mobile computer) is set to show counter, the current record count will be saved and displayed in the form in five digits, starting from 00000. The counter is displayed on the user application main menu as the picture shown below:



8700

For 8700, when a field (a line on the screen of the mobile computer) is set to show counter, the record count is saved and displayed by seven digits, starting from 0000000. The counter is displayed on the user application main menu as the picture shown below:



1.8.16 LARGE DATA

When an input field is set to **“Large Data”**, it accepts data of maximum 2048 characters collected by 2D scan engines.

This data type is only available when the reader type is set to 2D reader for 8200, 8400, 8500 and 8700 mobile computers by the **“Initial”** page under **“Setting”** property page. Refer to [5.1.4 Reader Option](#).

- ▶ Each form can have one input field set to read large data.
- ▶ The maximum field length is set to 160 characters by default. To extend the field length up to 2048 characters, you need to manually configure the **“Max. Length”** setting.
- ▶ Note, for **“Large Data”**, the **“Read partial barcode”** is enabled by default whereby only a short piece of the scanned barcode will be read, from the 1st character to the 20th character by default. If you need the whole extended data to be read, be sure to disable **“Read partial barcode”** in the advanced setting of the input field. Click the **“More”** button of an input field to pop up a [Properties] dialogue box. See [1.14.2 Barcode Input](#).

No	Data Type	Prompt	Input Type	Min Length	Max Length	Variables	More
1	Large data	Data:	Reader	0	2048	Nil	More
2	Nil		Both	0	160	Nil	More
3	Nil		Both	0	160	Nil	More

Note: The setting of **“Variable”** / **“Field”** element isn’t available when both of the conditions are met: (1) More than 160 characters are set for the maximum field length, and (2) the **“Read partial barcode”** is disabled.

1.8.17 READ FROM 2D

“Read from 2D” data type is available only when the following conditions are met: (1) 2D scan engine is selected for 8200/8400/8700 mobile computers, and (2) one of the preceding input fields is set to **“Large data”**.

When **“Read from 2D”** is set to the data type of an input field, the line it occupies on the screen of the mobile computer doesn’t accept data input but displays a short piece extracted from the preceding **“Large Data”** field.

- ▶ Any data collecting form having one input field set to **“Large Data”** can have as many input fields set to **“Read from 2D”** succeeding the **“Large Data”** input field.
- ▶ **“Read from 2D”** supports to extract a partial piece that reaching up to 160 characters from the extended data in the preceding **“Large Data”** field. Refer to [1.14.2 Barcode Input](#).

1.8.18 DATE

The “Data Type” starts to support date info. Update both the Batch AG on your PC and the AG Runtime on the mobile computer to the latest version available to have this new feature – the data type “**Date**”. Note 8500 isn’t supported presently.

The data type “**Date**” depends on the mercy of the “**Date & Time stamp**” settings. Disable the “**Date & Time stamp**” to have the “**Date**” listed in the “Data Type” selections. Likewise, selecting “**Date**” data type leaves the “**Date & Time stamp**” settings unavailable.

When “**Date**” is set to the data type of an input field, the line it occupies on the mobile computer’s screen doesn’t accept data input but imports date info. The date info is saved into a form’s transaction entry and stored in the data file.

To further write the date info into lookup files, set the **Record** mode of a form to “Save & update”. (See also [1.2.3 Record](#).) Note a corresponding field must be assigned for the lookup file to admit the time info.

A **More** button is available to set whether the date info shows on the mobile computer’s screen and how it manifests itself (the output format).

1.8.19 TIME

The “Data Type” starts to support time info. Update both the Batch AG on your PC and the AG Runtime on the mobile computer to the latest version available to have this new feature – the data type “**Time**”. Note 8500 isn’t supported presently.

The data type “**Time**” depends on the mercy of the “**Date & Time stamp**” settings. Disable the “**Date & Time stamp**” to have the “**Time**” listed in the “Data Type” selections. Likewise, selecting “**Time**” data type leaves the “**Date & Time stamp**” settings unavailable.

When “**Time**” is set to the data type of an input field, the line it occupies on the mobile computer’s screen doesn’t accept data input but imports time info, with time resolution configurable down to seconds granularity. The time info is saved into a form’s transaction entry and stored in the data file.

To further write the time info into lookup files, set the **Record** mode of a form to “Save & update” (See also [1.2.3 Record](#).). Note a corresponding field must be assigned for the lookup file to admit the time info.

A **More** button is available to set whether the time info shows on the mobile computer’s screen and how it manifests itself (its output format).

1.8.20 SERIAL

This data type is used to keep information with the serial number of a particular terminal, indicating the data record was created by some terminal according to the serial number.

1.9 PROMPT

"**Prompt**" is the label or the name of an input field. Specify a prompt string for an input field, if necessary.

Note: Prompt strings won't be saved in a transaction record except for "**Fixed Data**".

1.10 INPUT TYPE

The "**Input Type**" configures the source that data is collected from.

Depending on the models of the mobile computer, the options available are:

- ▶ Reader
- ▶ Keypad
- ▶ Both
- ▶ RFID (only applicable to 8300, 8500, 8700 Series)
- ▶ All (only applicable to 8300, 8500, 8700 Series)

After the required information is entered into one input field, it takes to press the [Enter] key on the mobile computer to complete the input field. Then the cursor will move either to the next input field, or to the next form or menu.

When "**Reader**" is selected for the "**Input Type**", you need to enable "**Auto Enter**" in the input field property by clicking the **More** button. See [1.14 More](#).

Note: When "**RFID**" is selected, you may still press the [ESC] or [Enter] key on the mobile computer to cancel or confirm a task. However, the other keys on the keypad won't work.

1.11 MINIMUM LENGTH

The "**Min Length**" specifies the minimum length of the input data.

- ▶ If the input data is shorter than specified, it is considered unacceptable. A warning message will display indicating "Data is too short!"

1.12 MAXIMUM LENGTH

The “**Max Length**” specifies the maximum length of the data input. 8000 and 8300 allow maximum 80 while 8200, 8400, 8500, and 8700 up to 160.

You can facilitate data input by showing input marks in the input field. Click the **More** button to pop up the [Properties] dialog box. In [Field data] group box, tick the “**Show input mark**” checkbox and assign a mark or symbol. The input field will be highlighted by a succession of the assigned input mark that is equally long as the maximum length specified.

- ▶ If the input data is longer than specified maximum, it is considered unacceptable.

1.12.1 INPUT VIA BARCODE/RFID READER

For the data input from the barcode or RFID reader, a warning message will display when the data is too long.

1.12.2 INPUT VIA KEYPAD

As long as the length falls within the scope specified, a data input by the keypad is always acceptable even if it is longer than the screen can display.

Taking the scenario below for example, when:

- ▶ the screen of the mobile computer displays 20 characters per line for small font, and
- ▶ the prompt string configured takes up 12 characters.

No	Data Type	Prompt	Input Type	Min Length	Max Length	Variables	More
1	Text	Description:	Both	1	10	Nil	More
2	Nil		Both	0	80	Nil	More
3	Text	Description:	Both	1	10	Nil	More
4	Extension		Both	0	80	Nil	More
5	Text	Description:	Both	1	15	Nil	More
6	Extension		Both	0	80	Nil	More
7	Text	Description:	Both	1	30	Nil	More
8	Extension		Both	0	80	Nil	More

The transaction between the data input, the on-screen indication and the record saved would be in the relationship as tabulated below:

Line	Input from Keypad	Screen Reading	Transaction Record
#1	12345678	12345678	12345678
	1234567890	34567890	1234567890
	123456789 <u>QABCDE</u>	3456789E	123456789 <u>E</u>
#3, 4	123456789 <u>QA</u>	123456789 <u>A</u>	123456789 <u>A</u>
#5, 6	1234567890 <u>LEMONADE</u>	1234567890 <u>LEMOE</u>	1234567890 <u>LEMOE</u>
#7, 8	1234567890 <u>ORANGE_JUICE</u>	1234567890 <u>ORANGE_JUICE</u>	1234567890 <u>ORANGE_JUICE</u>

1.13 VARIABLES/FIELD

“**Variables**” / “**Field**” are both the elements of an input field that decides whether the input field should admit a data read or imports some other data. “**Variables**” and “**Field**” are exclusive against each other. When a data collecting form refers to a lookup file, the element available is “**Field**” while otherwise “**Variables**”.

Refer to [1.4 Lookup \(File\)](#).

No	Data Type	Prompt	Input Type	Min Length	Max Length	Field	More
1	Text	ID:	Both	0	160	Nil	<input type="button" value="More"/>
2	Counter	Counter	Both	0	160	Nil	<input type="button" value="More"/>
3	Nil		Both	0	160	Nil	<input type="button" value="More"/>

1.13.1 FIELD

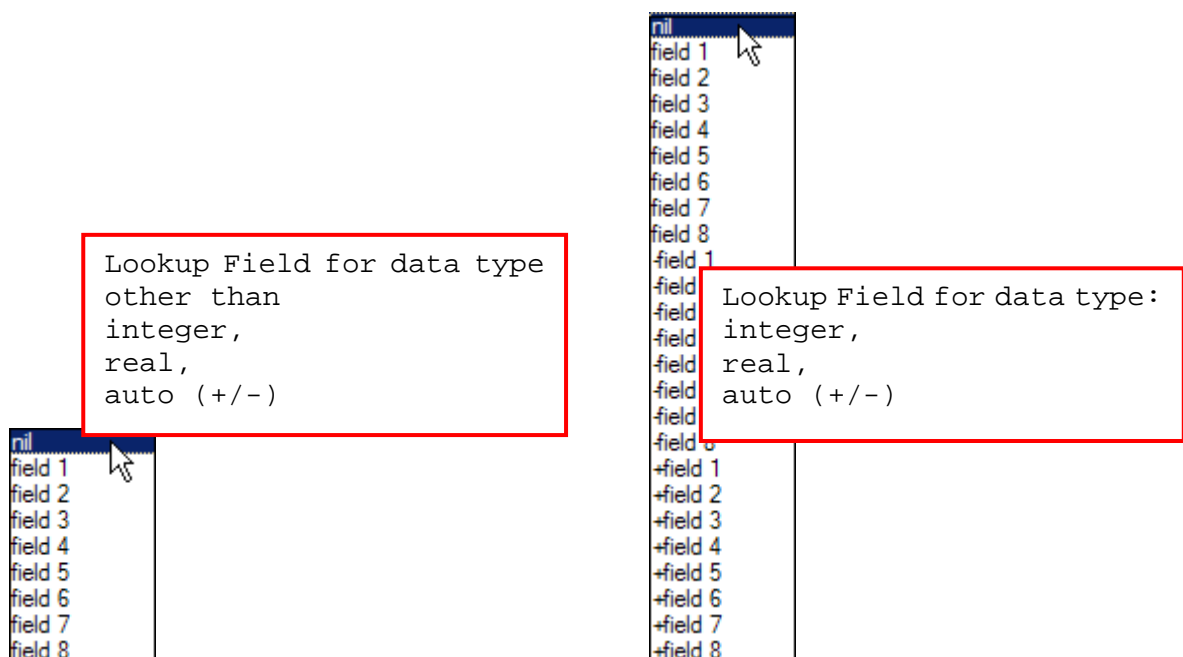
"Field" element is only available when the data collecting form is set to refer to a lookup file. For "Field" element, you set an input field to either admit the data read or fetch lookup value.

A lookup file usually contains a list of key fields (i.e. the indexed fields) and other associated fields. Normally, the "key field" is kept as Field #1. When an input field refers to the key field and finds its data matching, the following input fields will proceed to import the data from the remaining associated fields of that lookup file.

The following screenshots show you the "Field" options available when the input data type is selected as **Integer/Real/Auto(+/-)**, or otherwise:

- ▶ For the input data types other than **Integer**, **Real**, and **Auto (+/-)**, see left below.
- ▶ For the input data types of **Integer**, **Real**, and **Auto (+/-)**, see right below.

Note: For the field options with a prefixed arithmetic sign (+, -), the input data will be added or deducted from the lookup value.



1.13.2 VARIABLES

“**Variables**” element is only available when the data collecting form isn’t referring to any lookup file. For “**Variables**” element, you set an input field to either admit the data read or fetch some other data collected by the proceeding form.

The following describes how “**Variables**” function:

- ▶ When an input field is set to “**set V1**”, the data admitted can be fetched by an input field set to “**get V1**” in the succeeding form.
- ▶ When an input field is set to “**get V1**”, it fetches the value in the input field set to “**set V1**” in the direct preceding form.
- ▶ When an input field is set to “**get&set V1**”, it fetches the value from an input field set to “**set V1**” in the preceding form and sets the fetched value to the new variable that is to be fetched by the succeeding form. This selection is applicable when a data needs to pass down to an over next form.

Examples:

- ▶ Select “**set v1**” for input field #1 of form 1, and its input data will be saved in the first character array.
- ▶ Select “**get v1**” for input field #3 of form 2, it will fetch the data in field #1 of form 1 automatically.
- ▶ Select “**get&set v1**” for input field #3 of form 2, it will fetch the data in field #1 of form 1 and is set to a new variable that can be fetched by the direct succeeding form.

1.14 MORE

To every data collecting form, every input field features a “**More**” button by which the advance settings of the input field is possible.

Click the “**More**” button of an input field to pop up a [Properties] dialogue box as below:

The screenshot shows a 'Properties' dialog box with the following settings:

- Form #1: Form #1
- Line #1: Line #1
- Field data**
 - Fixed data length: 0
 - Left aligned (padded with space)
 - Initial value or text: [Empty]
 - Add prefix code: [Empty]
 - Add suffix code: [Empty]
 - Show input mark: [Empty]
 - Decimal places: variable
 - Decimal symbol: .
 - Compare
 - Comparison Operators Settings
- Barcode input**
 - Read partial barcode
 - Start position: 1
 - Maximum length: 20
 - Check leading code: [Empty]
 - Check Digit verification
 - MOD 10 Double-Add-Double (next high)
 - Auto ENTER: Scan+ENTER

Buttons: OK, Cancel

1.14.1 FIELD DATA

The [Field Data] group box features the following configuration:

Fixed Data Length

Select this item and enter a value to confine the data length within the specified value.

- ▶ If the input data is longer than specified, it will be truncated and saved to transaction record. When the data is browsed on the mobile computer, it would display in a truncated manner.
- ▶ If the input data is shorter than specified, "space" or "0" can be selected to add ahead or after the data based on either "Left" or "Right" alignment.

Below are some examples:

Fixed data length	Alignment	Input data	Transaction record
4	Left aligned / space	123456789	1234
4	Right aligned / space	123456789	6789
10	Left aligned / 0	7654321	7654321000
10	Right aligned / 0	7654321	0007654321

Initial Value or Text

Select this item and enter a value or text that is up to 9 characters to have it show in the input field on the screen of the mobile computer. Such value or text will be replaced by the data input. It functions to provide the prompt of an initial value of quantity for example.

Note: When an input data is set to a "variable" for the following data collecting form to fetch, the Initial Value/Text won't be available.

Add Prefix Code

Select this item to prefix the input data with a code. Click the text box to pop up a [Grid Control] dialogue box. Select one or more codes from the ASCII codes presented. For example, a dollar sign ("\$\$") can be added ahead of the data input for price.

Add Suffix Code

Select this item to suffix the input data with a code. Click the text box to pop up a [Grid Control] dialogue box. Select one or more codes from the ASCII codes presented. Next to delimiters (section [6.3 Data Field Properties](#)), prefix and/or suffix codes can also function to separate each data piece.

Note: You may use prefix/suffix code to enclose the input data.

Show Input Mark

Select this item and enter a specific mark or symbol, such as underline (_) or asterisk (*), into the text box. Such mark or symbol will show in a succession to highlight the input field. However as soon as any data is input, such mark/symbol succession will be replaced by the data. The number of input marks shown on the screen equals to the maximum length of data specified in [1.12 Maximum Length](#).

Decimal Places

This drop-down menu is available only when the Data Type field is set to **Real**. "Decimal places" defines how many decimal digits after the decimal point.

- ▶ The "Decimal places" is set to **variable** by default meaning any real numbers are acceptable.

When "Decimal places" is set to '4', for example, and the data input has only 2 decimal places like "8.12", the system will save the input data as "8.1200". If you try to input a number "8.12345" via the keypad, the fifth decimal digit will be discarded. Only "8.1234" is considered acceptable and saved to file.

If the barcode "8.12345" is scanned via the barcode reader, a warning message "Incorrect decimal input" will display on the screen of the mobile computer, and the system will automatically clear the input data and wait for new entry.

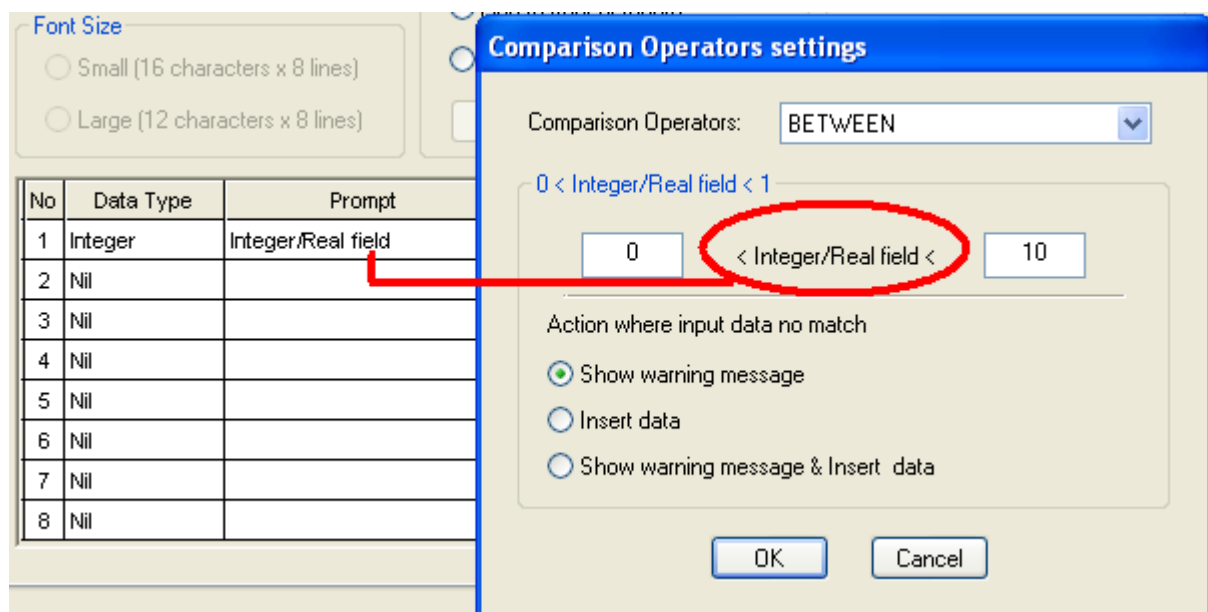
Decimal Symbol

This drop-down menu is available only when the Data Type field is set to **Real**. "Decimal symbol" allows users to designate ',' or '.' as the decimal point symbol.

- ▶ The "Decimal symbol" is set to '.' by default.

Compare

This function is available only when the Data Type field is set to **Integer** or **Real**. Tick the "Compare" checkbox to enable the "Comparison Operators settings" button and then click the button to bring up the settings window. With this comparison function enabled, the field value will be compared with the comparison condition. You can determine the behaviour in reaction to results not matched, by selecting the radio buttons as follows:



- ▶ Show warning message: Show message for notification. The scanned data will be discarded.
- ▶ Insert data: The scanned data will be inserted.
- ▶ Show warning message & Insert data: Show message for notification and the scanned data will also be inserted.

1.14.2 BARCODE INPUT

The [Barcode Input] group box features the following configuration:

Read Partial Barcode

To collect only a short piece of the barcode scanned, select this item and configure which character to start with and how long the data should be.

An example:

Start position	Max. length	Barcode scanned	Transaction record
2	10	9876543210	876543210
2	3	9876543210	876

Check Leading Code

Select this item to enable the check against the very first character of a barcode scanned. When the leading character doesn't match the configured code, the barcode will be rejected.

An example:

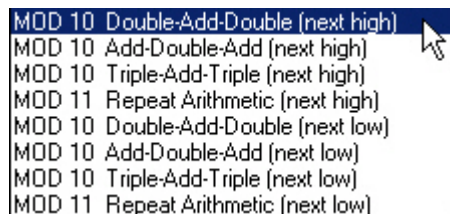
Leading code	Barcode scanned	Transaction record
9	9876543210	9876543210
2	9876543210	(Error message: Wrong leading code!)

When "Read partial code" and "Check leading code" are both enabled:

Start position	Max. length	Leading Code	Barcode scanned	Transaction record
2	7	8	9876543210	8765432
2	7	9	9876543210	(Error message: Wrong leading code!)

Check Digit Verification

The "check digit" refers to the digit at the end of a barcode derived from a simple formula to validate the barcode scanned. Select this item to enable the check against the barcode's check digit. From the drop-down menu, select one formula for the checksum examination. Modulus 10 and 11 are available. When the check digit isn't validated, the barcode scanned will be rejected.



Auto ENTER

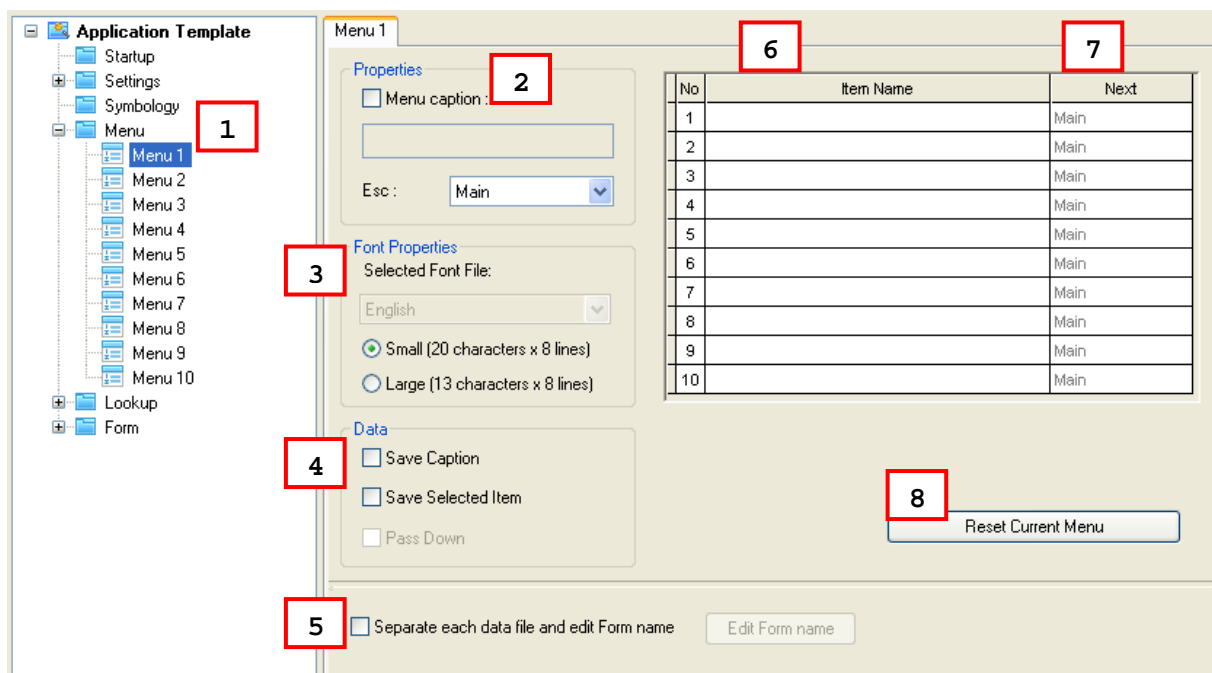
Normally, [Enter] key needs to be pressed on the mobile computer to complete one input field, so that the on-screen cursor will proceed to the next input field, or the next form/menu configured. From the drop-down menu, select if to trigger a carriage return before or after the barcode is scanned.

- ▶ For barcode scanning, it proves to save time when Scan+ENTER is enabled.
- ▶ For a typical application of continuous scanning, it is efficient by making use of ENTER+Scan.

MENU

A menu is a list of commands for users to access various forms defined for the mobile computer to collect data. With Batch AG, up to ten menus are definable. Forms and menus can be set to connect to each other for user's data collecting needs.

A "Menu" property page covers the settings as the picture shown below:



In the following contents of this chapter, you will be guided to how menus can be defined through the **Menu** property pages.

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2.1 SELECT A MENU

- ▶ **Menu** 1~10 are available. Select one to start with, usually "Menu 1".
- ▶ Each **Menu** carries these group boxes: the [Properties], [Font Size], [Data], a command name editing table, a checkbox to enable the **Edit Form Name** button, and a **Reset Current Menu** button.

2.2 PROPERTIES

[Property] group box features the settings of **Menu caption** and **Esc**. The former specifies the title of the menu while **Esc** configures the data collecting form or any other menu to succeed the menu.

In the following content of this section, you will be walked through said settings one by one.

2.2.1 MENU CAPTION

Select "**Menu Caption**" to be able to specify a title for the menu if necessary.

2.2.2 ESC

Select a form or menu to display when the [ESC] key is pressed to the menu. Options available are:

- ▶ Main Menu
- ▶ Form 1 ~ 10
- ▶ Menu 1 ~ 10

Note: Normally, the [ESC] key is used to return to a previous form or menu.

2.3 FONT SIZE

Large font is only applicable to the double-byte languages such as Chinese, Japanese, etc. For a menu, font size needs to be configured according to the font in use on the mobile computer.

Refer to [Localization](#) and [1.3 Font Size](#).

2.4 DATA

[Data] group box features a few actions for the mobile computer to take when the menu is selected on the mobile computer

2.4.1 SAVE CAPTION

Select "**Save Caption**" to save the menu caption to the transaction record as long as the menu is selected and run.

2.4.2 SAVE SELECTED ITEM

Select "**Save Selected Item**" to save the name of the selected item to the transaction record.

2.4.3 PASS DOWN

As long as either of the aforesaid items is selected, the option "**Pass Down**" would become available. Select if to pass the enabled information to the next form or to affix the enabled information to a transaction record entry.

By the options in the [Data] group box, the combinations available are:

- ▶ Save caption & pass down
- ▶ Save selected item & pass down
- ▶ Save both & pass down

Note: The selected data will be passed down to an associated form or menu.

2.5 SEPARATE EACH DATA FILE AND EDIT FORM NAME

When a menu leads to more than one form, select this item to save the data collected from each form to individual data files.

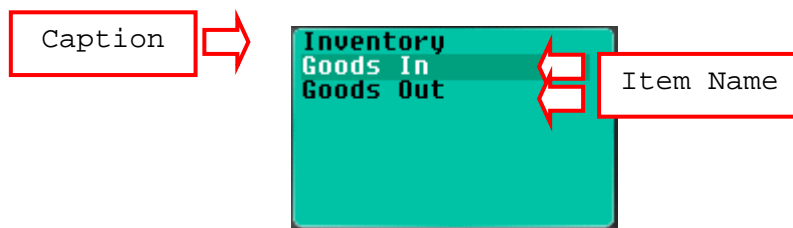
As soon as this item is selected, the "**Pass down**" in [Data] group box is selected automatically, which means the menu caption and/or the selected item name will be affixed to each transaction data entry and saved into the data file of the due form.

2.6 ITEM NAME

In the upper right of the **Menu** property page, there is a table that can configure up to ten items for a menu. Each row in this table sets up a menu item that will occupy one line on the screen of the mobile computer while each column configures an element of a menu item.

For the “**Item Name**” setting, specify the names of the items to be featured by the menu.

For example, you may specify "1. Goods In" or simply "Goods In" as the first item name (See below).



Note: Whether you have included a number in an item or not, you can press [1] on the mobile computer to enter the first menu item, say the "Goods In" menu as exemplified by the screenshot above.

2.7 NEXT

For the “**Next**” setting, sets a menu or a form for the menu item to lead to when the menu item is selected. Options available are:

- ▶ Main Menu
- ▶ Form 1 ~ 10
- ▶ Menu 1 ~ 10

The selection of an item is executed by one of the following operations performed on the mobile computer -

- ▶ Press the shortcut key (Item No.) of a menu item, e.g. press [2] to select the second menu item. The form or menu you specified here in the “**Next**” element column will display.
- ▶ Press the navigation keys [Up/Down] to move between the menu items, and press [Enter] to select it.

2.8 RESET CURRENT MENU

Click the “**Reset Current Menu**” button to load the default settings.

Note: The settings of current menu will be cleared.

LOOKUP

A lookup file is a database created for information reference. Up to three lookup files are supported by the mobile computer and definable with the Batch AG. If the settings on a **Lookup** property page are improperly made, it may go wrong when an input field of a form refers to a lookup field.

The **Lookup** property page makes it possible for users to provide the information about the data structure of the lookup file(s) they are going to use and to configure the related parameters.

The screenshot shows the '1st Lookup File' configuration window. On the left is a tree view of the 'Application Template' with 'Lookup' expanded and '1st Lookup File' selected (1). The main area is divided into sections: 'Field property' (2) with 'Number of fields' set to 0, 'Fixed length' selected, and 'DBF file location' set to 'SRAM'; 'Lookup data' (3) with 'Lookup data can be uploaded' checked; 'Action when input data no match' (4) with 'Continue' selected; a table (5, 6, 7) with 8 rows and 4 columns (No, Offset, Length, Key Field); 'Action when record format is wrong' (8) with 'Stop the download process' selected; and a 'Reset Current Lookup File' button (9).

No	Offset	Length	Key Field
1	1	1	<input type="radio"/>
2	1	1	<input type="radio"/>
3	1	1	<input type="radio"/>
4	1	1	<input type="radio"/>
5	1	1	<input type="radio"/>
6	1	1	<input type="radio"/>
7	1	1	<input type="radio"/>
8	1	1	<input type="radio"/>

However, to collect data with the help of lookup file(s), the following settings are needed in addition to the “**Lookup**” property page:

- ▶ The [Lookup] group box featured on the **Form** property page. See [1.4 Lookup \(File\)](#).
- ▶ The setting of “**Data Type**” of an input field on the **Form** property page. See [1.8.11 Lookup \(Data Type\)](#).
- ▶ The setting of the “**Field**” element of an input field on the **Form** property page. See [1.13.1 Field](#).

Users need to apply an application template that refers to lookup files to be able to send the lookup files to the mobile computer; otherwise the command **3. Utilities | 8. Load Lookup File** will be absent from the user application main menu.

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- 3.3 Lookup Data 74
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3.1 SELECT A LOOKUP FILE

Up to 3 lookup files are definable. Select one to start with, usually the “1st Lookup File”.

Each **Lookup** property page carries these elements: the group boxes [Field property], [Lookup data], [Action when input data no match], [Action when record format is wrong] and a table that enables users to provide the data structure of their lookup file(s).

In the following contents of this chapter, you will be walked through the said elements one by one:

3.2 FIELD PROPERTY

[Field property] group box features the settings of “**Number of fields**”, “**Fixed length**”, “**Delimiter**” and “**DBF file location**”. Together with the data structure table, users are able to provide the information about the data structure of their lookup file(s) at hand.

3.2.1 NUMBER OF FIELDS

In the “**Number of fields**” box, configure the number of fields in the lookup file you are using. Set a number that is no smaller than the lookup file’s actual field amount.

Refer to [1.13.1 Field](#).

3.2.2 FIXED LENGTH

Fixed Length is the default setting. When **Fixed Length** is selected, users are able to define the length of the information pieces in a lookup file, so that a data collecting form is able to look up in a database that has no express matrix or grid structure.

The following settings are necessary:

- ▶ Number of fields
- ▶ Offset
- ▶ Length

3.2.3 DELIMITER

“**Delimiter**” setting lets users to define an ASCII character to separate the data fields. Proceed to define related settings as follows:

- ▶ Number of fields
- ▶ Max. Length

If the maximum length of each field is set improperly, you will receive a warning message when the mobile computer is downloading the lookup file. Whether the download will fail or not depends on the action you want the mobile computer to take when the data format is wrong. Refer to the settings of [3.8 Action When Record Format Is Wrong](#).

3.2.4 DBF FILE LOCATION (8200/8400/8700 ONLY)

The setting of “**DBF file location**” is only available for 8200, 8400, and 8700 since currently only these models support the memory extension with an SD card.

By the setting of “**DBF file location**”, you may specify where the lookup file is located. The options are:

- ▶ SRAM
- ▶ SD Card

Normally, the lookup files are stored in the SRAM of the mobile computer. The original lookup files (.TXT) will be automatically saved to DBF format when being sent to the mobile computer.

8200/8400/8700 support to save files to the SRAM, to the SD card or to the SRAM through the SD card.

Before the lookup files are sent to the mobile computer, they need to be converted to DBF format (.DB0) by the DBF converter tool. You must save the lookup files (.TXT) to DBF format first. Refer to [7.4 SD DBF Converter \(8200/8400/8700 Only\)](#).

The following table details how a DBF file can be sent to the mobile computer when the destined locations are different:

File Location	Sending Method
SRAM	<p>(1) Send the lookup file to 8200/8400/8700 SRAM.</p> <ul style="list-style-type: none"> ▶ The sending is carried out by the lookup sending utility featured by the Batch AG. Click Transfer Send Lookup on the menu bar of the Batch AG to run the utility. <p>(2) Send the lookup file to 8200/8400/8700 SRAM through the SD card.</p> <ul style="list-style-type: none"> ▶ The sending is carried out by the DBF converter featured by the Batch AG. Click Tools DBF Converter from the menu bar of the Batch AG to run the utility. In the DBF tool window, be sure to enable Distribute. ▶ Note the mobile computer's application template must have the Lookup property's DBF file location set to “SRAM”.
SD	<p>Send the DBF file to the SD card in 8200/8400/8700.</p> <ul style="list-style-type: none"> ▶ Such sending is only feasible when the mobile computer installed with the SD card runs as a removable disk. It requires the mobile computer with SD card connected to a host computer with a USB cable. ▶ Such sending is carried out by the DBF converter featured by the Batch AG. Click Tools DBF Converter from the menu bar of the Batch AG to run the utility. In the DBF tool window, be sure to enable Distribute. ▶ Note the mobile computer's application template must have the Lookup property's DBF file location set to “SD Card”.

Note: It takes less time to send lookup files to SRAM via SD card than send to SRAM directly.

3.3 LOOKUP DATA

[Lookup data] group box features the settings about how the data in the lookup file should be handled

3.3.1 ONLY READ DATA ONCE

When a data collecting form is configured to refer to a lookup file, one of its input fields would normally compare an incoming data with the lookup file's key field for as many times as required. However, when it is necessary to restrict a key field data to only one reading, "**Only read data once**" is the option that needs to be enabled.

The following details how a data collecting form deals with the incoming data when **Only read data once** is enabled:

Lookup data found matching...

A data is accepted by the initial entry only. The second entry of the same piece of data would be found matching with the previous piece in the lookup file, and is rejected. The input field will be cleared up automatically by default.

- ▶ For 8000/8200/8300/8400/8700, it can be set to show a warning message before the input field is cleared. In this case, press any key on the mobile computer to clear the input field.

No lookup data found matching...

As long as **Only read data once is enabled**, the action for a data collecting form to take would be set to **Insert to lookup file** automatically when no data in the lookup file is found matching the incoming data, i.e. new data (see [3.4 Action When the Input Data Has No Match](#)). Then the incoming data will be written into the lookup file.

- ▶ Another action available for the data collecting form to take is **Show Warning Message & Insert**. It supports to show a warning message before the incoming data is accepted into the lookup file.

3.3.2 LOOKUP DATA CAN BE UPLOADED

This is the default setting. It enables the exchange of a lookup file between the mobile computer and a host computer (such as your PC). On the mobile computer, select **2. Upload Data** from the user application main menu after you have the data collected and have the connection established between your PC and the mobile computer.

Refer to [1.2.3 Record](#).

3.3.3 TRIM SPACE WHEN LOOKUP DATA CAN BE UPLOADED

This option is only available when the **Delimiter** option is selected in the [Field property] group box. Select this option to remove the spaces in a lookup file that has delimiters to separate the data fields when it is uploaded to your PC.

3.4 ACTION WHEN THE INPUT DATA HAS NO MATCH

The [Action when input data no match] group box features a few actions for the data collecting form to take when the incoming data finds no match in the key fields of the lookup file. See [3.7 Key Field](#) for reference.

3.4.1 CONTINUE

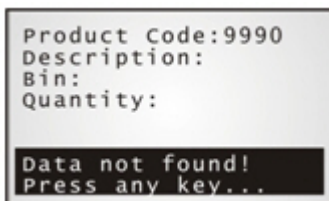
When “**Continue**” is selected, the data collecting form goes on and allows the incoming data to input into its field when the incoming data finds no match in the key fields of the lookup file. No message will display.

- ▶ With “**Continue**” selected, if the “**Record**” mode of the data collecting form is set to “Save”, “Save & update”, “Save & output record”, “Save & output screen” or “Save & remove” on the **Form** property page, data can only be saved in a data file. See [1.2.3 Record](#) for reference.

3.4.2 SHOW WARNING MESSAGE

When **Show warning message** is selected, a warning message “Data not found!” would display when the incoming data finds no match in the key fields of the lookup file.

- ▶ The cursor shows at the end of the data input to prompt you to input other data. (By the example below, you need to replace “9990” with other data.)



3.4.3 INSERT TO LOOKUP FILE

When “**Insert to lookup file**” is selected, the data collecting form proceeds to accept the incoming data without showing any message even when the incoming data finds no match in the key fields of the lookup file.

The incoming data will be written into the target lookup file if the **Record** mode of the data collecting form is set to “Update lookup”, “Save & update”, “Remove from lookup”, or “Save & remove”. See [1.2.3 Record](#) for details.

3.4.4 SHOW WARNING MESSAGE & INSERT

When **"Showing warning message & insert"** is selected, the data collecting form shows a warning message "Data not found!" before accepting the incoming data into the target lookup file even if the incoming data finds no match in the lookup file.

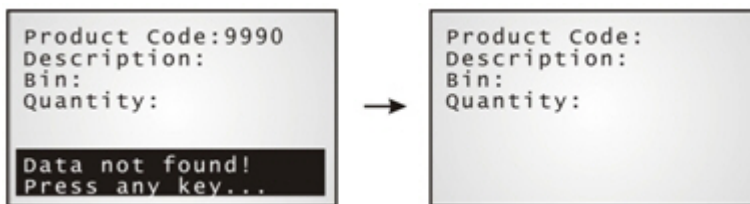
The incoming data will be written into the target lookup file if the **Record** mode of the data collecting form is set to "Update lookup", "Save & update", "Remove from lookup", or "Save & remove". See [1.2.3 Record](#) for reference.

3.4.5 CLEAR THE SCREEN

When **"Clear the screen"** is selected, the data collecting form automatically clears the incoming data when it finds no match in the lookup file. The incoming data isn't accepted into the lookup file. The input field awaits new entry.

3.4.6 SHOW WARNING & CLEAR SCREEN

When **"Show warning & clear screen"** is selected, the data collecting form shows a warning message "Data not found!" when the incoming data finds no match in the lookup file. The incoming data will be cleared and the input field awaits new entry.



3.5 OFFSET

This applies to **Fixed Length**. Specify the start position for each referred data field.

3.6 (MAX) LENGTH

- ▶ When the field property is set **Fixed Length**, specify the length for each referred data field. The value can be 255 at most.
- ▶ When the field property is set **Delimiter**, specify the maximum length for each referred data field. The value can be 255 at most.

Note: If a delimiter is used to separate data fields, any improper value would cause wrong data format.

3.7 KEY FIELD

The import of data depends on the key field. Select your key field so that an index file can be created for the database (lookup file).

- ▶ When a form makes reference to a lookup file, there must be one input field associated with the key field of the database (lookup file).

When its input data is found matching with that of the key field, data of other input fields, if referring to a lookup field, will be imported accordingly.

If no matching, see [3.4 Action When the Input Data Has No Match](#).

Note: If offset and length of each field are specified improperly, it may go wrong with data import.

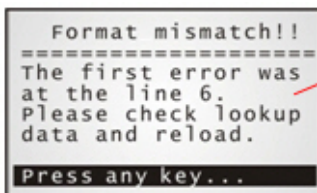
3.8 ACTION WHEN RECORD FORMAT IS WRONG

The [Action when the format of record is wrong] group box features a few actions for the application template to take when a lookup file of wrong data format is sent to the mobile computer. The crucial factors for a lookup file's data format are usually the separation of data fields, i.e. fixed length and delimiter.

3.8.1 STOP THE DOWNLOAD PROCESS

When **"Stop the download process"** is selected, if a lookup file of wrong format is being sent in, the application template first displays a warning message on the screen of the mobile computer to notice the format mismatching line found, and then stops the downloading.

Then you need to correct the data format, for example, remove a blank line at the end of the lookup file. Then try again.



The preceding records (line 1~5 for example) can still be downloaded.

The following table lists the actions taken by the application template when the incoming lookup file's format is wrong:
(Note: An application template is marked as ".AGX".)

Fixed Length

Conditions	Action
Record length in source file is greater than that specified in .AGX	Stop download
Record length in source file is less than that specified in .AGX	Stop download

Delimiter

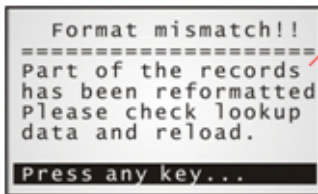
Cause of Failure	Action
The number of fields in the source lookup file is more than that specified in .AGX	Stop download
The number of fields in the source lookup file is less than that specified in .AGX	Stop download
The field length in the source lookup file is more than that specified in .AGX	Stop download
The field length in the source lookup file is less than that specified in .AGX	Allow download ^{Note}

Note: In the case delimiters are used for the separator of data pieces in the source lookup file, if the max data length specified in the application template is more than the field length in the source lookup file, the data field in the lookup file will be padded with blank space when it is sent to the mobile computer.

3.8.2 TRUNCATE / REFORMAT THE RECORD

When “**Truncate/Reformat the Record**” is selected, if a lookup file of wrong format is sent in, the application template first displays a message on the mobile computer to notify the mismatching part fixed, automatically truncated, or reformatted during downloading.

For example, the additional fields of a record will be left out. However, you may need to reload the lookup file after the data format has been corrected.



The downloading of lookup file will be completed with a successful fix to the mismatching line(s).

The following table lists the actions taken by the application template when the incoming lookup file's format is wrong:

(Note: An application template is marked as “.AGX”.)

Fixed Length

Conditions	Action
Record length in source file is greater than that specified in .AGX	Truncate
Record length in source file is less than that specified in .AGX	Reformat ^{Note}

Note: Each field of that specific record will be padded with additional space.

Delimiter

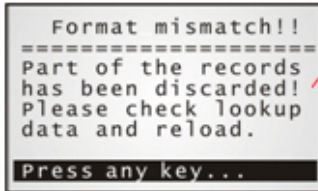
Conditions	Action
The number of fields in the source lookup file is more than that specified in .AGX	Truncate
The number of fields in the source lookup file is less than that specified in .AGX	Reformat ^{Note1}
The field length in the source lookup file is more than that specified in .AGX	Truncate
The field length in the source lookup file is less than that specified in .AGX	Allow download ^{Note2}

Note: (1) Additional fields will be appended with additional delimiter and space.

(2) The data field concerned will be padded with additional blank space.

3.8.3 SKIP THE RECORD

When **“Skip the record”** is selected, if a lookup file of wrong format is set in, the application template first displays a message on the mobile computer to indicate the mismatching part discarded. Then you may need to reload the lookup file after the data format has been corrected.



The downloading of lookup file will be completed without the mismatching line(s).

Fixed Length

Conditions	Action
Record length in the source lookup file is more than that specified in .AGX	Skip
Record length in the source lookup file is less than that specified in .AGX	Skip

Delimiter

Conditions	Action
The number of fields in the source lookup file is more than that specified in .AGX	Skip
The number of fields in the source lookup file is less than that specified in .AGX	Skip
The field length in the source lookup file is more than that specified in .AGX	Skip
The field length in the source lookup file is less than that specified in .AGX	Allow download ^{Note}

Note: That specific field will be padded with additional blank space.

3.9 RESET CURRENT LOOKUP FILE

Click the **“Reset Current Lookup File”** button to load the default settings.

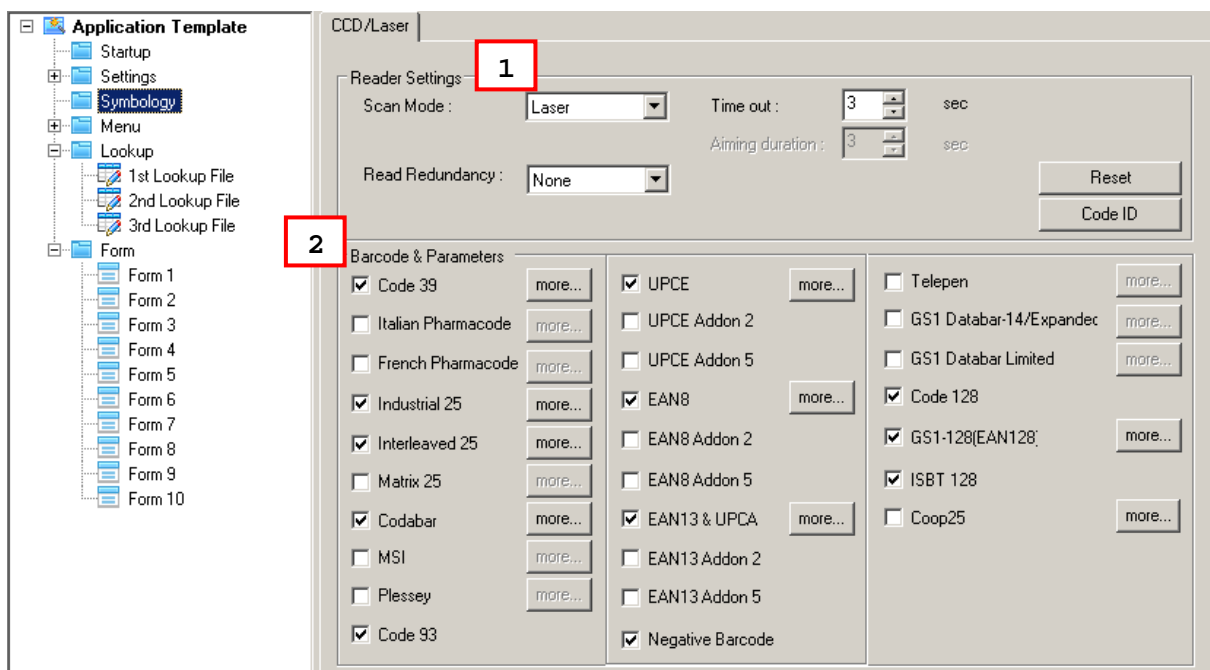
Note: The settings for the current lookup file will be cleared.

SYMBOLLOGY

A symbology means a type of barcode that is coded by its own rule. An 8-series mobile computer's barcode support depends on the scan engine equipped.

According to application requirement, users may need to enable or disable certain symbologies, and the configuration should be included in the application template on the mobile computer. The Batch AG's **Symbology** property page is the access to achieve the such configuration.

The **Symbology** property page covers the group boxes of [Reader Settings] and [Barcode & Parameters]. In the following contents of this chapter, you will be guided though these group boxes one by one.



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4.1 READER SETTINGS

The [Reader Settings] group box features a set of options regarding how the scan engine should scan and read. Refer to the following appendices for information on barcode reader settings —

- ▶ Appendix II - CCD/Laser Scan Engine for details.
- ▶ Appendix III - LR/ELR Laser Scan Engine for details.
- ▶ Appendix IV - 2D Scan Engine for details.

4.1.1 CODE ID

The **“Code ID”** means the characters prefixed to a barcode scanned to identify the barcode’s symbology. Click the **Code ID** button to pop up a [Code ID] dialogue box that features the settings of barcode ID. When **“Code ID”** is enabled, a Code ID will be prefixed to the decoding result of a barcode.

- ▶ Click on the text box next to a barcode name, and select one code from the pop-up [Grid Control] (ASCII codes) dialogue box.

Alternatively, you may click Set 1 ~ 5 buttons to assign code ID for all text boxes.

Note: The Code ID settings for GS1 Databar-14/Expanded, GS1 Databar Limited, and GS1-128 are detailed in [4.2 Barcode & Parameters](#).

4.1.2 RESET

Click the [Reset] button to load the default settings. The resetting applies to the following -

- ▶ The settings in [Reader Settings] group box. See [4.1 Reader Settings](#).
- ▶ The settings in [Barcode & Parameters] group box. See [4.2 Barcode & Parameters](#).

Note: The current settings will be cleared.

4.2 BARCODE & PARAMETERS

The [Barcode & Parameters] group box features the advance settings of various barcode symbologies supported.

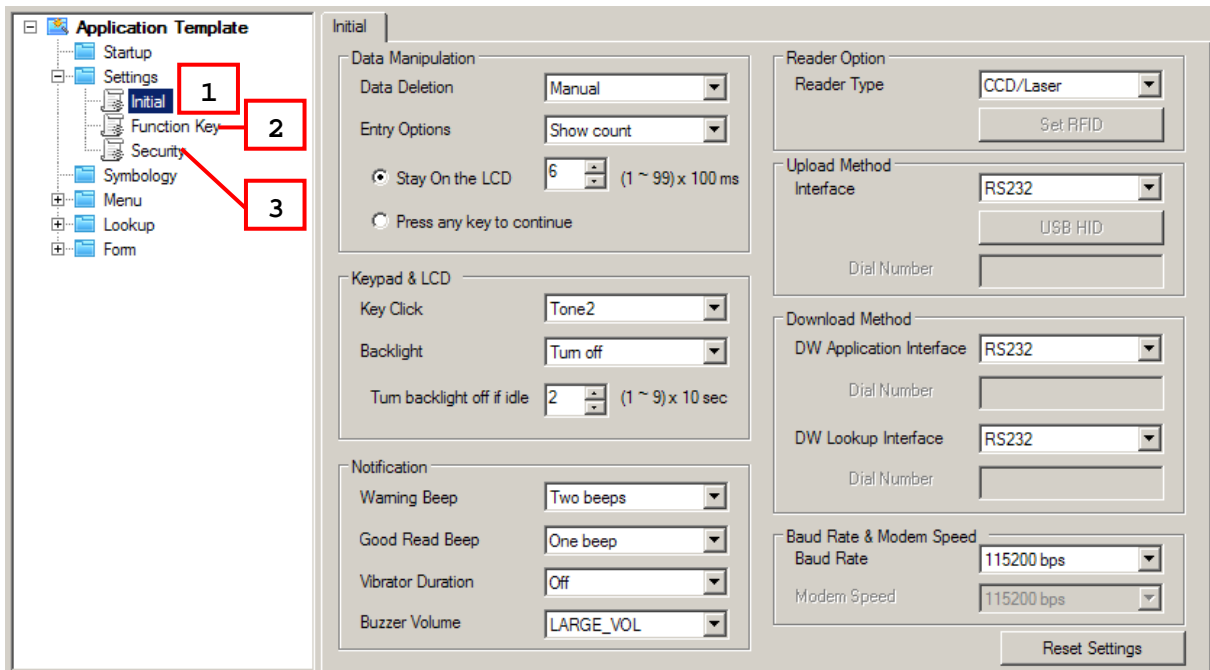
Refer to the following appendices for information on symbology settings —

- ▶ Appendix II - [CCD/Laser Scan Engine](#) for details.
- ▶ Appendix III - [LR/ELR Laser Scan Engine](#) for details.
- ▶ Appendix IV - [2D Scan Engine](#) for details.

Note: Code ID settings for GS1 Databar-14/Expanded, GS1 Databar Limited, and GS1-128 are provided in this group box.

SETTINGS

The **Settings** property page features the basic settings for the application template. These basic settings are divided into three themes: “**Initial**”, “**Function Key**” and “**Security**”. Each is presented on a single tabbed page of the **Settings**.



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5.1 INITIAL SETTINGS

The **Initial** property page features the following settings:

Settings	Default Value	Remarks
Data Deletion	Manual	
Entry Options	Show count	Stay on the LCD for 600 ms
Key Click	Tone 2	
Backlight	Turn off	
Warning Beep	Two beeps	
Good Read Beep	One beep	
Vibrator Duration	Off	
Buzzer Volume	LARGE_VOL	Only for 8200/8400
Reader Option	CCD/Laser	
Upload Method	Cradle-IR ^{Note}	Bluetooth SPP is not available on the mobile computer unless selected for downloading to 8061, 8360.
Download Method	Cradle-IR ^{Note}	
Baud Rate & Modem Speed	115200 bps	

Note: For 8200/8400/8700, the default upload/download port is RS-232.

5.1.1 DATA MANIPULATION

The [Data Manipulation] group box covers settings of **“Data Deletion”** and **“Entry Options”** which are detailed in the following:

Data Deletion

Configures if the data should be automatically deleted from the mobile computer after it is uploaded to a host computer.

It is set to “Manual” by default, which means the application template won’t automatically delete the data from the mobile computer after uploading it to a host computer but leaves it to your decision if to delete the data right after the uploading completes. When the upload completes, you will be prompted if to delete the data. If you decide not to delete the data right at the moment, you can always delete the data later by selecting **3. Utilities | 3. Delete Data** from the application main menu on the mobile computer.

Select “Automatic” to have the data automatically deleted from the mobile computer upon upload completion. The uploaded data is no longer available as soon as it is uploaded to a host computer. Then the data browsing option **3. Utilities | 2. Browse Data** in the user application main menu of the mobile computer won’t be available.

If “No” is selected, the application template will skip the data deletion prompt upon completion of upload. The data file(s) and lookup file(s) will remain on the mobile computer after they are uploaded to a host computer. However, you can always select **3. Utilities | 3. Delete Data** to delete them later.

Entry Options

By **Entry Options**, you can specify what kind of information the mobile computer will show on the screen after the entry of a data is completed and before the next data entry is proceeded with. Options available are the count (option "Show count") and the data preview (option "Show record"). By default, the count will display on the mobile computer screen for 600 milliseconds as soon as an entry is completed. Refer to [1.8.15 Counter](#).

When selecting either "Show count" or "Show record", the options of **Stay on the LCD** and **Press any key to continue** are available for you to either specify the time the data preview / count displaying on the screen of the mobile computer or simply choose to show the data review / count before a key is pressed on the mobile computer. Time-out is configured within the range of 1~99 times 100 milliseconds.

5.1.2 KEYPAD & LCD

The [Keypad & LCD] group box features the option in regard to the tone of the key click and the LCD/keypad backlight behaviour.

The [Keypad & LCD] group box covers the options of **Key Click** and **Backlight** which are detailed in the following:

Key Click

"Tone 2" is the default for the key click. You may select a desired tone or mute it.

Backlight

The LCD/keypad backlight is off by default. When the backlight is turned on, you may specify the idle duration for turning off backlight. Such time-out is configured within the range of 1~9 times 10 seconds. The default time-out is 20 seconds.

5.1.3 NOTIFICATION

The [Notification] group box features the options regarding the status feedback of the mobile computer that are detailed in the following:

Warning Beep

By this option, you can specify if to have the application template make a warning beep when a specific event occurs. By default, the mobile computer outputs two beeps to warn you of a specific event.

Good Read Beep

By this option, you can specify if to have a beep when a barcode is decoded successfully. By default, the mobile computer produces one beep to inform you of a successful reading.

Vibration Duration

This option is only available for 8200/8300/8400/8500/8700. You can specify if to enable the vibrator to warn you of a specific event. The vibrator is off by default. You may turn it on for a preset period of time.

Buzzer Volume

This option is available for 8200/8400 only. You may change the buzzer volume by this option.

5.1.4 READER OPTION

The [Reader Option] group box sets the barcode reader and RFID reader on the mobile computer. Refer to [Appendix I - Scan Engine Settings](#) for more information.

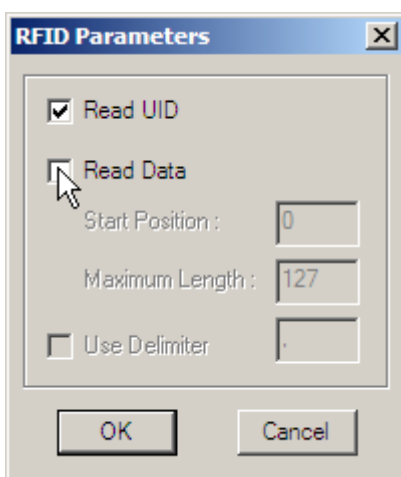
Reader Type (for barcode scan engine)

By this option, select a reader type according to the hardware configuration of your mobile computer. The associated barcode parameters will display in the **Symbology** property page accordingly. If there is a **More** button next to the barcode symbology listed, advanced settings are available.

Note: In order to initialize the barcode reader, you must select the correct reader type when you first configure an application template. Otherwise, a message will be displayed on the mobile computer to indicate "Wrong reader type!" after you download the application template file.

Set RFID

The RFID reader is automatically enabled after initialization. Advanced settings are provided as the picture shown below. RFID tags in proximity will be read automatically by 8300/8500/8700 when RFID reader is enabled. You may limit the [1.10 Input Type](#) options in Form to prevent from misreading RFID data.



Read UID

By default, the RFID reader is set to read UID (Unique Identification).

Read Data

- ▶ Select the check box so that RFID data can be read.
- ▶ If only partial data is required, specify the start position and maximum length.

Use Delimiter

Select the check box and specify a delimiter to separate UID from data.

5.1.5 UPLOAD METHOD

The [Upload Method] group box sets the interface for the host computer to receive data file(s) and lookup files(s) from the mobile computer. Refer to [7.2.1 Data Read](#) on how to set the host computer to auto-receive files from the mobile computer.

Here shows the review of the “upload interfaces” supported on the 8-series mobile computers:

Upload Interface	Remarks
AG8000	<p>Update the AG Runtime to the latest release for your 8000 mobile computer, and update the Batch AG to the latest release on the PC.</p> <p>Normally the interface options on the mobile computer are</p> <ul style="list-style-type: none"> ▶ Cradle-IR ▶ IrDA ▶ Modem ▶ Ethernet Cradle <p>Note when your mobile computer is a model of 806x, setting the “Upload Method” to either “Bluetooth SPP_Master” or “Bluetooth SPP_Slave” in the application template will delete “Modem” from the “Upload Port” submenu on the mobile computer and replace it with either of “Bluetooth SPP_Master” or “Bluetooth SPP_Slave”.</p> <p>Check out the mobile computer’s “Upload Interface” submenu at:</p> <p>3. Utilities 1. Settings 1. Upload Port</p>
AG8200	<p>Update the AG Runtime to the latest release for your 8200 mobile computer, and update the Batch AG to the latest release on the PC.</p> <p>Since part of the 8200 lineup comes with Bluetooth integrated, the interface options on the mobile computer are:</p> <ul style="list-style-type: none"> ▶ RS232 ▶ Bluetooth SPP_Master ▶ Bluetooth SPP_Slave ▶ USB VCOM ▶ USB VCOM_CDC ▶ Modem ▶ Ethernet Cradle ▶ USB HID ▶ SD Card^{Note}

AG8300	<p>Update the AG Runtime to the latest release for your 8300 mobile computer, and update the Batch AG to the latest release on the PC.</p> <p>Normally the interface options on the mobile computer are:</p> <ul style="list-style-type: none">▶ Direct RS-232▶ Cradle-IR▶ IrDA▶ Keyboard Wedge^{Note}▶ Modem▶ Ethernet Cradle <p>Note when your mobile computer is a model of 836x, setting the "Upload Method" to either "Bluetooth SPP_Master" or "Bluetooth SPP_Slave" in the application template will delete "Modem" from the "Upload Interface" submenu on the mobile computer and replace it with either of "Bluetooth SPP_Master" or "Bluetooth SPP_Slave".</p> <p>Check out the mobile computer's "Upload Interface" submenu at:</p> <ul style="list-style-type: none">▶ 3. Utilities 1. Settings 1. Upload Interface
--------	--

Note: Keyboard Wedge option is provided with the 8300 Series mobile computers, and therefore, the settings are available in AG8300 program only.

Upload Interface	Remarks
AG8400	<p>Update the AG Runtime to the latest release for your 8400 mobile computer, and update the Batch AG to the latest release on the PC.</p> <p>Since the whole 8400 lineup comes with Bluetooth integrated, the interface options on the mobile computer are:</p> <ul style="list-style-type: none"> ▶ RS232 ▶ Bluetooth SPP_Master ▶ Bluetooth SPP_Slave ▶ USB VCOM ▶ Modem ▶ Ethernet Cradle ▶ USB HID ▶ SD Card^{Note}
AG8500	<p>As the whole 8500 lineup comes with Bluetooth integrated, the interface options on the mobile computer are:</p> <ul style="list-style-type: none"> ▶ Cradle-IR ▶ IrDA ▶ Modem ▶ Bluetooth SPP ▶ Ethernet Cradle
AG8700	<p>Since the whole 8700 lineup come with Bluetooth integrated, the upload interfaces available are:</p> <ul style="list-style-type: none"> ▶ RS232 ▶ Bluetooth SPP_Master ▶ Bluetooth SPP_Slave ▶ USB VCOM ▶ USB VCOM_CDC ▶ USB HID ▶ SD Card^{Note}

Note: SD Card is provided for 8200/8400/8700 to store DAT files and DBF files. The files will be saved to the default working directory “\AG\EXPORT”, which will be created on SD card automatically.

5.1.6 DOWNLOAD METHOD

The [Download Method] group box sets the interface for the mobile computer to download application templates and lookup file(s) from the host computer.

Here is an overview of the “download interfaces” supported on the 8-series mobile computers:

Download Interface	Remarks
AG8000	<p>Update the AG Runtime to the latest available version for your 8000 mobile computer, and update the Batch AG to the latest available version on the host computer.</p> <p>Normally the interface options on the mobile computer are:</p> <ul style="list-style-type: none"> ▶ Cradle-IR ▶ IrDA ▶ Modem <p>Note when your mobile computer is an 806x model, set the “Download Method” to either Bluetooth SPP_Master or Bluetooth SPP_Slave in the application template to be able to have either of them replace the “Modem” in the “Download Port” submenu on the mobile computer at:</p> <p>3. Utilities 1. Settings 2. Download Port</p>
AG8200	<p>Update the AG Runtime to the latest available version for your 8200 mobile computer, and update the Batch AG to the latest available version on the host computer.</p> <p>Since part of the 8200 lineup comes with Bluetooth integrated, the interface options on the mobile computer are:</p> <ul style="list-style-type: none"> ▶ RS232 ▶ Bluetooth SPP_Master ▶ Bluetooth SPP_Slave ▶ USB VCOM ▶ USB VCOM_CDC ▶ Modem ▶ SD Card

AG8300	<p>Update the AG Runtime to the latest available version for your 8300 mobile computer, and update the Batch AG to the latest available version on the host computer.</p> <p>Normally the interface options on the mobile computer are:</p> <ul style="list-style-type: none"> ▶ Direct RS-232 ▶ Cradle-IR ▶ IrDA ▶ Modem <p>Note when your mobile computer is an 836x model, set the "Download Method" to either Bluetooth SPP_Master or Bluetooth SPP_Slave in the application template to be able to have either of them replace the "Modem" in the "Download Interface" submenu on the mobile computer at:</p> <ul style="list-style-type: none"> ▶ 3. Utilities 1. Settings 2. Download Interface
AG8400	<p>Update the AG Runtime to the latest available version for your 8400 mobile computer, and update the Batch AG to the latest available version on the host computer.</p> <p>Since the whole 8400 lineup comes with Bluetooth integrated, the interface options on the mobile computer are:</p> <ul style="list-style-type: none"> ▶ RS232 ▶ Bluetooth SPP_Master ▶ Bluetooth SPP_Slave ▶ USB VCOM ▶ Modem ▶ SD Card
AG8500	<p>As the whole 8500 lineup comes with Bluetooth integrated, the interface options on the mobile computer are:</p> <ul style="list-style-type: none"> ▶ Cradle-IR ▶ IrDA ▶ Modem ▶ Bluetooth SPP
AG8700	<p>Since the whole 8700 lineup come with Bluetooth integrated, the upload interfaces available are:</p> <ul style="list-style-type: none"> ▶ RS232 ▶ Bluetooth SPP_Master ▶ Bluetooth SPP_Slave ▶ USB VCOM ▶ USB VCOM_CDC ▶ SD Card

Note: (1) SD Card is made available for 8200/8400/8700 to store the template file (.AGX) and lookup files. The default working directories are “\AG\IMPORT” for template file and “\AG\DBF” for lookup files, which will be created on SD card automatically. Different download interfaces are supported for different file types.
(2) Before the lookup files are sent to the mobile computers, they need to be converted from text files (.TXT) to DBF format (.DBF) with a DBF converter tool. This tool will automatically copy the DBF file(s) to the import directory “\AG\DBF” on either the SD card or SRAM.

5.1.7 BAUD RATE & MODEM SPEED

The [Baud Rate & Modem Speed] group box features speed options of the mobile computer's data transmission.

Baud Rate

By default, the baud rate is set to 115200 bps for communications via any interface other than **Modem**.

Modem Speed

Only when the modem is selected for upload or download interface, this option will become available.

- ▶ For 8000/8300/8500, the data transmission speed depends on the IR control board of the modem cradle which is set to 57600 bps by default. If you select any value other than 57600 bps, you need to adjust the DIP switch of the control board accordingly.
- ▶ For 8200/8400, the modem cradle is capable of detecting baud rate.

Note: For the 8000/8300 Series, the version of IR control board on the modem cradle must be greater than SV3.01.

5.1.8 RESET SETTINGS

Click this button to load the default settings. This button applies to all the three tabbed pages of the **Settings** property:

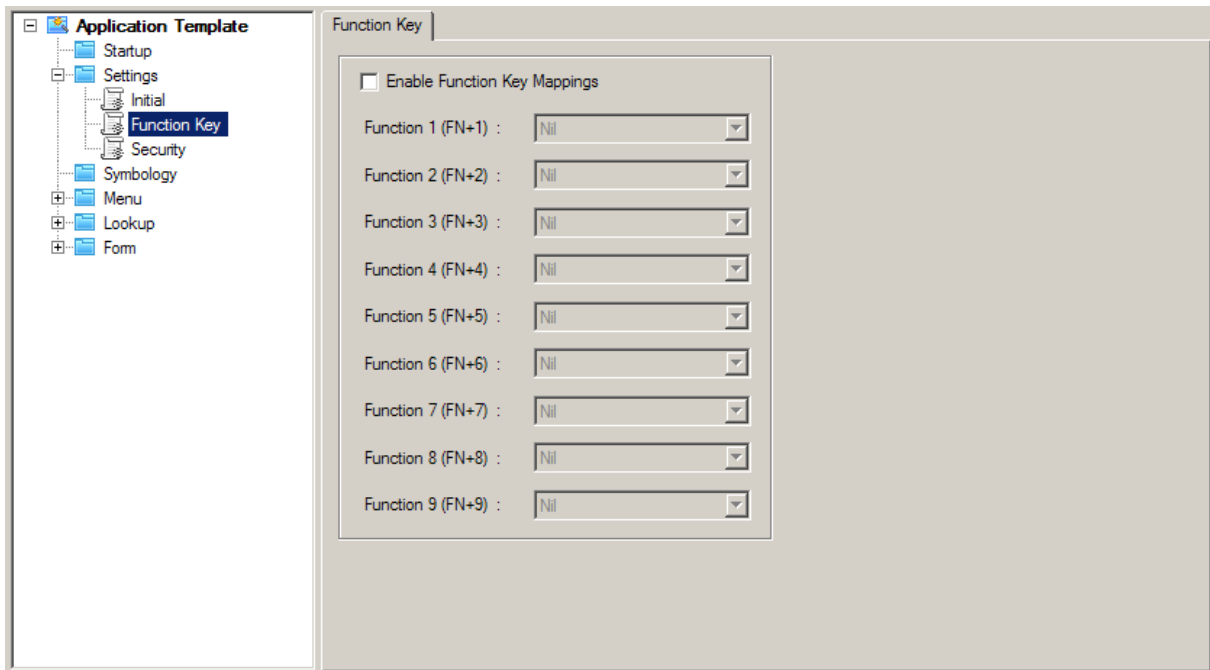
- ▶ The **Initial** property page. (See 5.1 Initial Setting)
- ▶ The **Function Key** property page. (See 5.2 Function Key Setting)
- ▶ The **Security** property page. (See 5.3 Security Setting)

Note: The current settings will be cleared.

5.2 FUNCTION KEY SETTING

The **Function Key** property page enables users' definition of one or more keypad shortcuts to quick-access user application main menu items or submenus thereunder. By default no keypad shortcut is defined.

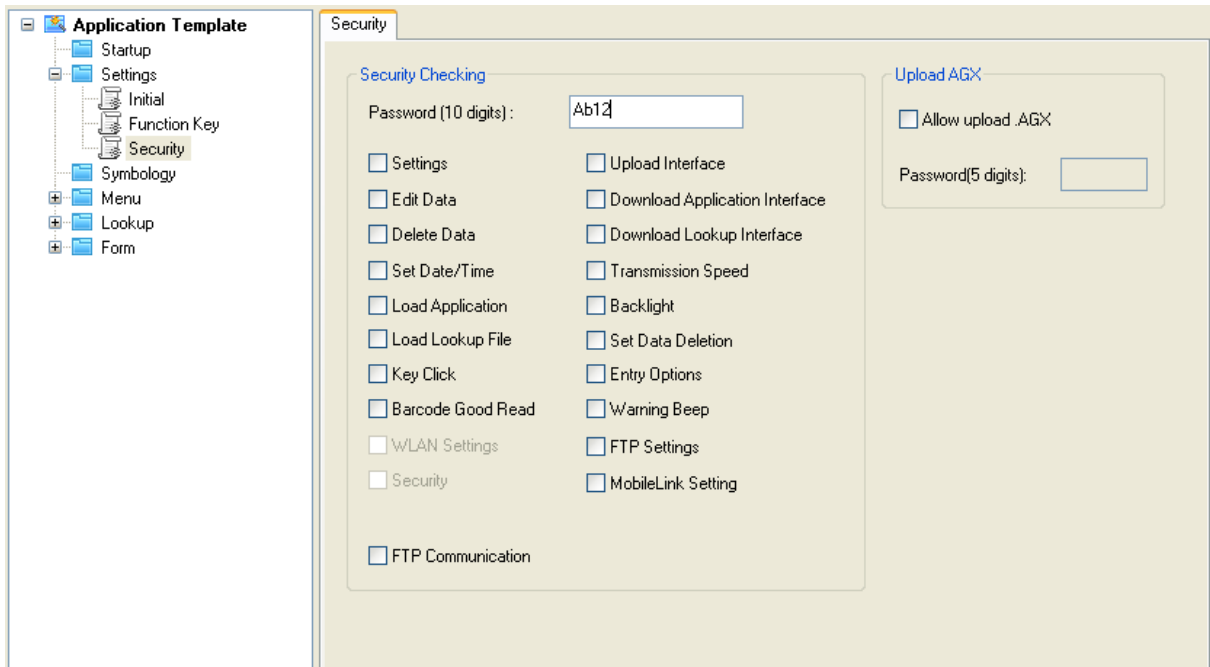
Note the data collecting forms you create are not supported by these keypad shortcuts.



Note: For 8400, key combination FN+9 on 29-key requires pressing the orange modifier key and the "-" key.

5.3 SECURITY SETTING

The **Security** property page enables the authentication that restricts the access to various resources on the mobile computer. No security is set up by default.



5.3.1 SECURITY CHECKING

The [Security Checking] group box features the following:

You may specify a password and select one or more items to be protected to apply the security authentication. By default, no action needs password to be taken.

If any action is selected and a password is assigned, you won't be able to cause the action to be taken on the mobile computer without the password.

- ▶ A password permits up to 10 alphanumeric characters.

Note: The password is case-sensitive.

Options provided in the [Security Checking] box correspond to the submenus tabulated as below:

Security Options	Remarks
Settings	3. Utilities 1. Program Settings
Edit Data	3. Utilities 2. Browse Data
Delete Data	3. Utilities 3. Delete Data
Set Date/Time	3. Utilities 5. Set Date/Time
Load Application	3. Utilities 6. Load Application
Load Lookup File	3. Utilities 8. Load Lookup File
Key Click	3. Utilities 1. Program Settings 8. Buzzer 1. Key Click
Barcode Good Read	3. Utilities 1. Program Settings 8. Buzzer 2. Barcode Read
MobileLink Setting	3. Utilities 1. Program Settings (2nd page) 4. MobileLink Setting
WLAN Setting	3. Utilities 1. Program Settings (2nd page) 2. WLAN Settings
Upload Port	▶ 3. Utilities 1. Program Settings 1. Upload Interface
Download Application Port	3. Utilities 1. Program Settings 2. DL Program Interface
Baud Rate	3. Utilities 1. Program Settings 4. Transmission speed
Backlight	3. Utilities 1. Program Settings 5. Backlight
Data Deletion	3. Utilities 1. Program Settings 6. Set Data Delete
Entry Options	3. Utilities 1. Program Settings 7. Entry Options
Warning Beep	3. Utilities 1. Program Settings 8. Buzzer 3. Warning Beep
Download Lookup Port	3. Utilities 1. Program Settings 3. DL Lookup Interface
FTP Setting	3. Utilities 1. Program Settings (2nd page) 1. FTP Settings
Security	3. Utilities 1. Program Settings (2nd page) 3. Security
FTP Communication	4. FTP

Note: 8200, 8400 and 8700 allow different download interfaces for template file (.AGX) and lookup files.

5.3.2 UPLOAD .AGX

If your Batch AG is a version of 1.00.0005 or later, the setup of a password to protect the application template from any external access by any other computer is made available by the [Upload AGX] group box. See [Upload Application Template](#) for reference.

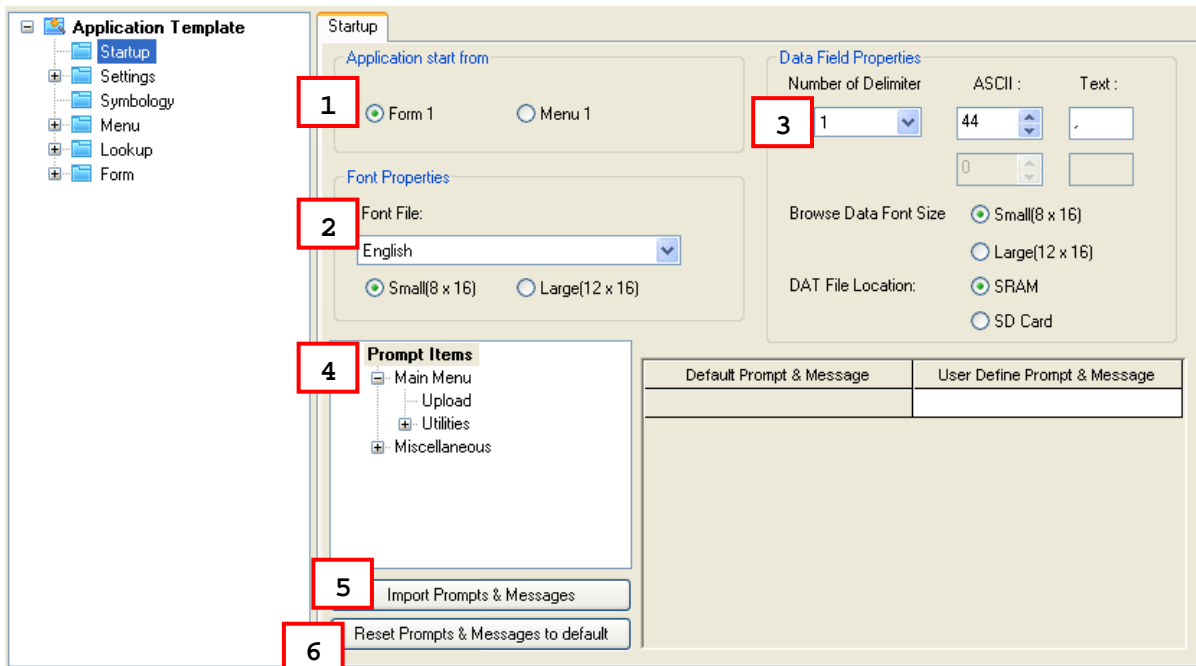
Select **"Allow upload .AGX"** to enable the authentication of any external access to the .AGX file. Upon selecting **"Allow upload .AGX"**, you are asked to specify a password.

- ▶ The password allows up to 5 alphanumeric characters.

Note: The password is case-sensitive.

STARTUP

On this property page, **Startup** settings for the application program can be customized.



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6.1 APPLICATION START FROM

By [Application start from] group box, you can proceed to make the following settings:

Decide where the application program starts as soon as the menu item **1. Collect data** is selected on the mobile computer.

- ▶ Form 1
- ▶ Menu 1

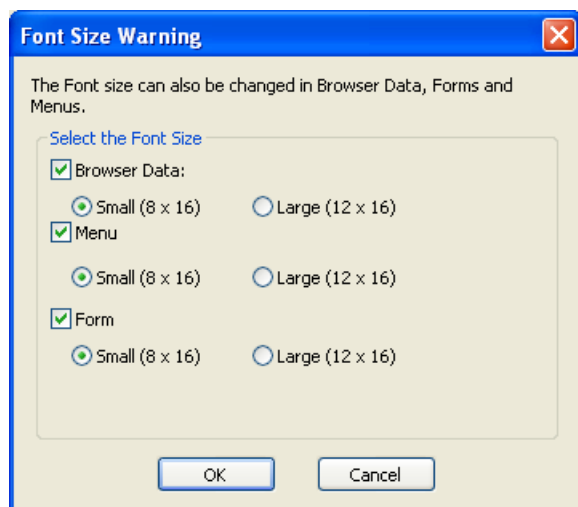
6.2 FONT PROPERTIES

The **Font File** drop-down menu that allows users to select a language is available in AG8200, AG8400, and AG8700. The table below lists the font files supported.

Once the font file is determined here, the **Selected Font File** item on Form/Menu property pages will be changed accordingly.

Font File Language	Double-byte	Single-byte
Traditional Chinese	✓	
Simplified Chinese	✓	
Korean	✓	
Japanese	✓	
English (Default)		✓
Canadian French		✓
Hebrew		✓
Latin (Slovak)		✓
Nordic		✓
Portuguese		✓
Cyrillic (Russian) (CP-1251)		✓
Turkish		✓
Windows 1250		✓
Greek (CP-737)		✓
Greek (Windows-1253)		✓

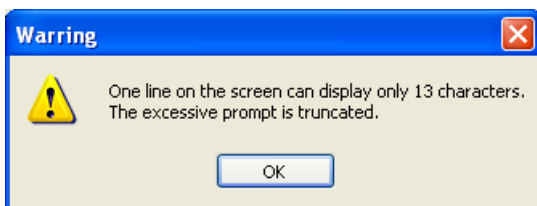
With the **Font File** item set to a single-byte language, when the small/large font size radio button is toggled, the **Font Size Warning** dialog box will show up. Users can determine whether to change font size for browser data, forms and menus.



With the **Font File** item set to a double-byte language, when the small/large font size radio button is toggled, a message box will pop up warning that font properties will be applied to forms, menus, and browsing data.



With the **Large** radio button selected, when the **Font File** item is changed from double-byte languages to single-byte languages, a message box will pop up warning that a single line on the screen can display only 13 characters and the excessive prompt will be truncated.



6.3 DATA FIELD PROPERTIES

6.3.1 NUMBER OF DELIMITER

The input data will be saved as transaction records. Specify the delimiters used to separate data fields, either in ASCII code or text. It allows using up to two different delimiters. Type the ASCII code for a delimiter and its corresponding character will be shown automatically, and vice versa.

6.3.2 BROWSE DATA FONT SIZE

You may select to use small/large font for data browsing when the **Font File** item is set to single-byte languages.

Note: This selection is not available for 8500 model.

6.3.3 DAT FILE LOCATION

You may specify the location to store the DAT files. The options are as follows:

- ▶ SRAM
- ▶ SD Card

Note: This selection is not available for 8000/8300/8500 models.

6.4 REDEFINE PROMPTS & MESSAGES

For non-English environment, all the prompts and messages need to be re-defined in your local language. In addition, the appropriate font file has to be downloaded to the mobile computer so that it can display the prompts and messages correctly. Refer to [Localization](#).

6.5 IMPORT PROMPTS & MESSAGES

If the prompts and messages have already been re-defined with an existing template file, simply click this button to import the template file.

6.6 RESET PROMPTS & MESSAGES TO DEFAULT

Click this button to load the default prompts and messages settings.

Note: The current settings will be cleared.

UTILITIES

These utilities are available in the Tools menu inside the 8 Series Batch AG program, or can be accessed via **Start | All Programs | CipherLab | Forge | Batch | Utilities**. For experienced programmers to issue a command or run a script, refer to [Appendix V Command Line Syntax](#).

Shortcut Name of Utility	Program Name	Usage
AG_Load	AG_Load.exe	To download the current application template to the mobile computer.
DLookup	DLookup.exe	To download associated lookup file(s) to the mobile computer
Prog_Load	ProgLoad.exe	To download the AG runtime or font file (.SHX) to the mobile computer.
Data_Read	Data_Read.exe	To receive data via Data_Read utility. It also synchronizes date/time on every host connection.
AGX_Read	AGX_Read.exe	To upload the current application template from the mobile computer.
MobileLink	MobileLink.exe	To receive data from the mobile computer via Mobile Link utility.
DBF_Converter	DBF_Converter.exe	To convert text file into DBF file.
Simulator	Simulator.exe	To launch the simulator.

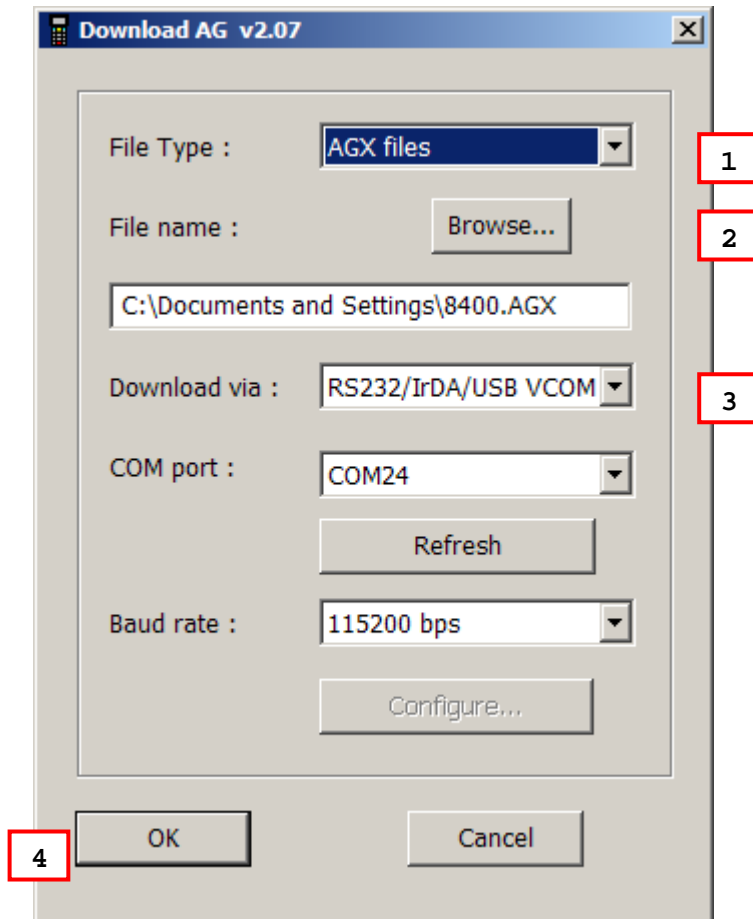
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7.1 DOWNLOAD UTILITIES

7.1.1 AG LOAD

Without the need to run the Batch or WLAN Application Generator programs, you can use **AG_Load.exe** to download a template file to your mobile computer.



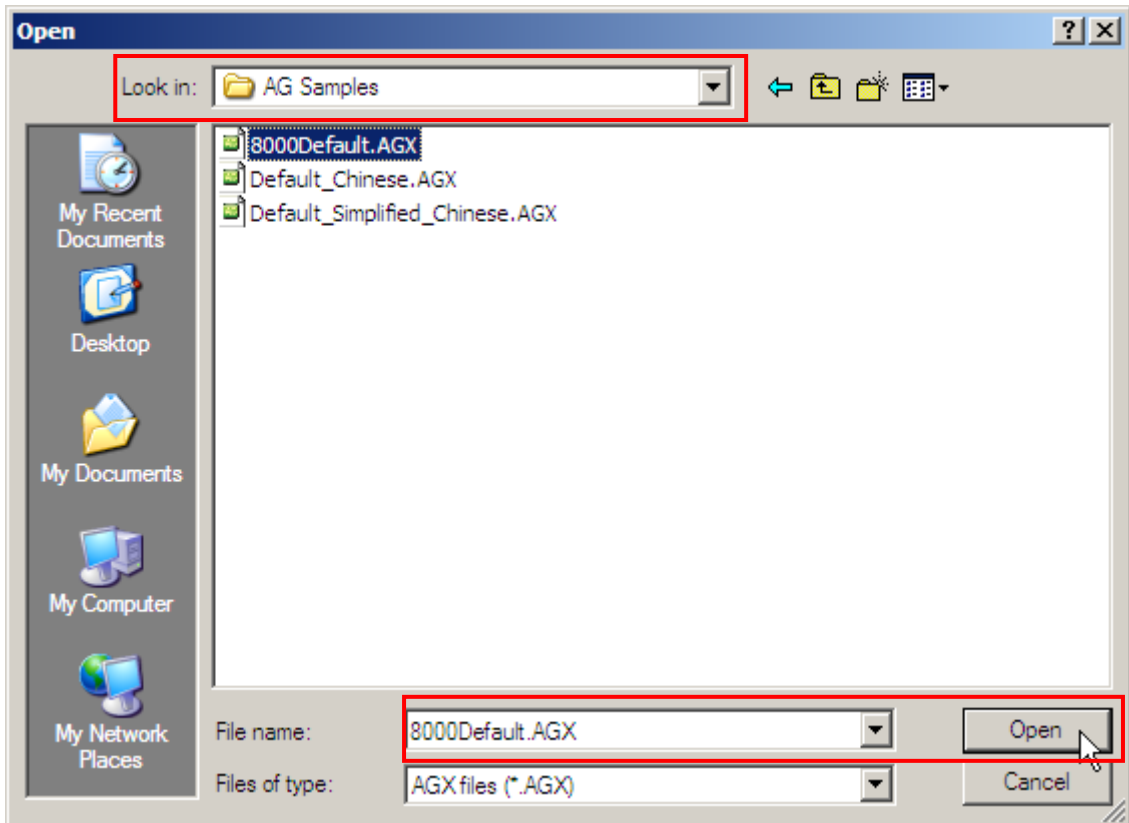
Run AG_Load.exe

1. In the **File Type** box, select the file type of the target AG template file.

File Type	Description
AGX files ATX files ATF files	The AGX format is used by the template file of Forge Batch AG program for 8000/8200/8300/8400/8500/8700 Series Mobile Computers.
AGX files ATX files ATF files	The ATX format is used by the template file of Batch AG program AG711*.exe for 711 Mobile Computer.
AGX files ATX files ATF files	The ATF format is used by the template file of WLAN AG programs for 8000/8200/8300/8400/8500/8700 Series Mobile computers.

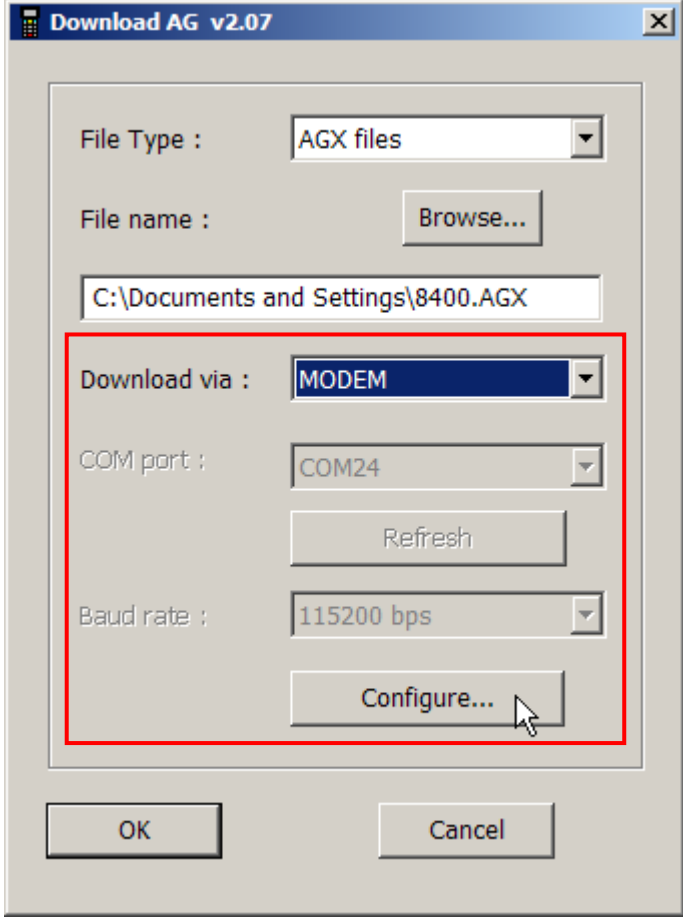
2. In the **File name** box, type the file path where the AG template file is located.

Otherwise, click **Browse** to locate the AG template file you want to download. Click **Open** in the dialog box as shown below.



- In the **Download via** box, select the download interface.

Download via	Description
RS232/IrDA/USB VCOM Cradle-IR MODEM	RS-232/IrDA/USB VCOM is available on 711/8000/8200/8300/8400/8500/8700 Series Mobile Computers. ▶ Proceed to configure COM port (1~255) and baud rate settings.
RS232/IrDA/USB VCOM Cradle-IR MODEM	Cradle-IR interface is available on 711/8000/8300/8500 Series Mobile Computers. Cradles or IR-Transceivers are required. ▶ Proceed to configure COM port (1~255) and baud rate settings.
RS232/IrDA/USB VCOM Cradle-IR MODEM	Modem interface is available on 8000/8200/8300/8400/8500 Series Mobile Computers. Modem Cradles are required. ▶ Proceed to configure modem if necessary.

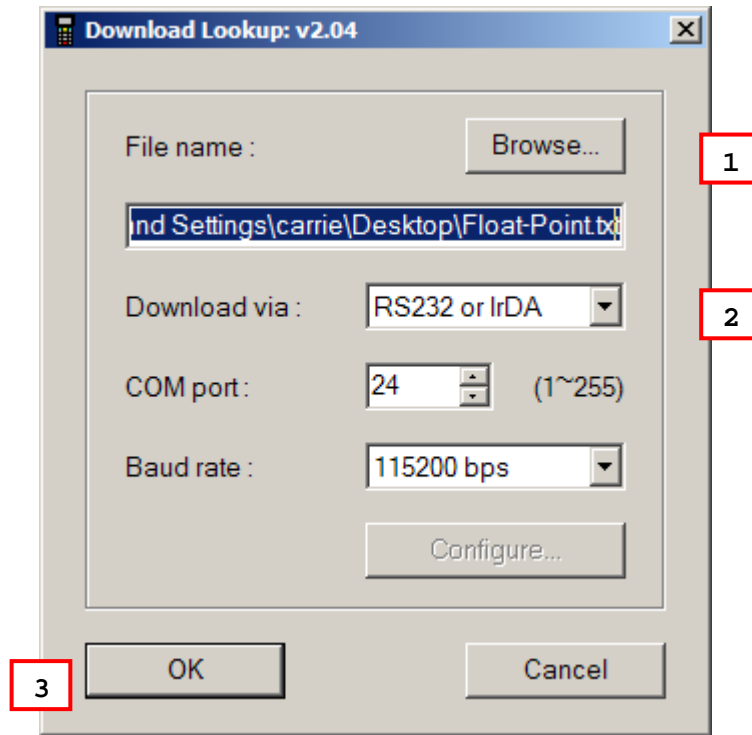


The screenshot shows a dialog box titled "Download AG v2.07". It contains several fields and buttons. The "File Type" is set to "AGX files". The "File name" field is empty, with a "Browse..." button next to it. The file path is "C:\Documents and Settings\8400.AGX". The "Download via" dropdown is set to "MODEM". The "COM port" dropdown is set to "COM24", with a "Refresh" button below it. The "Baud rate" dropdown is set to "115200 bps". A "Configure..." button is highlighted with a mouse cursor. At the bottom, there are "OK" and "Cancel" buttons.

- Click **OK** to start the download process.

7.1.2 DLOOKUP

Without the need to run the Batch Application Generator programs, you can use **DLookup.exe** to download a lookup file to your mobile computer.



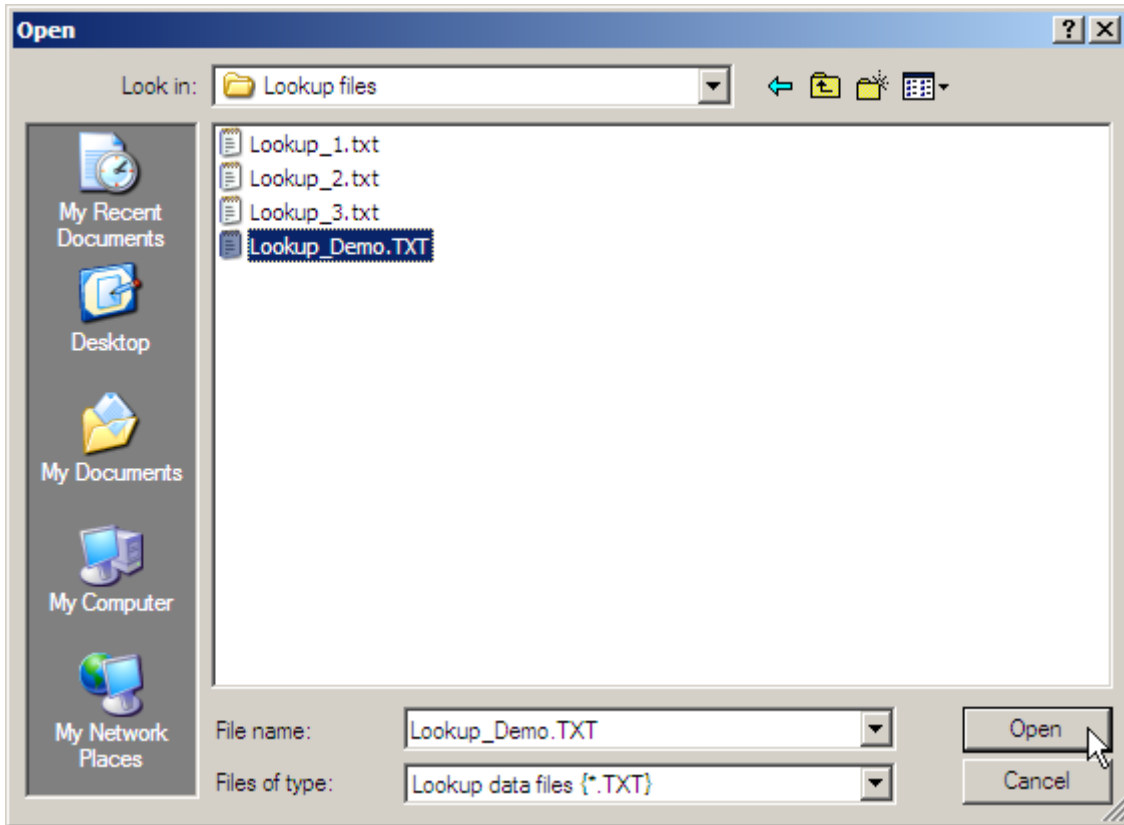
Note: (1) For 8200/8400/8700, USB Virtual COM shares the interface option of RS-232/IrDA.

(2) Cradle-IR is not supported on 8200/8400/8700.

Run DLookup.exe

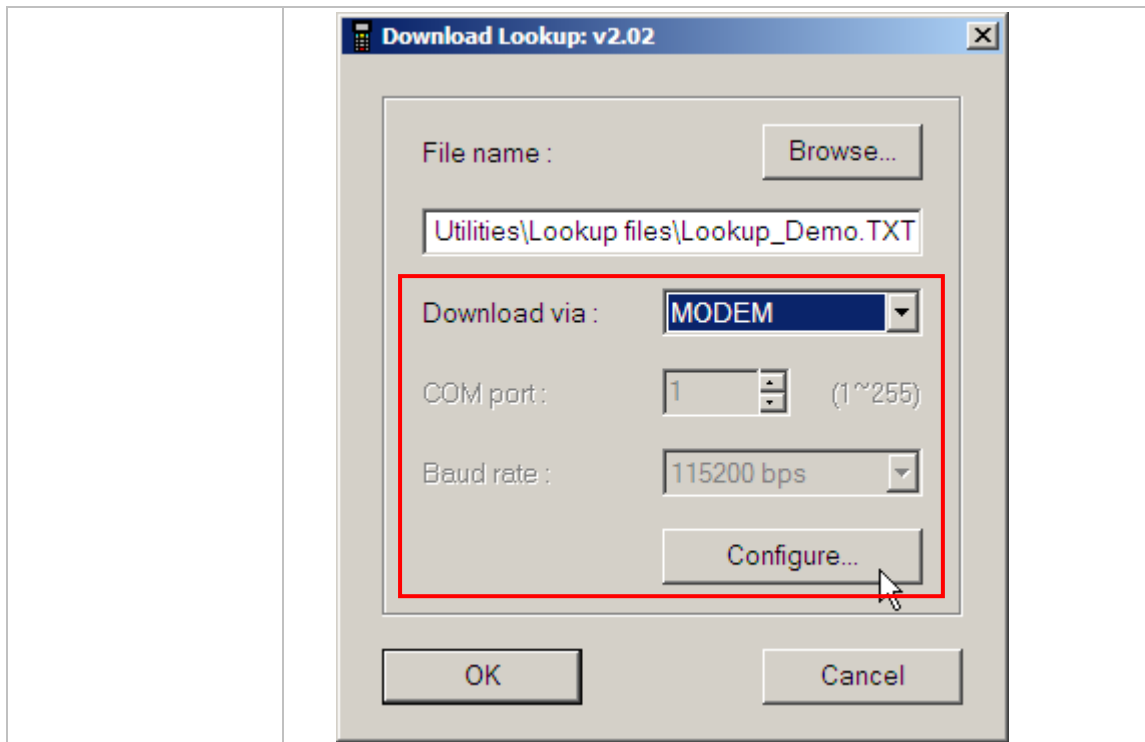
1. In the **File name** box, type the file path where the lookup file is located.

Otherwise, click **Browse** to locate the lookup file you want to download. Click **Open** in the dialog box as shown below.



2. In the **Download via** box, select the download interface.

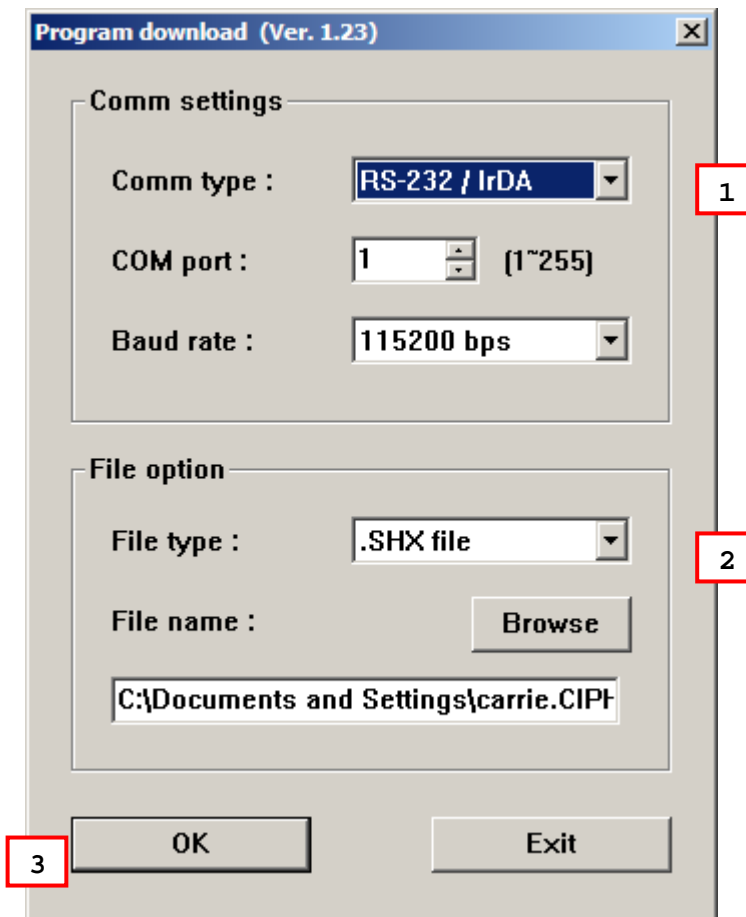
Download via	Description
RS232 or IrDA Cradle-IR MODEM	RS-232 or IrDA interface is available on 711/8000/8200/8300/8400/8500/8700 Series Mobile Computers. <ul style="list-style-type: none"> ▶ Proceed to configure COM port (1~255) and baud rate settings.
RS232 or IrDA Cradle-IR MODEM	Cradle-IR interface is available on 711/8000/8300/8500 Series Mobile Computers. Cradles or IR-Transceivers are required. <ul style="list-style-type: none"> ▶ Proceed to configure COM port (1~255) and baud rate settings.
RS232 or IrDA Cradle-IR MODEM	Modem interface is available on 8000/8200/8300/8400/8500 Series Mobile Computers. Modem Cradles are required. <ul style="list-style-type: none"> ▶ Proceed to configure modem if necessary.



3. Click **OK** to start the download process.

7.1.3 PROGLOAD

Without the need to run the Batch or WLAN Application Generator programs, you can use **ProgLoad.exe** to download a program (*.SHX, *.SYN or *.BIN) to your mobile computer.



Note: (1) For 8200/8400/8700, USB Virtual COM shares the interface option of RS-232/IrDA.
(2) Cradle-IR is not supported on 8200/8400/8700.

Run ProgLoad.exe

1. In the **Comm type** box, select the download interface.

Comm Type	Description
RS-232/IrDA	Connection via direct RS-232 cable, IrDA port, or Bluetooth SPP
Cradle-IR	Connection via cradle
TCP/IP	Connection over networks

2. Click the **File type** drop-down menu to determine the file format. Then in the **File name** box, type the file path where the program file is located.

Otherwise, click **Browse** to locate the program file you want to download. Click **Open** in the dialog box as shown below.

File Type	Description
.SHX file	Any C program, such as AG Runtime, BASIC Runtime, font file, etc.
.SYN file	Any BASIC program after BASIC Runtime has been installed on the mobile computer.
.BIN file	Any C program <ul style="list-style-type: none"> ▶ Use PC utility "SHX2Bin.exe" to convert the program (.shx → .bin).

3. Click **OK** to start the download process.

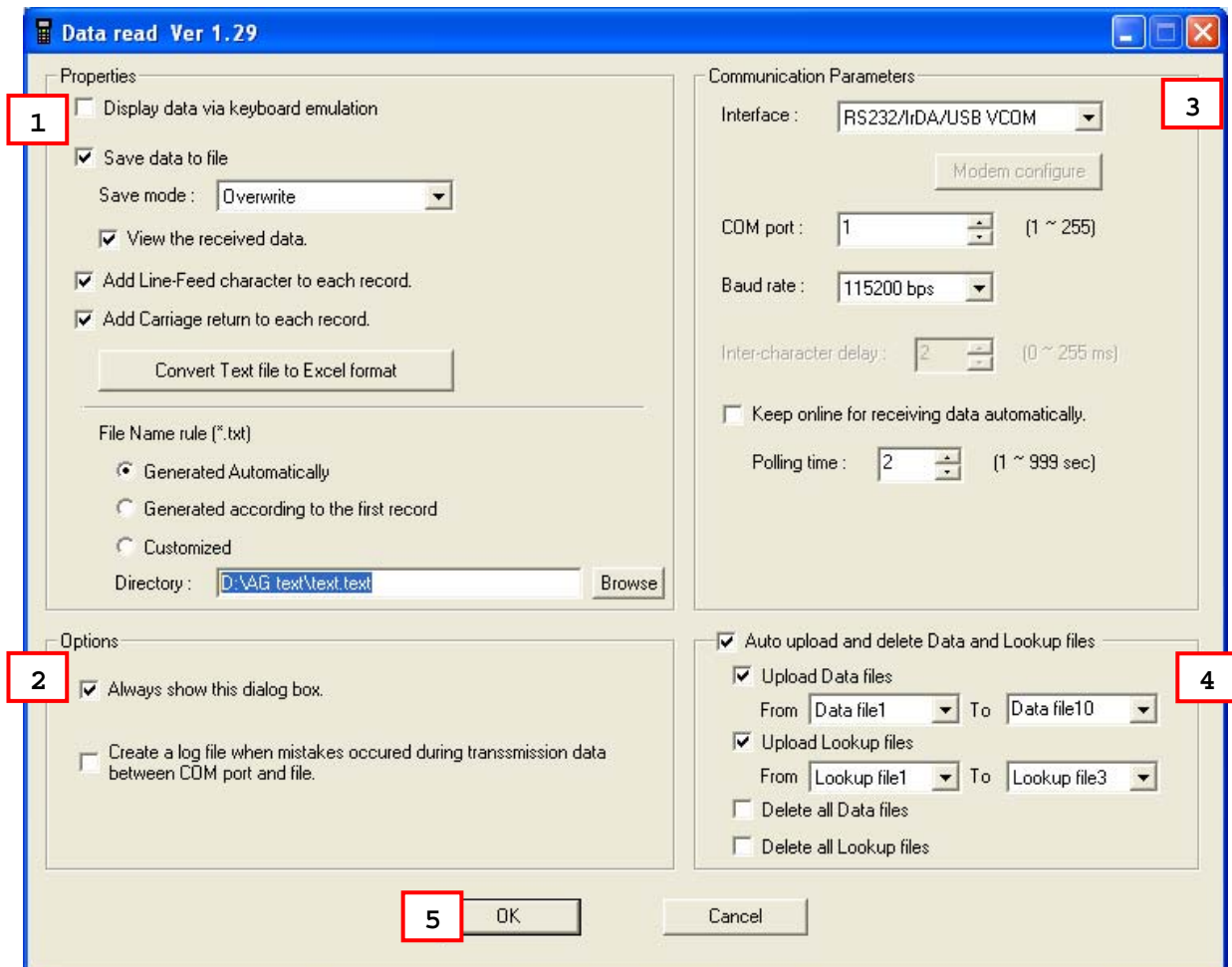
7.2 UPLOAD UTILITIES

7.2.1 DATA_READ

Data_Read.exe enables users to receive the data file(s) from the mobile computer without running the Batch AG. However, if you want to upload data files over the network via Ethernet Cradles, use [Mobile Link](#) instead.

With the upload interface properly configured among Cradle-IR, RS-232 or USB VCOM, the **Data_Read.exe** supports automatic data uploading to a host computer. Once the mobile computer is seated in the cradle or connected via the RS-232 or USB Virtual COM cable, there will be a running dot or hourglass icon displaying on the upper-right corner of the screen indicating the mobile computer's readiness for auto upload. Make sure the interface on the mobile computer is matching.

Auto Upload Support	8000	8200	8300	8400	8500	8700
Interface Required	Cradle-IR	RS-232 USB VCOM	Cradle-IR RS-232	RS-232 USB VCOM	Cradle-IR	RS-232 USB VCOM



Run Data_Read.exe

1. In [**Properties**] dialog box, decide whether to display data via keyboard emulation or save data to file. Options available are:

- ▶ Display data via keyboard emulation:

Data is emulated as typed text and sent to the active window on the host. Open a text editor on the host to receive the data. In the **Inter-character delay** spin box inside the [**Communication Parameters**] group box, type or select a value that matches the computer response time of the keyboard interface. Such delay time is inserted between every two characters being transmitted. The longer the delay time is, the slower the transmission speed will be.

- ▶ Save data to file:

Select this item to save the received data to the host computer's storage. The received data are saved to text files (.txt). Two saving modes are provided:

Save Mode	Description
Overwrite	Overwrite: If the file name you give is the same as of an existing file, the uploaded data will overwrite the original data. Otherwise, it will create a new file.
Append	Append: If the file name you give is the same as of an existing file, the uploaded data will be appended to the original data. Otherwise, it will create a new file. <ul style="list-style-type: none"> ▶ To append data to file automatically, the best practice requires specifying reasonable polling time with Keep online for receiving data automatically enabled.

A [**Convert text file to Excel format**] button is featured with "Save data to file" to facilitate the conversion of the received data to an Excel file. Click this button to access the data conversion setting.

"Save data to file" involves the setting of "File Name rule". The "File Name rule" setting features the following options:

Option	Function
Generated automatically	The uploaded data will be saved to the specified directory with a file name that is automatically generated based on the system date and time. <ul style="list-style-type: none"> ▶ The best practice requires specifying reasonable polling time with Keep online for receiving data automatically enabled.
Generated according to the first record	The received data will be saved to a file named by its first record. <ul style="list-style-type: none"> ▶ For example, in Batch Application Generator you may design Form 1 to allow only one line for a specific file name and proceed to other forms for collecting data. Thus, the first record will be used to keep its file name. Depending on Save mode, if the file name you give is the same as of an existing file, the uploaded data will overwrite or append to the original data.
Customized	If you select to customize own rule, type the file path where the data file will be saved to. Otherwise, click Browse to select which directory the data file is saved to.

- ▶ Add Line-Feed character to each record:

Adds a line-feed character to each transaction entry. Disable/enable it if necessary.

- ▶ Add Carriage return to each record:

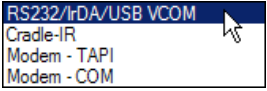
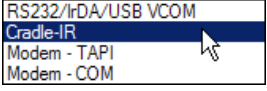
Adds a carriage return control character to each transaction entry. Disable/enable it if necessary.

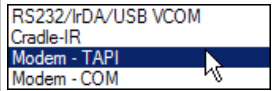
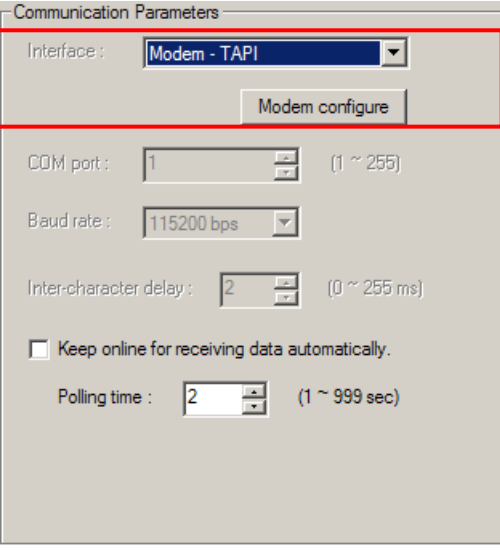
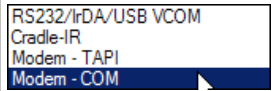
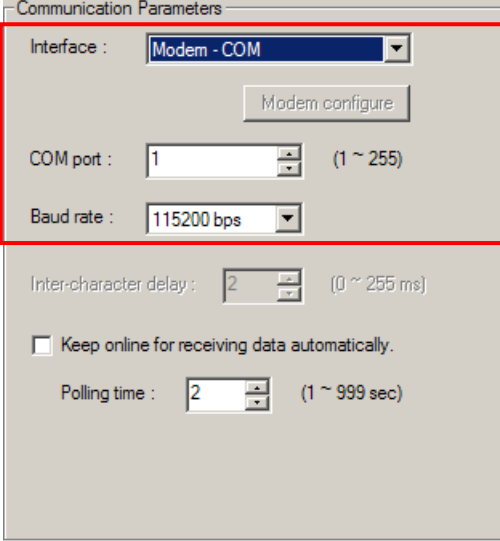
2. The [Options] group box encloses the settings how the Data_Read.exe acts each time it is used and what it responds to a data transmission error that comes up.

The options available are:

Option	Description
Always show this dialog box	<p>Sets the Data_Read.exe to show its window each time it is run. Users are able to access the settings to receive data prior to the act.</p> <p>Deselecting it to have the Data_Read.exe directly receive data from the mobile computer without showing its window. Note the window won't be able to recur unless the software's .ini file is deleted from the directory where the Data_Read.exe is installed. And once the .ini file is deleted, the software's configuration is gone.</p> <ul style="list-style-type: none"> ▶ This is selected by default.
Create a log file when mistakes occur during transmission data between COM port and file	<p>Select it to set the Data_Read.exe to create a log file when one of the following comes up:</p> <ul style="list-style-type: none"> ▶ The Batch AG fails to write data to the assigned file. ▶ The Batch AG fails to open the COM port. ▶ Data receiving time out. <p>Normally the log file is accessible at the directory where the Data_Read.exe is installed.</p>

3. In the **Interface** box under **Communication Parameters**, select the upload interface.

Interface	Description
	<p>RS-232/IrDA/USB VCOM is available on 711/8000/8200/8300/8400/8500/8700 Series Mobile Computers.</p> <ul style="list-style-type: none"> ▶ Proceed to configure COM port (1~255) and baud rate settings.
	<p>Cradle-IR interface is available on 711/8000/8300/8500 Series Mobile Computers. Cradles or IR-Transceivers are required.</p> <ul style="list-style-type: none"> ▶ Proceed to configure COM port (1~255) and baud rate settings.

	<p>Modem interface is available on 8000/8200/8300/8400/8500 Series Mobile Computers. Modem Cradles are required.</p> <ul style="list-style-type: none"> ▶ Select Modem-TAPI when using TAPI-compliant communication application on the host computer. Proceed to configure modem if necessary. 
	<p>Modem interface is available on 8000/8200/8300/8400/8500 Series Mobile Computers. Modem Cradles are required.</p> <ul style="list-style-type: none"> ▶ Select Modem-COM when using COM port based modem, and proceed to configure COM port and baud rate settings. 

4. Tick [**Auto upload and delete Data and Lookup files**] to configure whether to upload/delete data and lookup files.

Option	Description
Upload Data files/lookup files	Tick the upload checkboxes to enable the associated pull-down menus to automatically upload the data files and lookup files to the host computer especially when working with a Charging and Communication Cradle. Click the pull-down menus to designate

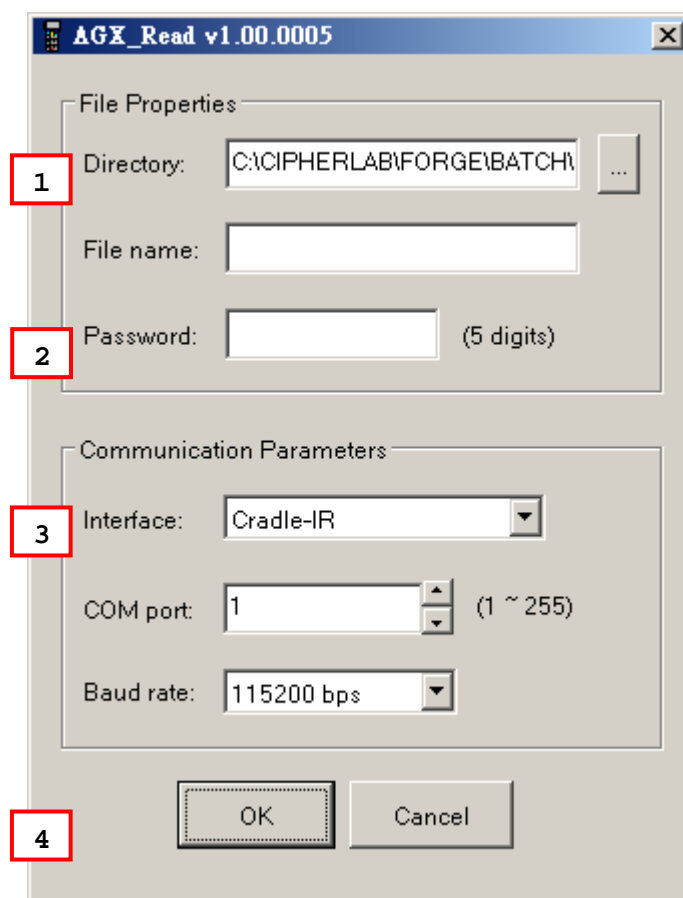
	data files to be uploaded. Please note that the index of the last file can't be higher than the first one.
Delete all Data/Lookup files	Tick the checkboxes to delete all Data/Lookup files

5. Click **OK** to start the upload process.

7.2.2 AGX_READ

When using the Forge Batch AG version 1.00.0005 or later to create and download a template file, it may be configured to allow uploading the template file from the mobile computer at a later time.


Without the need to run the Batch Application Generator programs, you can use **AGX_Read.exe** to receive a template file (*.AGX) from your mobile computer.



Note: Cradle-IR is not supported on 8200/8400/8700.

Run AGX_Read.exe

1. In the **Directory** text field, type the file path where the .AGX file is to be saved.

Otherwise, click  to locate where to save the file. You may change the file name as well

2. In the **Password** field, enter the correct password for access to the template file.
3. Click the **Interface** drop-down menu to select the upload interface.

Interface	Description
RS-232/IrDA/USB VCOM	Connection via direct RS-232 cable, IrDA port, or USB Virtual COM
Cradle-IR	Connection via cradle

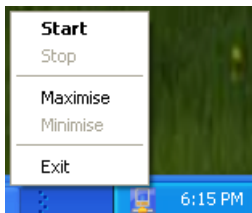
4. Click **OK** to start the download process

7.3 MOBILELINK

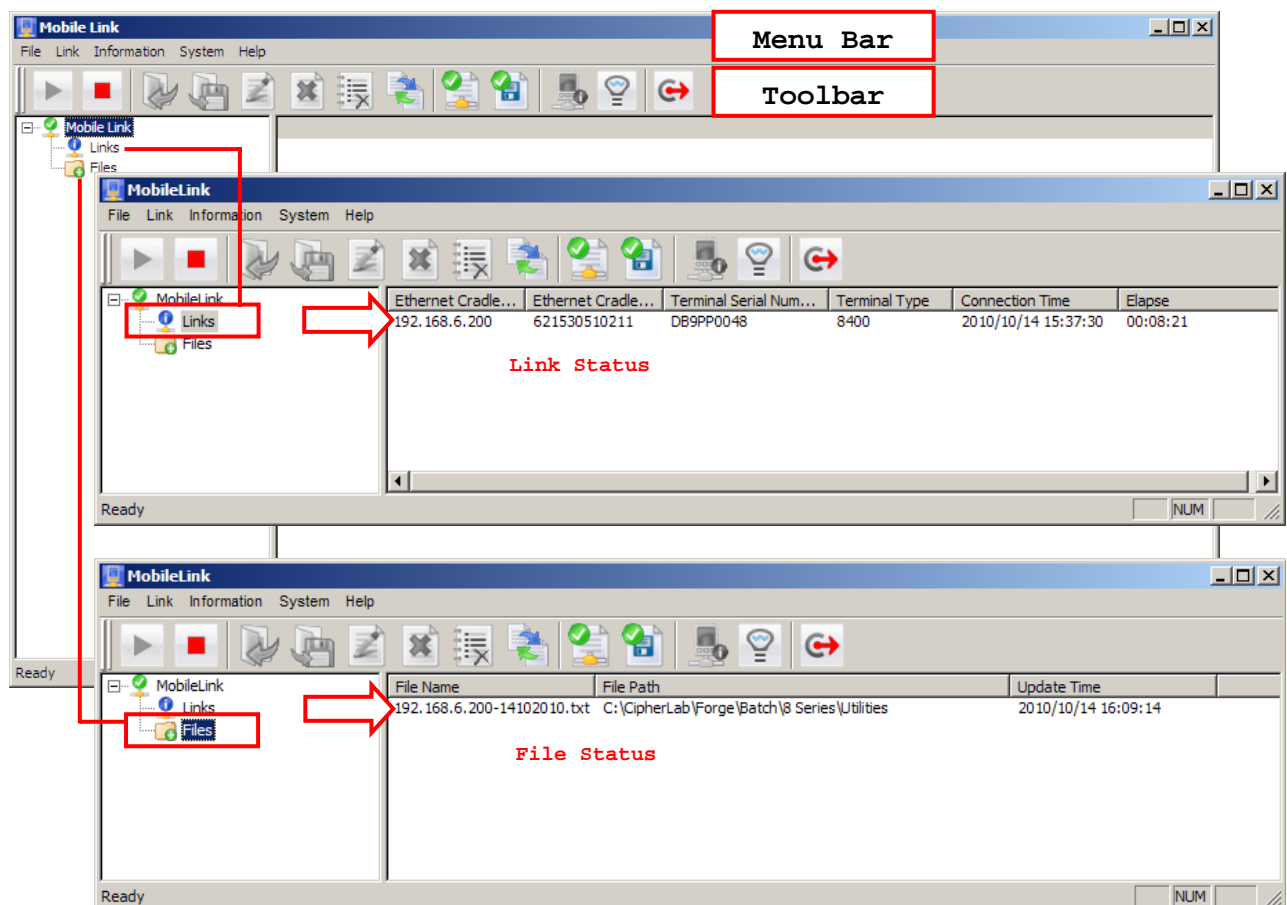
MobileLink harnesses a Windows-based PC (host) to one or more (client) mobile computer(s) to retrieve data files and/or lookup files from them, especially through LAN (Ethernet).

Save for Ethernet, **MobileLink** now gets tweaked for more communicative interfaces. Update your Batch AG to the latest release to get the interface supports of RS232, IrDA, USB Virtual COM, Cradle IR, and Modem-Com.

MobileLink is a Windows service known as long-running application that can run in the background. Once **MobileLink** is launched, you can find its icon in the bottom-right corner of the screen as the picture shown below.



MobileLink auto-starts each time you start your computer. And once data transfer occurs, **Link Status** and **File Status** are able to be viewed, as shown below:











7.3.1 ETHERNET CONNECTION






If you choose to network with Ethernet, an Ethernet Cradle is necessary for the mobile computer to team up with. Then set up the following:

- ▶ On the mobile computer, set the output interface to “Ethernet Cradle” by user application main menu | **3. Utilities** | **1. Program Settings** | **1. Upload Interface**.
- ▶ Set the Ethernet Cradle to work in **Data Mode** and configure correct IP and port number of the host computer. (See Ethernet Cradle Guides.)
- ▶ On the host computer, run Batch AG and enable **MobileLink**. See [MobileLink Settings](#).
- ▶ On the host computer, run Batch AG. Disable or **Enable Auto Update**. See [MobileLink Settings](#).
- ▶ Launch **MobileLink**

On the host computer, from the menu bar of Batch AG, select **Transfer** | **MobileLink Data Transfer**.

7.3.2 MENU BAR & TOOLBAR

File Menu		
Open		Opens a selected data file.
Save As		Saves a selected data file to a different file path.
Rename		Renames a selected data file.
Delete File		Deletes a selected data file.
Remove from List		Removes a selected data file from the file list.
Convert		Converts a selected data file to Excel file format.
Exit		Closes MobileLink application.
Link Menu		
Start		Starts a MobileLink service session, throughout which the mobile computer periodically updates data to the host computer until one of the following comes up: <ul style="list-style-type: none"> ▶ MobileLink service session stops (The Stop button  is pressed). ▶ Client mobile computer(s) quit uploading data.

Restart		Re-starts MobileLink service session.
Stop		Stops MobileLink service session.
Information Menu		
Device Information		Gets system information about a specific mobile computer.
System Menu		
System menu items are only available when MobileLink service is put to stop.		
Link Properties		Configures link properties.
File Properties		Configures file properties.
Help Menu		
About Mobile Link		Views the information about the Mobile Link program.

7.3.3 VIEW LINK STATUS

Link Status delivers a few pieces of information about Ethernet networking and also about the mobile computer that is sending in data at the moment.

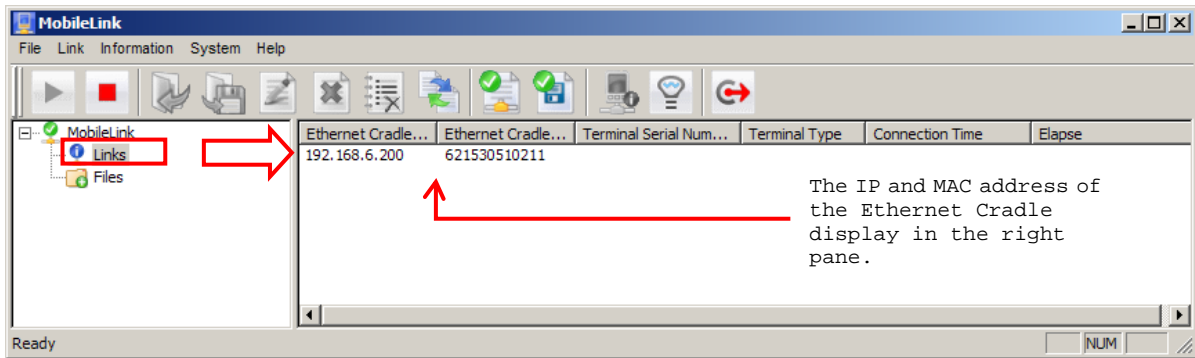
Whichever the interface is, **Link Status** can be viewed in **MobileLink** window at the right pane. The following describes how to view **Link Status** when interfaces are different:

BY ETHERNET

Once Ethernet connection is up between Ethernet Cradle and host computer, **Link Status** can be viewed by the approach below:

In the left pane of **Mobile Link** window, click **Links** to highlight it. The right pane will show these pieces of info:

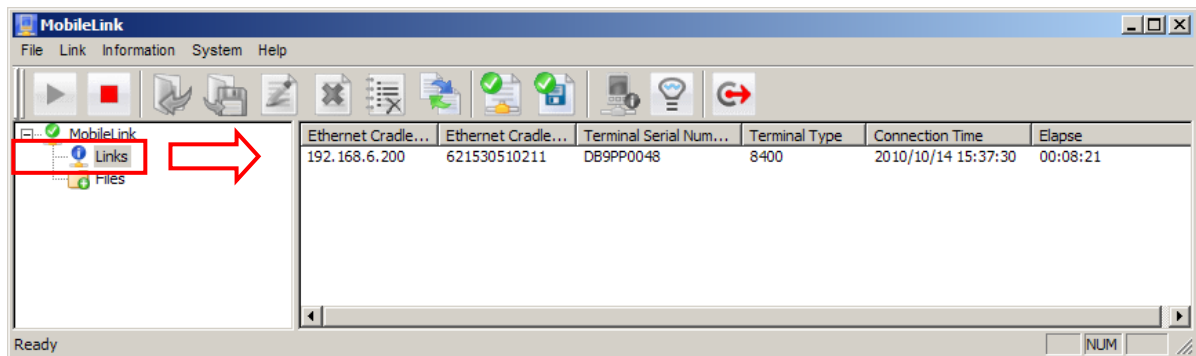
- ▶ Ethernet Cradle IP
- ▶ Ethernet Cradle MAC Address



Note: To connect to host computer, Ethernet Cradle must be configured with correct host IP and port number

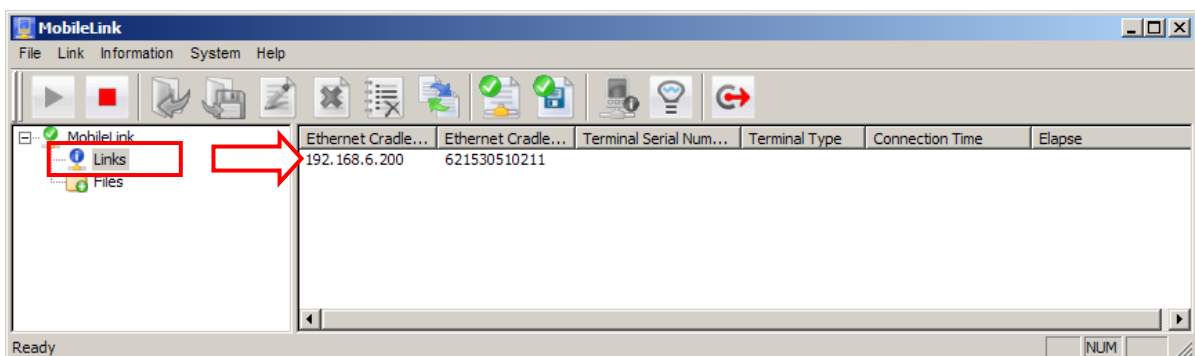
After the mobile computer is seated into Ethernet Cradle and data output starts, the right pane delivers more info as below:

- ▶ **Terminal Serial Number** (of the mobile computer)
- ▶ **Terminal Type** (model name of the mobile computer)
- ▶ **Connection Time** (output start time)
- ▶ **Elapse** (time elapsed upon **MobileLink** service session start)



Note: Interfaced with Ethernet, 8000/8200/8300/8400 auto-starts data output while 8500 needs manual launching **Upload Data** from user application main menu.

The information other than Ethernet Cradle IP and MAC address are cleared upon completion of data upload.

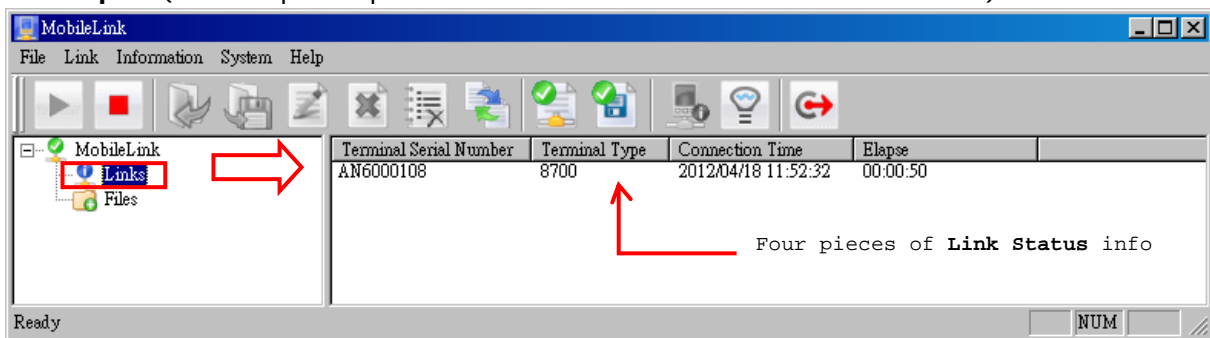


BY OTHER INTERFACES

Once connection is up between two computers via **RS232**, **IrDA**, **USB Virtual COM**, **Cradle IR** or **Modem-COM** and data output starts, view **Link Status** by the approach below:

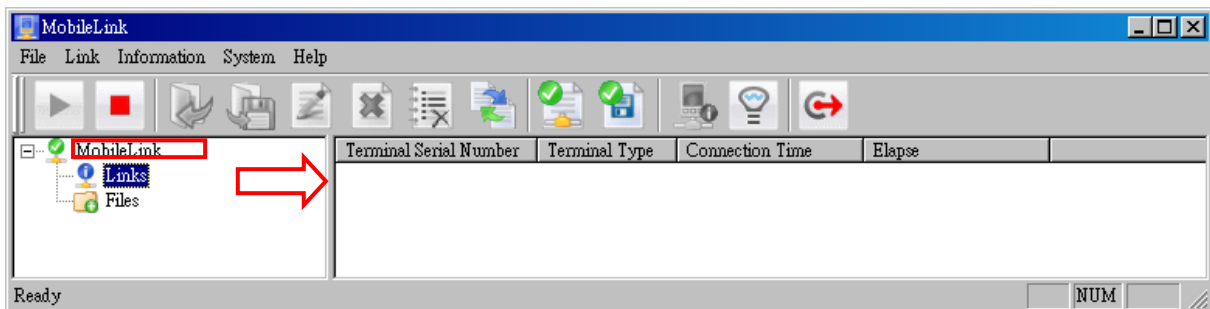
At the left pane of **Mobile Link** window, click **Links** to highlight it. The right pane will show these pieces of info:

- ▶ **Terminal Serial Number** of the mobile computer.
- ▶ **Terminal Type** (model name of the mobile computer)
- ▶ **Connect Time** (output start time)
- ▶ **Elapse** (time elapsed upon the start of a **MobileLink** service session)



Note: Whichever model the mobile computer is, as long as it interfaces by RS232, IrDA, USB Virtual COM, Cradle IR or Modem-Com, the mobile computer has to launch **Upload Data** from user application main menu to start data output.

Link Status info is cleared upon completion of data output.



Note: If you are networking through RS232, there must be an hourglass icon rotating at the upper right on the client's screen. If not, the mobile computer isn't detected.

7.3.4 VIEW RECEIVED FILES

By **MobileLink's File** menu, a number of actions can be taken to a received file selected in the right pane of **MobileLink** window.

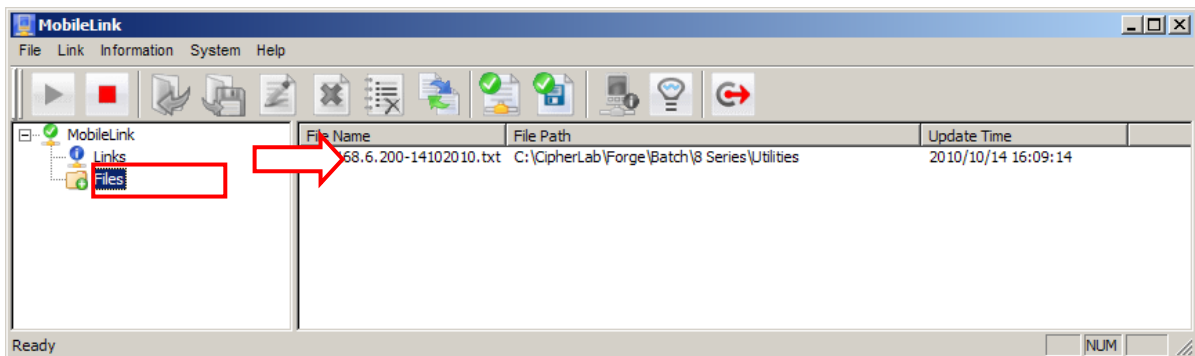
To take an action to a received file, select the file first. To select a file:

- 1) In the left pane of **MobileLink** window, click **Files**.

Files is selected with highlight. The right pane then drops down a list of received files.

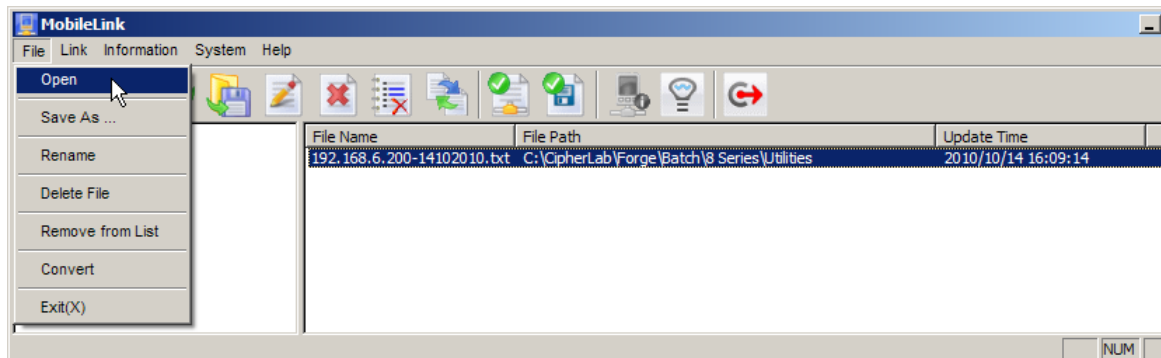
- 2) Click a received file from the list.

The file is selected by highlight.

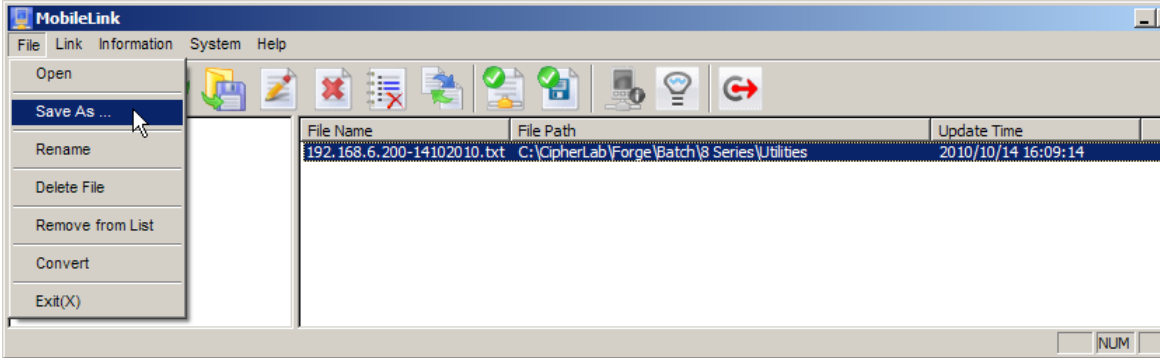


- 3) Take the following actions:

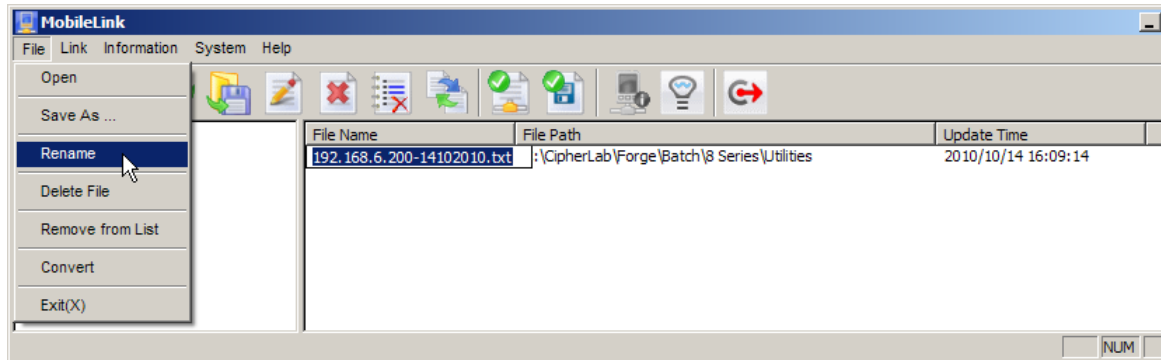
From the menu bar, click **File | Open** to open the selected file.



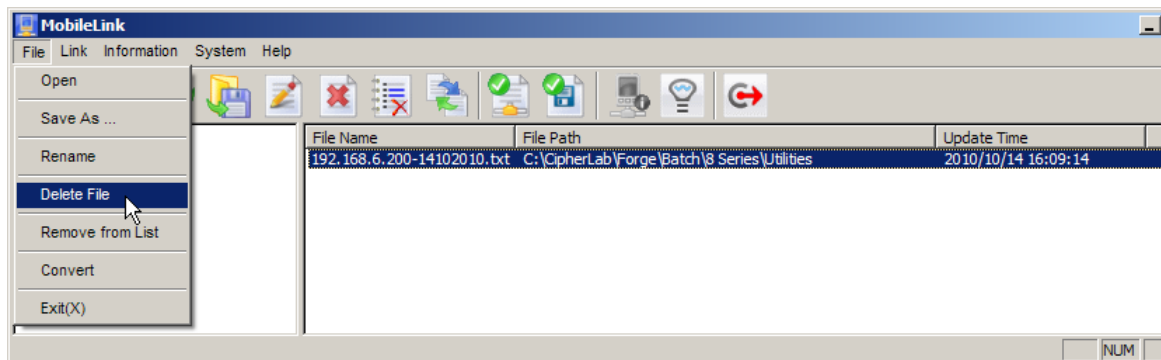
From the menu bar, click **File | Save As** to save the selected file as a new file.



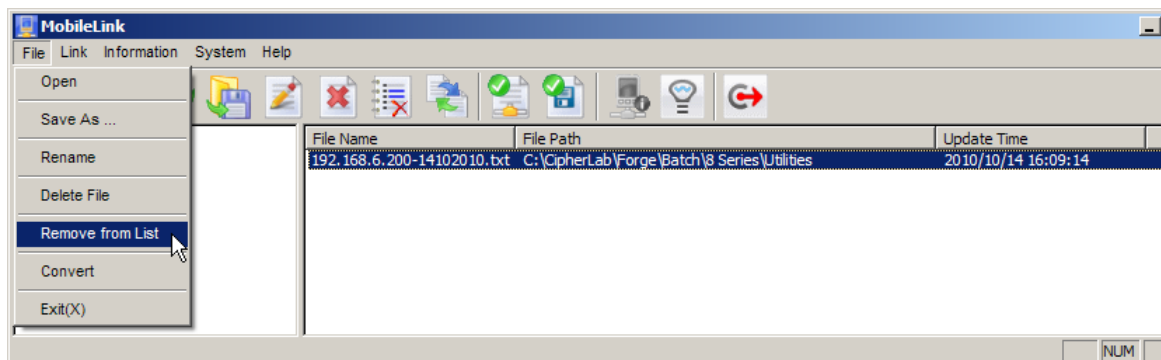
From the menu bar, click **File | Rename** to assign a new name for the selected file.



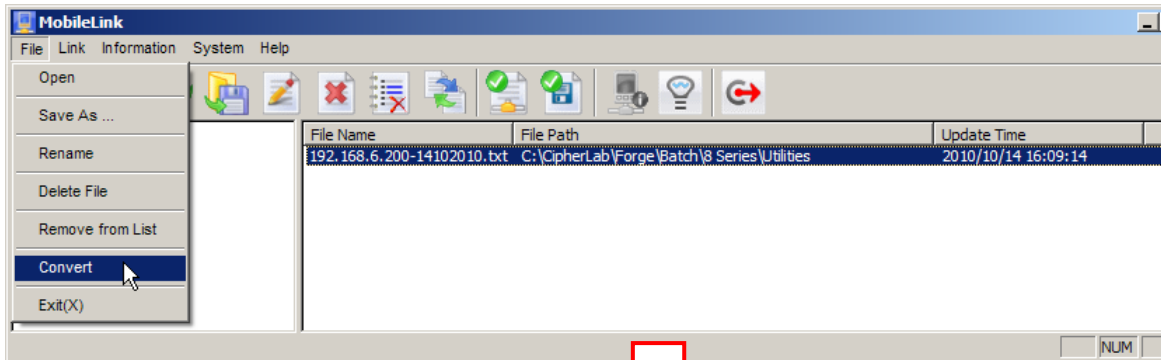
From **File** menu, click **Delete File** to delete the selected data file.



From the menu bar, click **File | Remove from List** to remove the selected file from the file list.



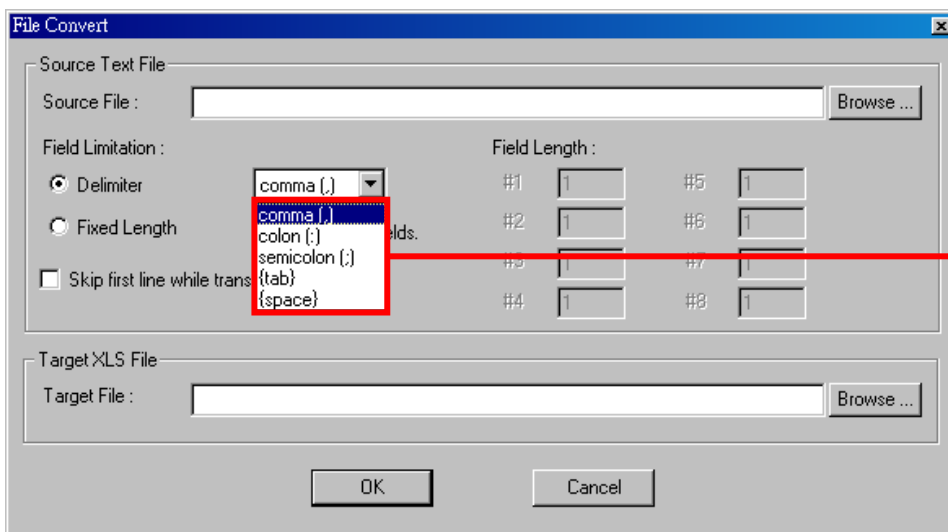
From **File** menu, click **Convert** to convert the selected data file to Excel file format.



File Convert window opens providing file conversion settings. Among the settings, **Delimiter** drop-box presents slightly different options when the O.S. has different number format settings.

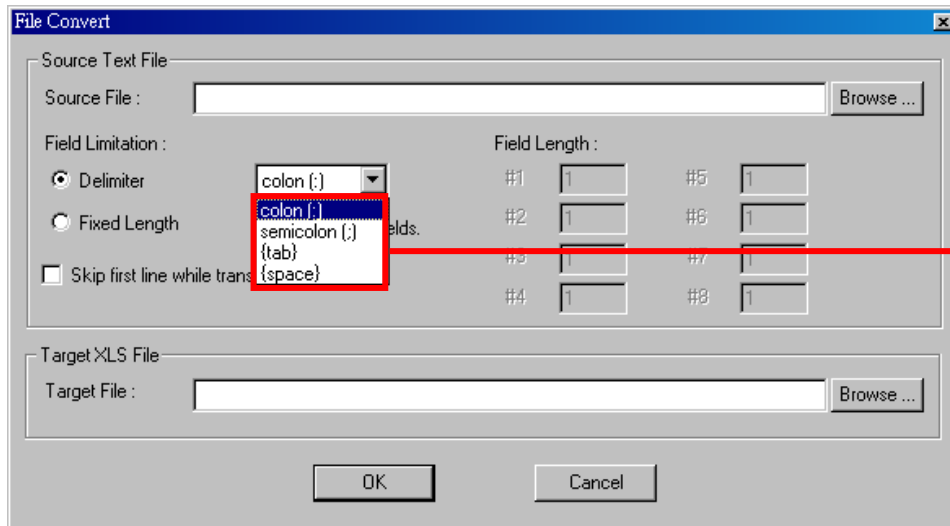
When number format is set to either of German, Norwegian, Finnish, Swedish or Danish in the O.S., comma(,) isn't to opt for since it is generally written for decimal point and is therefore ruled out from the options to wrongly delimiting data.

For a Windows-powered PC, number format setting is provided under **Region and Language** setting.



The O.S. has number format set to neither German, Norwegian, Danish, Finnish nor Swedish. Comma (.) is provided among **Delimiter** options.

OR



The O.S. has number format set to either of German, Norwegian, Danish, Finnish or Swedish. Comma (.) is excluded from **Delimiter** options.

7.3.5 VIEW DEVICE INFORMATION

Mobile Link also enables viewing the information of a client mobile computer that is sending in data at the moment. To view a client mobile computer's info:

- 1) Click **Links** in the left pane of **MobileLink** window.

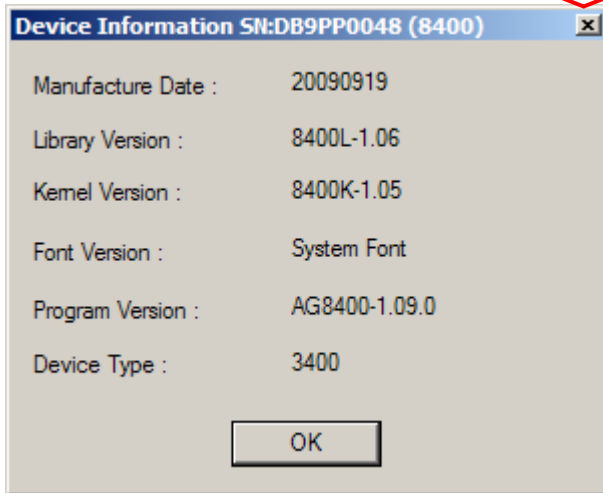
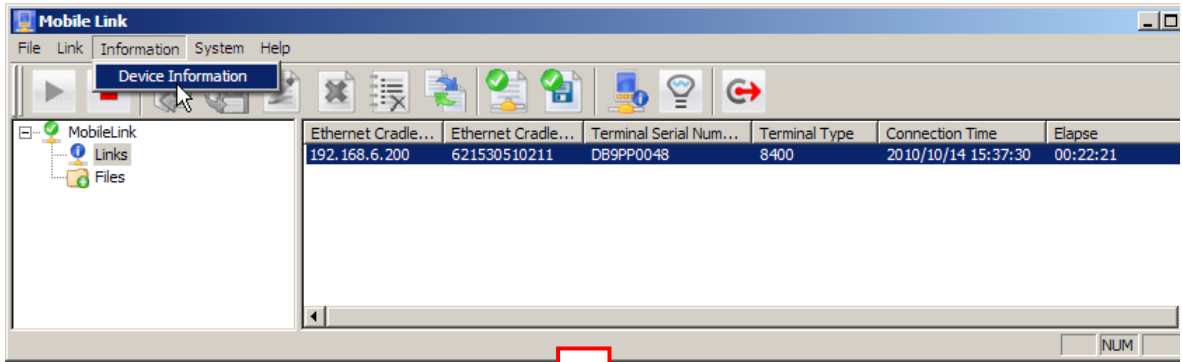
The right pane drops down a list of client mobile computer(s) active in sending data to host computer at the moment.

- 2) Click a mobile computer from the list in the right pane.

The mobile computer is selected with highlight.

- 3) From the menu bar, click **Information | Device Information** to open a dialog that delivers the mobile computer's system information as below:

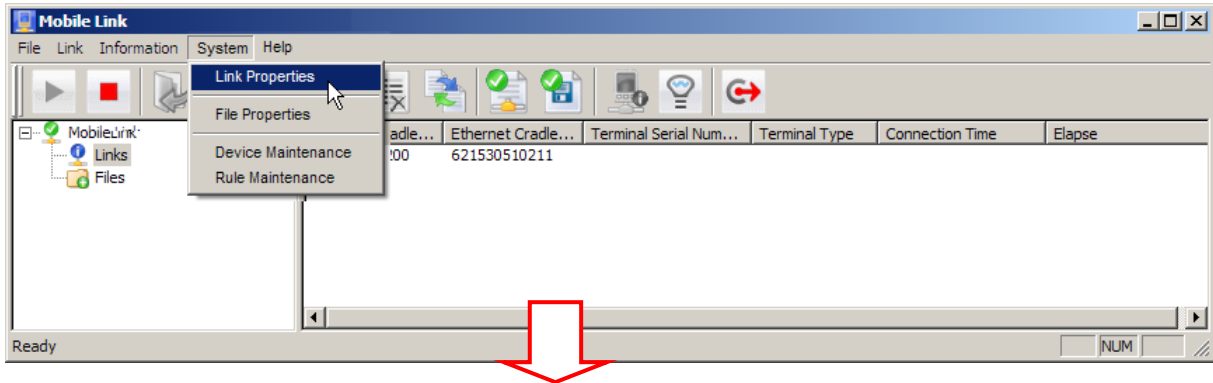
- ▶ Serial Number (on the title bar of the dialog)
- ▶ Manufacture Date
- ▶ Library Version
- ▶ Kernel Version
- ▶ Font Version
- ▶ Program Version
- ▶ Device Type



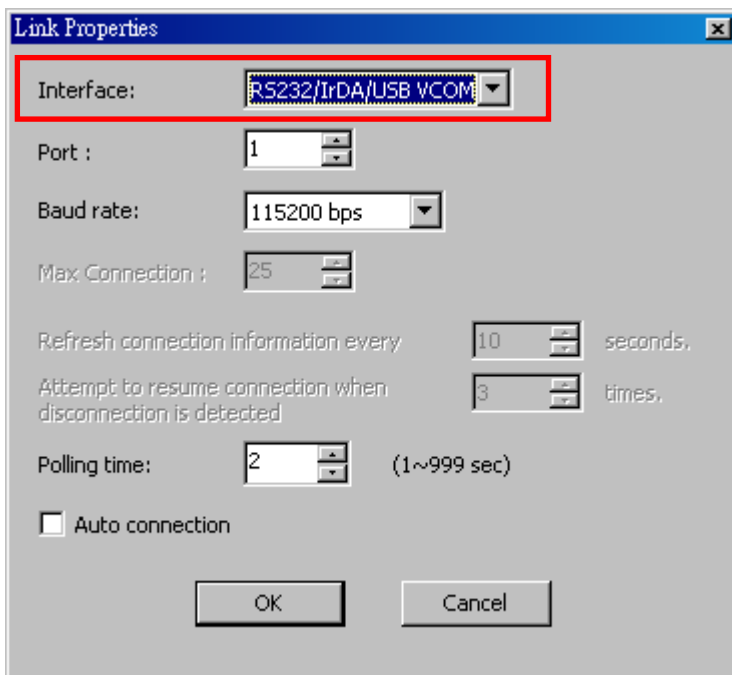
7.3.6 CHANGE CONNECTION SETTINGS

For the problem-free **MobileLink** data connection between the clients and the (remote) host, provide correct settings to menu bar | **System** | **Link Properties**.

Note **System** menu items are only available when **MobileLink** service is put to stop.

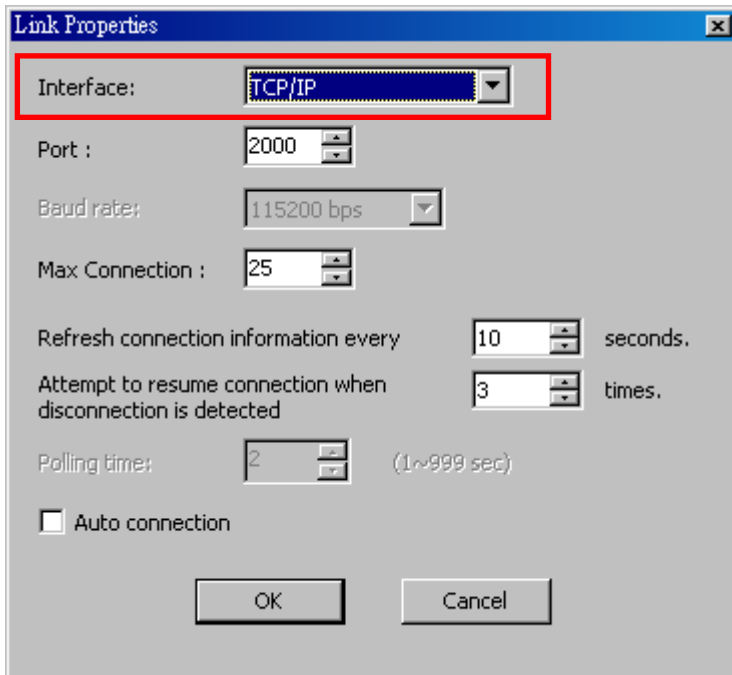


From **MobileLink** menu bar, click **System** | **Link Properties** to open a **Communication Properties** window that presents a variety of communicative settings. Different interface renders different communicative settings available. Hereunder in this section we detail this subject:



When **Interface** is set to **RS232**, **IrDA**, **USB Virtual COM**, **Cradle IR** or **Modem-Com**, ports available are limited to 255 and unavailable settings are:

1. **Max Connection**
2. the periodical checking to **Refresh connection information**
3. how often to **Attempt to resume connection**



When **Interface** is set to **TCP/IP** (for Ethernet), **Baud rate** setting is not applicable and thus unavailable. **Polling time** is also unavailable.

Each of the communicative settings featured are detailed as below:

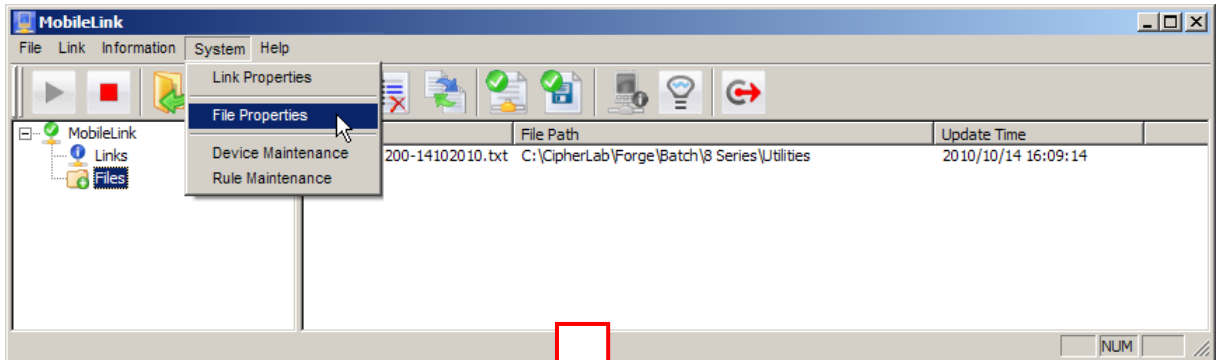
Setting	Description
Interface	<p>Sets the interface for MobileLink data connection between client(s) and the host.</p> <ul style="list-style-type: none"> ▶ Save from TCP/IP, MobileLink now supports RS232, IrDA, USB VCOM, Cradle IR and Modem-Com. Select an interface that best suits your needs. ▶ If your MobileLink doesn't feature said interfaces, upgrade your Batch AG to the latest release to get them.
Port	<p>Sets the communication port, which is set to "2000" for TCP/IP by default.</p> <ul style="list-style-type: none"> ▶ Port number is subject to change in MobileLink and also on Ethernet Cradle (if networking with Ethernet).
Max Connection	<p>Sets the maximum amount of client mobile computers that output data to the host.</p> <ul style="list-style-type: none"> ▶ Up to 25 mobile computers are allowed. ▶ When interface is set to RS232, IrDA, USB Virtual Com, Cradle IR or Modem-Com, Max Connection isn't applicable, and thus setting isn't available.
Refresh link information	<p>Sets the time that MobileLink periodically refreshes link status. Please set a time by the unit of second.</p> <ul style="list-style-type: none"> ▶ When interface is set to RS232, IrDA, USB Virtual Com, Cradle IR or Modem-Com, this setting is not applicable and not available.
Attempt to resume connection when disconnection is detected	<p>Sets how often MobileLink tries to re-establish Ethernet connection.</p> <p>When interface is set to RS232, IrDA, or USB Virtual Com, Cradle IR or Modem-COM, this setting is not applicable and not available.</p>
Polling time	<p>Sets how often MobileLink determines the status of client mobile</p>

	computer(s) so MobileLink can process the events generated by them.
Auto Connection	<p>Sets MobileLink to auto-establish connection with client mobile computer as soon as MobileLink launches.</p> <ul style="list-style-type: none">▶ Auto Connection is selected by default. Deselect it to disable auto-establishment of connection.

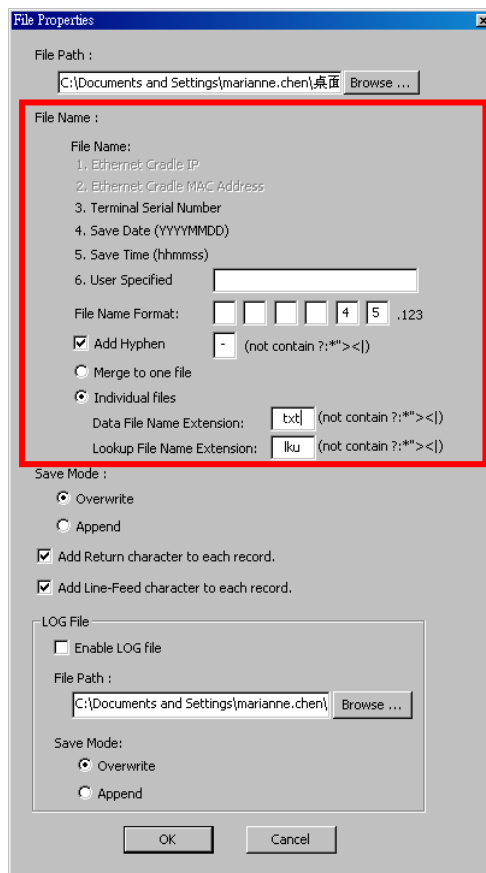
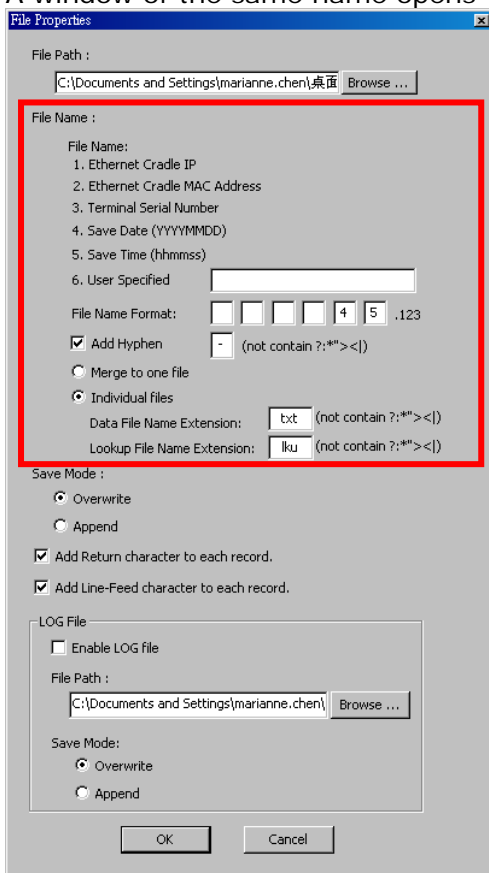
7.3.7 CHANGE DATA FILE SETTINGS

File Properties define where and how an incoming file is stored. To configure **File Properties**:

- 1) From **MobileLink** menu bar, click **System | File Properties**. (Note **System** menu items are only available when **MobileLink** service is put to stop.)



A window of the same name opens



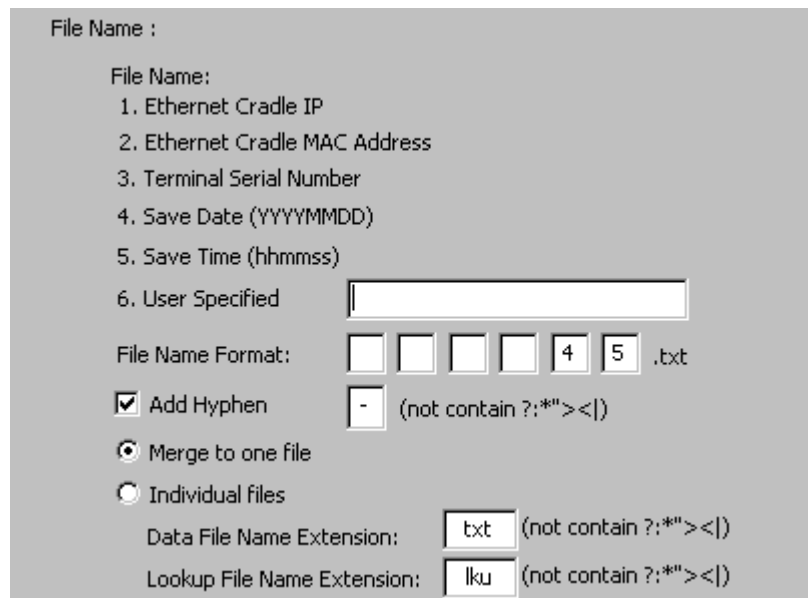
Different transmission interfaces render different **File Properties** settings provided on **File Properties** window. “Ethernet Cradle IP” and “Ethernet Cradle MAC Address” are ruled out from file-naming options when the interface isn’t TCP/IP.

- 2) Make settings by referencing the following:

File Path

Sets where the received files are saved. In default state, they are saved in the same folder where **MobileLink** is installed. To save them to somewhere else, click **Browse...** button to browse for some other folder desired.

File Name



File Name :

File Name:

1. Ethernet Cradle IP
2. Ethernet Cradle MAC Address
3. Terminal Serial Number
4. Save Date (YYYYMMDD)
5. Save Time (hhmmss)
6. User Specified

File Name Format: 4 5 .txt

Add Hyphen (not contain ?:*"><|)

Merge to one file

Individual files

Data File Name Extension: (not contain ?:*"><|)

Lookup File Name Extension: (not contain ?:*"><|)

Defines the naming rule for the incoming data files and lookup files. If interface is TCP/IP, six naming elements are provided; otherwise only four elements are available, with no. 1 (**Ethernet Cradle IP**) and no. 2 (**Ethernet Cradle MAC Address**) excluded due to inapplicability.

By default, all data files sent in are merged and saved to one file with a name comprising of elements no. 4 and no. 5. This means a file name is laid down based on the time and date it is received by the host.

For example, using element no. 1 and no. 4 results in a file name with these elements: (1) Ethernet Cradle IP through which the file comes in, and (2) the date when it is received.

How to make file-naming settings:

- ▶ If you want a unique piece of element in the file name, assign it in **6. User Specify** field. (If you don't see the need, skip it.)
- ▶ Add one or more element(s) to **File Name Format** fields. Assign the sequence to formulate the naming rule.
- ▶ Select if adding a separator between each piece of element in a file name. Symbols and punctuations such as ? (question mark), : (colon), * (asterisk mark), " (quotation mark), > (greater-than sign), < (less-than sign), and | (vertical bar) are illegal and unacceptable.
- ▶ Select **Individual files** to save the data files sent in to different files; otherwise select **Merge to one file**.
- ▶ By **Individual files**, file names are auto-suffixed with a string from "-01" to "-10", which comes from Batch AG data collecting form numberings.
- ▶ Data files are saved to .txt file by default. However file extension is redefinable and customizable with a few exceptions of illegal symbols and punctuations that should be ruled out.
- ▶ Lookup files are saved to .lku file by default. However file extension is redefinable and customizable with a few exceptions of illegal symbols and punctuations that should be ruled

out.

Save Mode

Sets how an incoming file is saved.

Normally an incoming file is saved as a new file. However, if an incoming file name is the same as an existing file name, the incoming file can be set to either overwrite or be appended to the existing file.

Add Return character to each record.

Adds a Return character to each record entry, which is the default. Change it if necessary.

Add Line-Feed character to each record.

Adds a Line-Feed character to each record entry, which is the default. Change it if necessary.

Log File

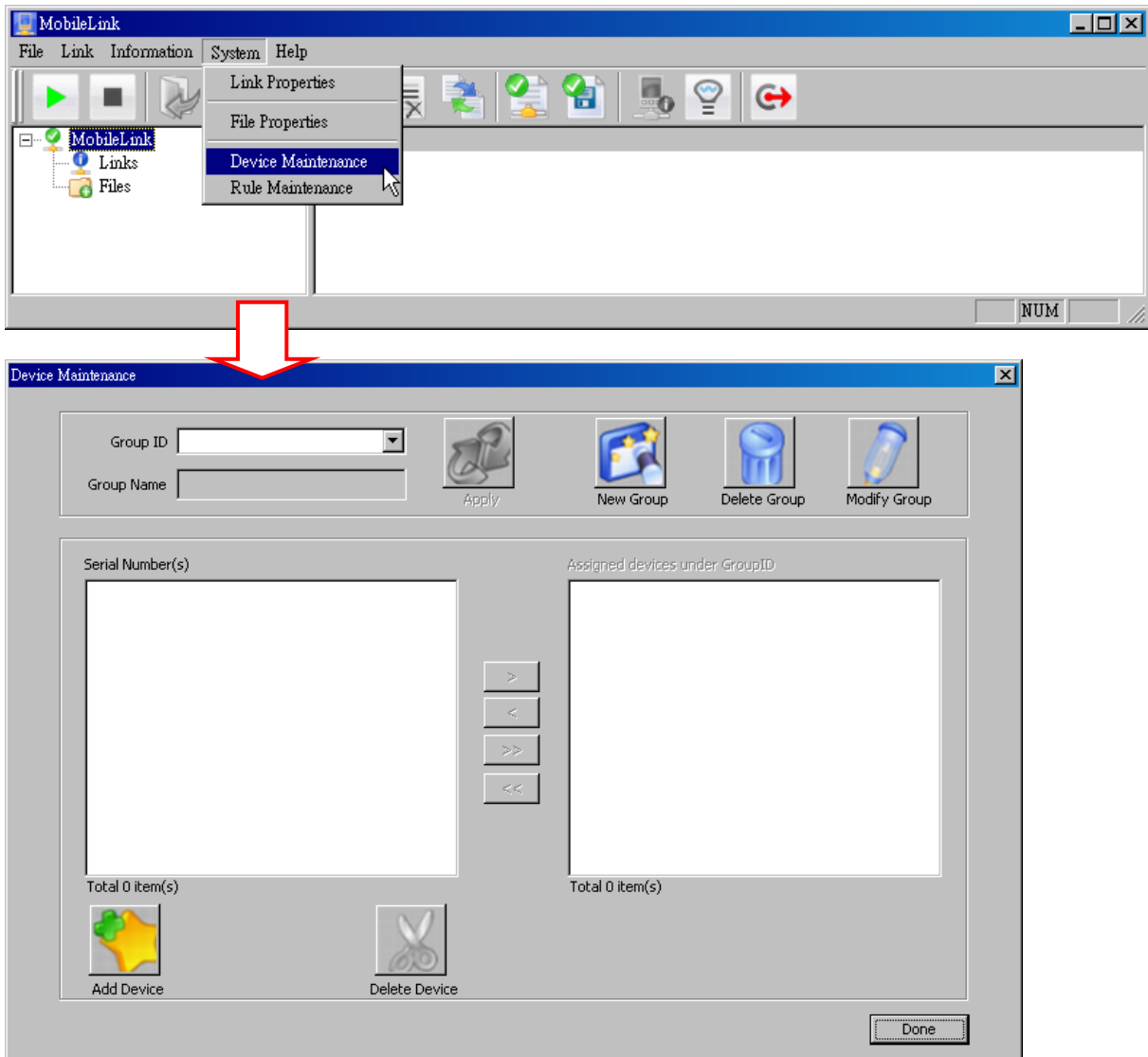
Select **Enable LOG file** to have **MobileLink** auto-generates a data transmission log that helps analyze the activities during data transmission.

File Path	By default, log files are saved in the same folder where MobileLink is installed. Browse for somewhere else to save the log files.
Save Mode	If the file name is the same as of an existing file, the log file will either overwrite or be appended to the original file. Otherwise, it will create a new file.

7.3.8 MANAGE DEVICES

From the menu bar of **MobileLink**, click **System | Device Maintenance** to manage devices by adding them to the Device List. You may group the devices if necessary.

Note **System** menu items are only available when **MobileLink** service is put to stop.



New Group

Create a group by specifying Group ID. You may specify Group Name as well. Upon completion, it will be displayed in the drop-down menu of Group ID listing.





- ▶ The maximum length of Group ID/Group Name is 250 characters each.

Delete Group

Remove a selected group from the drop-down menu of Group ID listing.

Modify Group

Assign devices to a selected group or modify its Group Name.

- ▶ Select devices from the Device List and click  to move them to the group.
- ▶ Select devices from the group and click  to move them to the Device List.
- ▶ Click  to move all the devices from the Device List to the group.
- ▶ Click  to move all the devices from the group to the Device List.

Note: You may use the SHIFT key to select a range of items and/or the CTRL key to select or clear individual items.

Add Device

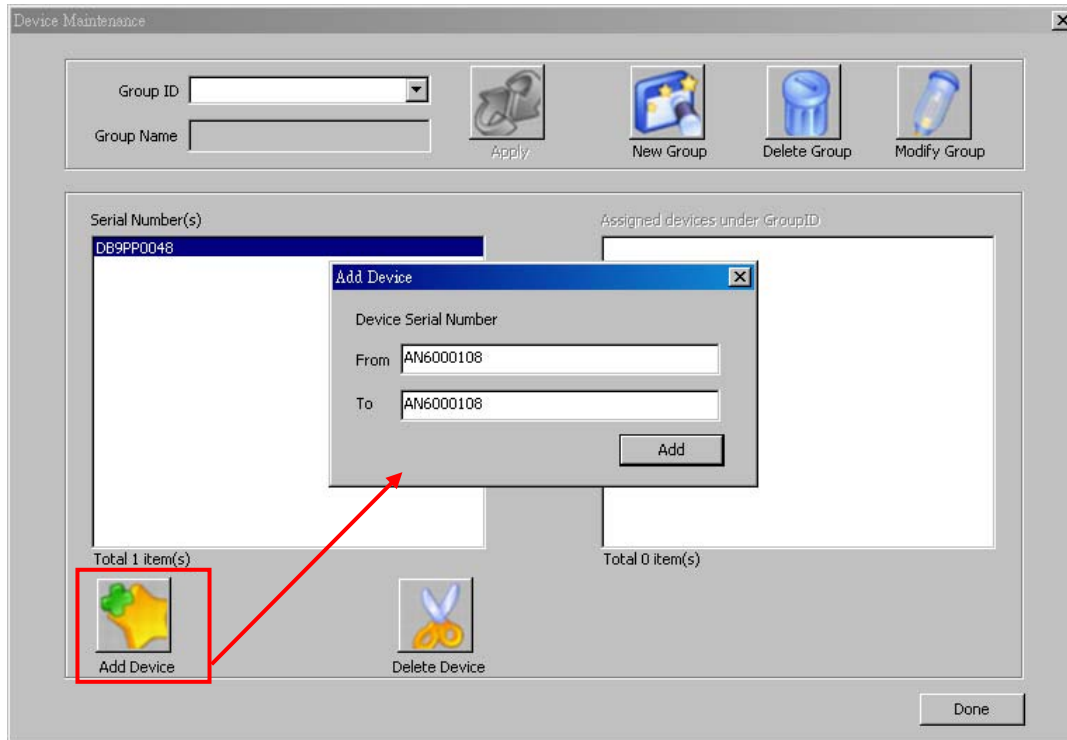
Add devices individually or by specifying a range of serial numbers. The serial numbers you entered will be added to the Device List.

- ▶ The maximum length of serial number is 12 characters.

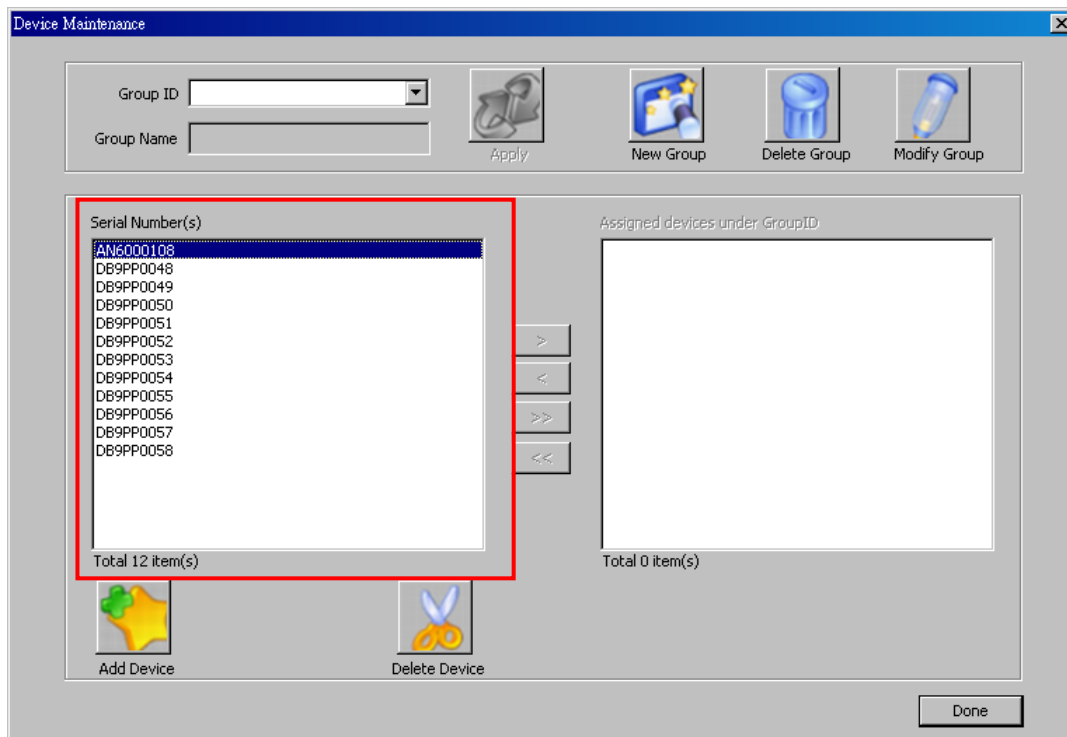
Delete Device

Delete any selected devices from the Device List.

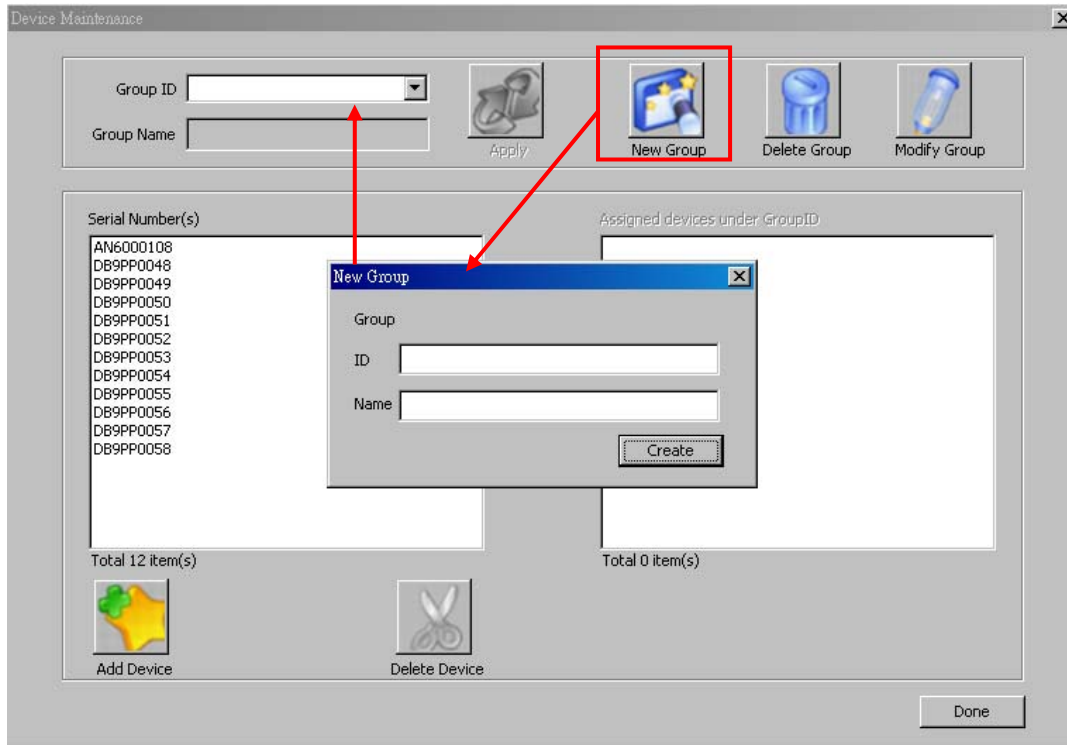
- 1) Click **Add Device** on the lower-left to add devices by serial number.



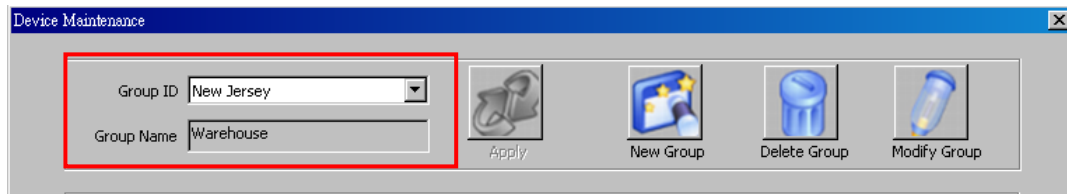
The serial numbers entered are added to the Device List on the left.



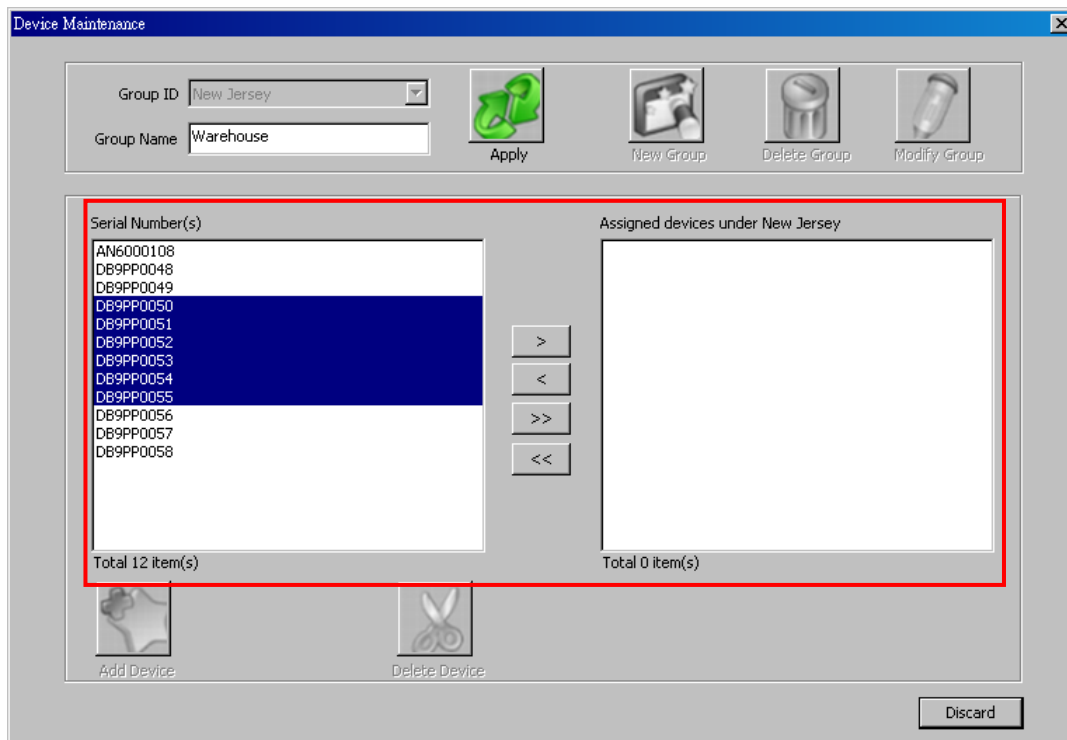
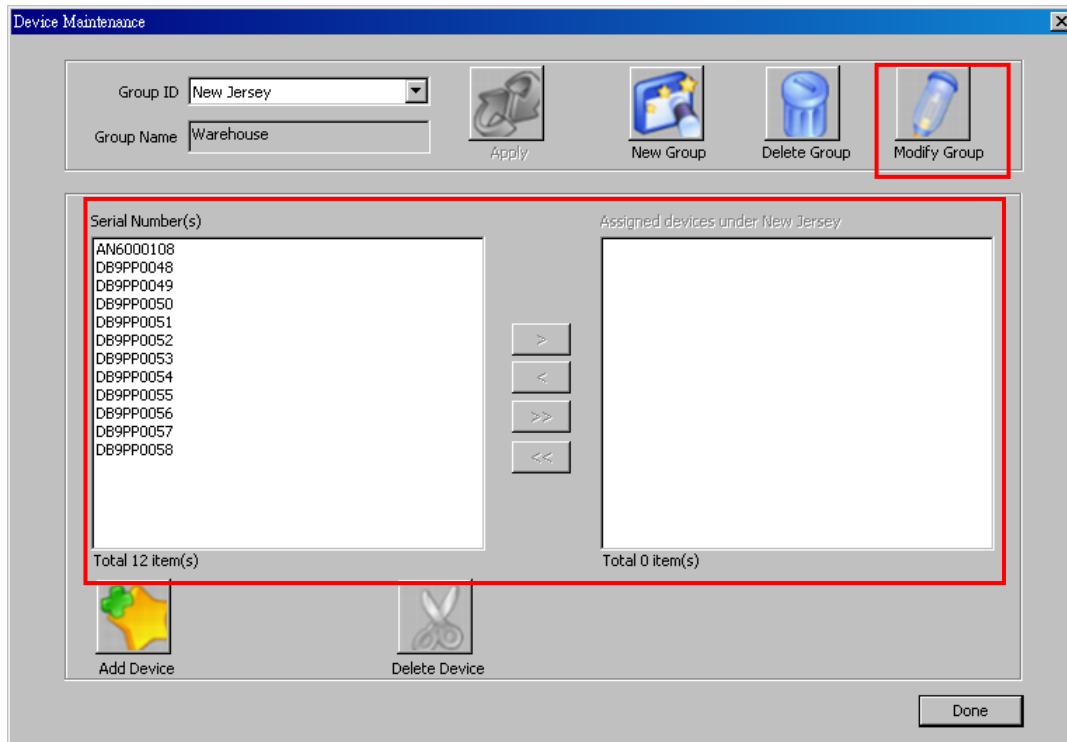
- 2) Click **New Group** to create a group by specifying Group ID. You may specify its Group Name as well.



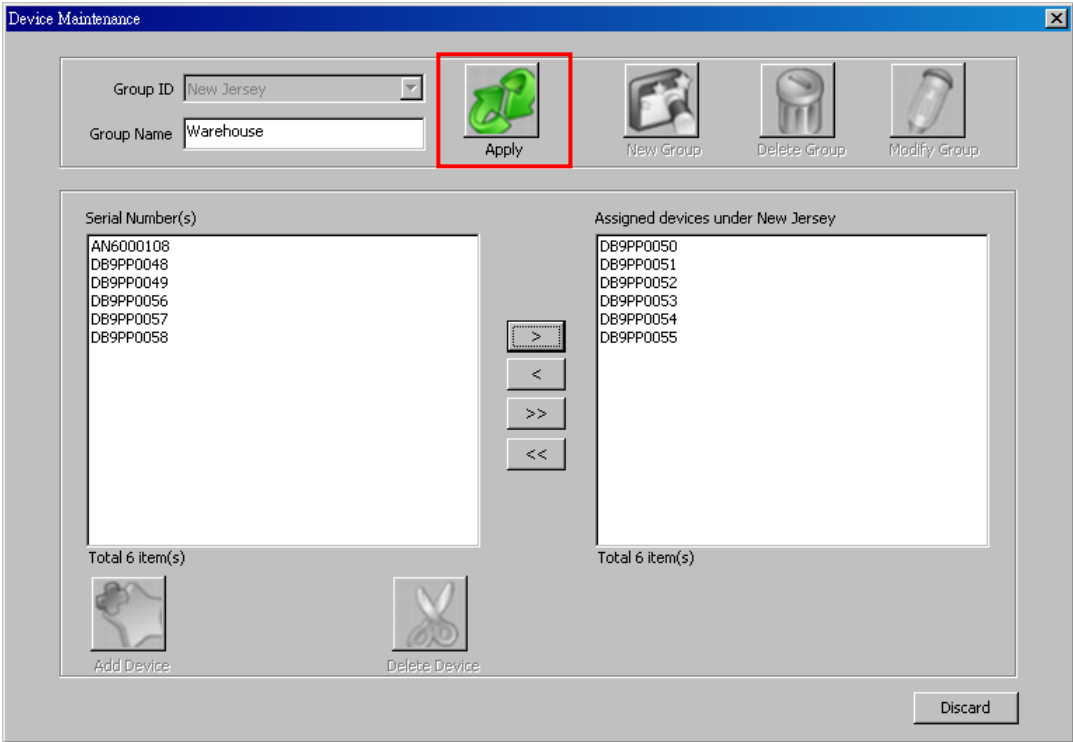
Upon completion, it will be displayed in the drop-down menu of Group ID listing.



- 3) Click **Modify Group** on the upper-right corner to assign devices to a selected group. You may modify its Group Name if necessary.



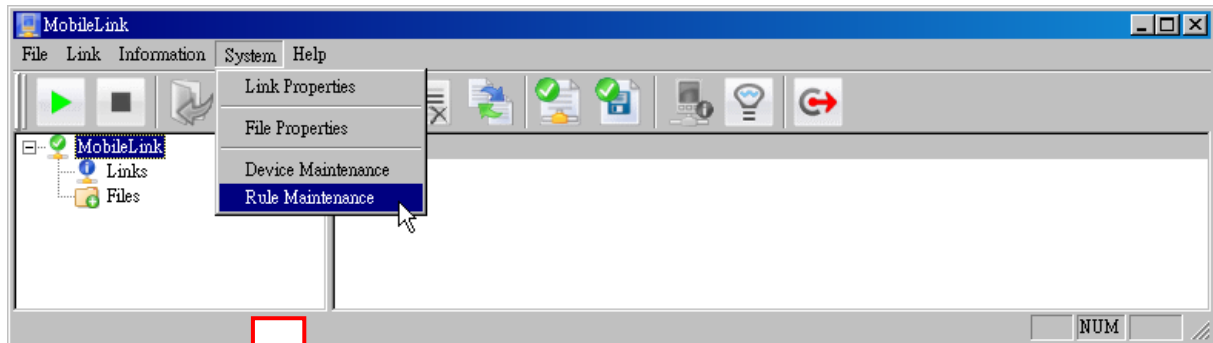
4) Click **Apply** to confirm the assignment.



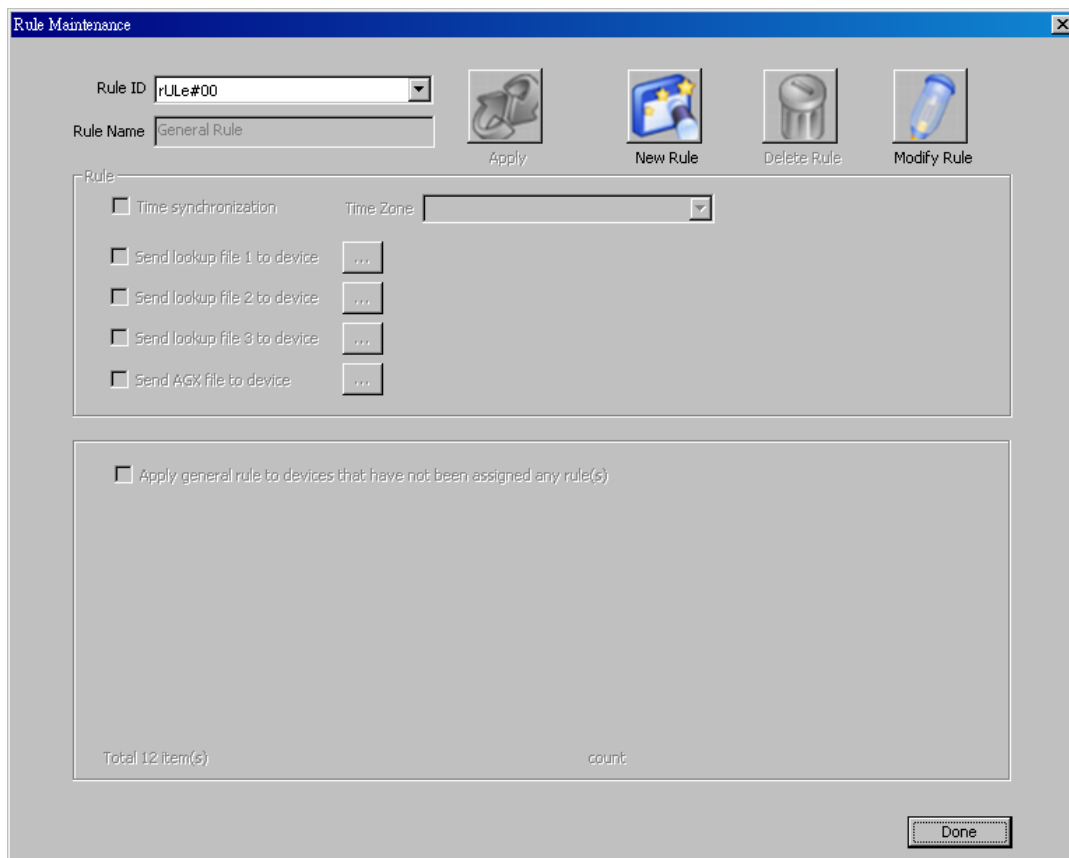
7.3.9 MANAGE RULES

A “rule” formulates what the host does to its client mobile computer(s), such as sending lookup file(s) and application template(s) to them.

From **MobileLink** menu bar, click **System | Rule Maintenance**. (Note **System** menu items are only available when **MobileLink** service is put to stop.)



A **Rule Maintenance** window opens.



GENERAL RULE

General Rule is the inherent rule that **MobileLink** provides. If no rule has been created, General Rule is the rule presented when **Rule Maintenance** window opens. Deletion isn't available for General Rule but only modification.

MODIFY GENERAL RULE

Click **Modify Rule** button  on **Rule Maintenance** window to modify General Rule. Settings to modify General Rule will become available as numerated below:

▶ Rule Name

Rule Name is subject to change, with no more than 250 characters.

Rule ID cannot be changed.

▶ Apply general rule to devices that have not been assigned any rule(s)

General Rule can be applied to the client mobile computers that haven't been assigned any rule(s) yet.

Select **Apply general rule to devices that have not been assigned any rule(s)** on **Rule Maintenance** window to apply General Rule to said mobile computers. Once selected, the following settings become available:

- **Time synchronization**

Select it and assign a time zone to synchronize device time with host time, which is necessary for **MobileLink** to determine which side (host or client) has the file that comes about later.

- **Send lookup file to device**


Select it and browse for a lookup file to enables host to offload it to client(s). Only a newer lookup file will be offloaded.

If current lookup files on the client were not acquired through **MobileLink**, they are considered outdated and will be replaced with files from the host.

- **Send AGX file to device**

Select **Send AGX file to device** and browse for an application template (*.AGX) on the host to enable host to offload it (*.AGX) to client mobile computer(s). Only a newer application template will be offloaded.

MobileLink will auto-detect if the application template to offload meets the model(s) of the client(s). If not, the application template won't be offloaded.

Done with the modification, click the **Apply** button  to apply the change and quit the setting.

NEW RULE(S)

Save for the inherent General Rule, one or more new rule(s) can be created and applied to the client(s).

Click **New Rule** button  on **Rule Maintenance** window to create a new rule. Settings to create a new rule will become available as numerated below:

- ▶ **Rule ID** - Must be no more than 250 characters.
- ▶ **Rule Name** - Must be no more than 250 characters.
- ▶ **Time synchronization**

Select it and set a time zone to synchronize device time with host time, which is necessary for **MobileLink** to determine which side (client or host) has the file that comes about later.

- ▶ **Send lookup file to device**

Select it and browse for a lookup file to enables host to offload it to the client(s) if it is newer.





If current lookup files on the client(s) were not acquired through **MobileLink**, they are considered outdated and will be replaced with files from the host.

▶ **Send AGX file to device**

Select it and browse for an application template (*.AGX) to enable the host to offload it (*.AGX) to the client mobile computer(s). Only a newer application template will be offloaded.

MobileLink will auto-detect if the application template to offload meets the model of the client mobile computer(s). If not, the application template won't be offloaded.

▶ Assign device(s)/group(s) to apply rule

- Add devices/groups to apply rule by  button.
- Removes devices/groups from rule by  button.
- Add all devices/groups to apply rule by  button.
- Removes all devices/groups from rule by  button.

Done with the settings, click **Apply** button  to apply the change and quit the setting. Once a new rule is created, it is listed among **Rule ID** drop-downs.

CREATED RULE(S)

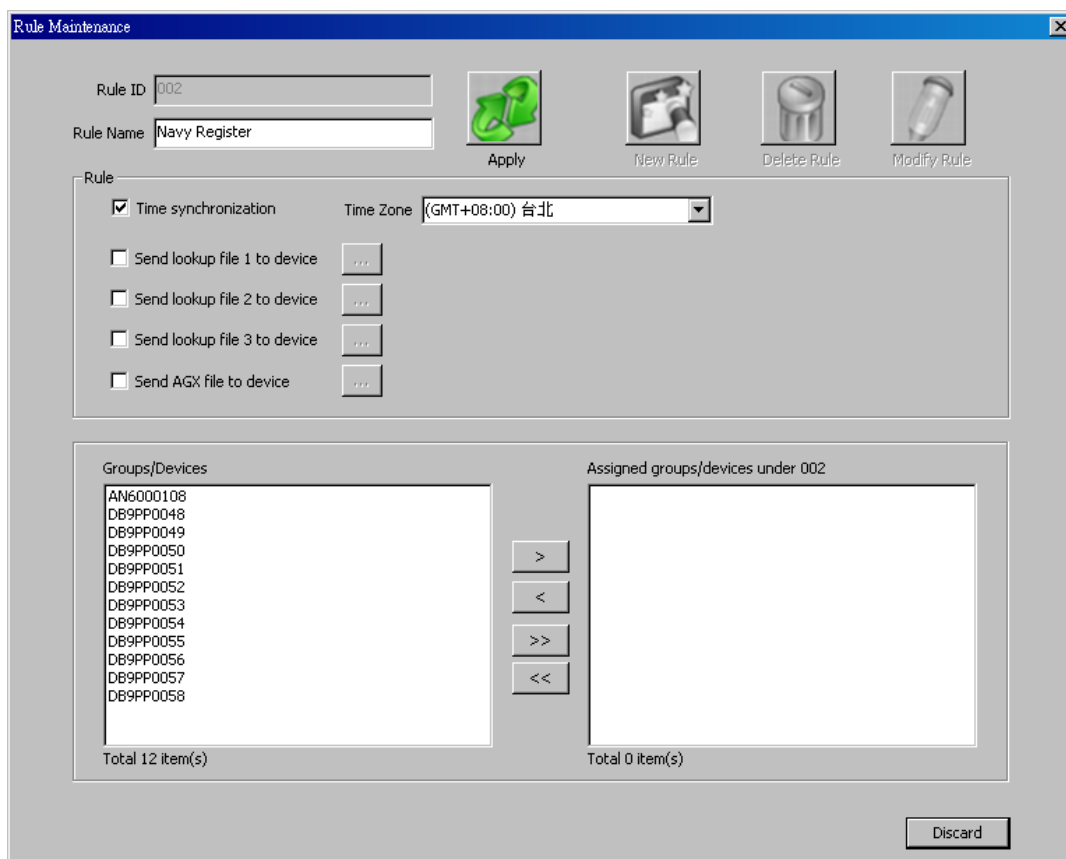
To a created rule, the following actions can be taken to it:

MODIFY CREATED RULE(S)

1) On **Rule Maintenance** window, from **Rule ID** drop box, select the created rule to modify.

2) Click **Modify Rule** button  on **Rule Maintenance** window.

Settings to modify a created rule will become available as below:



The screenshot shows the 'Rule Maintenance' window with the following details:

- Rule ID:** 002
- Rule Name:** Navy Register
- Buttons:** Apply, New Rule, Delete Rule, Modify Rule
- Rule Configuration:**
 - Time synchronization. Time Zone: (GMT+08:00) 台北
 - Send lookup file 1 to device
 - Send lookup file 2 to device
 - Send lookup file 3 to device
 - Send AGX file to device
- Groups/Devices:**
 - AN600108
 - DB9PP0048
 - DB9PP0049
 - DB9PP0050
 - DB9PP0051
 - DB9PP0052
 - DB9PP0053
 - DB9PP0054
 - DB9PP0055
 - DB9PP0056
 - DB9PP0057
 - DB9PP0058
- Assigned groups/devices under 002:** (Empty list)
- Buttons:** >, <, >>, <<
- Total:** 12 item(s) for Groups/Devices, 0 item(s) for Assigned groups/devices under 002.
- Discard** button at the bottom right.

▶ **Change Rule Name**

Note **Rule ID** cannot be changed.

▶ **Time synchronization**

Select it and set a time zone to synchronize device time with host time, which is necessary for **MobileLink** to determine which side (client or host) has the file that comes about later.

▶ **Send lookup file to device**

Select it and browse for a lookup file to enables host to offload it to the client mobile computer(s) if it is newer.


If current lookup files on the client(s) were not acquired through **MobileLink**, they are considered outdated and will be replaced with files from the host.


▶ **Send AGX file to device**


Select it and browse for an application template (*.AGX) to enable the host to offload it (*.AGX) to the client mobile computer(s). Only a newer application template will be offloaded.


MobileLink will auto-detect if the application template to offload meets the model of the client mobile computer(s). If not, the application template won't be offloaded.


▶ Assign device(s)/group(s) to apply the created rule

- Add devices/groups to apply the rule by the  button.

- Removes devices/groups from the rule by the  button.

- Add all devices/groups to apply the rule by the  button.

- Removes all devices/groups from the rule by the  button.

Done with the modification, click **Apply** button  to apply the change and quit the setting.

Note: Use SHIFT key to select a range of items and/or the CTRL key to select or clear individual items.

DELETE CREATED RULE(S)

A created rule is subject to removal. To remove a created rule:

1) On **Rule Maintenance** window, from the **Rule ID** drop-downs, select the created rule to remove.

2) Click **Deleted Rule** button .

A dialog pops up to ask for confirmation on deletion.

3) Click **Yes**.

The rule is deleted.

7.4 SD DBF CONVERTER (8200/8400/8700 ONLY)

8200, 8400 and 8700 supports accessing template files (.AGX) and lookup files from the SD card installed in the mobile computer.

The DBF Converter serves to convert a .txt lookup file to DBF format (.DB0, .DB1) and in the meanwhile duplicates the lookup file to the SD card installed in the mobile computer.

Click the "Distribute" checkbox to duplicate the lookup file (DBF format) to the SD card.

Note: The default working directory is "\AG\DBF", which will be created on SD card automatically.

1 File name :

2 Lookup properties

Getting lookup properties from AGX file

Lookup :

Number of fields :

Fixed length

Delimiter

Field	Offset	Length	Key field
#1	<input type="text"/>	<input type="text"/>	<input checked="" type="radio"/>
#2	<input type="text"/>	<input type="text"/>	<input type="radio"/>
#3	<input type="text"/>	<input type="text"/>	<input type="radio"/>
#4	<input type="text"/>	<input type="text"/>	<input type="radio"/>
#5	<input type="text"/>	<input type="text"/>	<input type="radio"/>
#6	<input type="text"/>	<input type="text"/>	<input type="radio"/>
#7	<input type="text"/>	<input type="text"/>	<input type="radio"/>
#8	<input type="text"/>	<input type="text"/>	<input type="radio"/>

3 Output DBF file

Convert

File name :

4 Distribute

DBF file :

5

- 1) For the source lookup file, click the [Browse] button to locate a text file (.TXT).
- 2) For the lookup properties, specify from scratch or select a template file (.AGX) and the target lookup file. For the latter, the properties will be loaded automatically.
- 3) For the output DBF file, make sure to select the check box of [Convert] and [Distribute].

- ▶ Specify a file name or locate an existing DBF file to save the result files on your PC.
- 4) On 8200/8400/8700, select **3. Utilities | 8. Load Lookup File** and identify the lookup file.
-

Note: The download interface must be set to "SD". Refer to 5.1.6 Download Method.

- 5) Click [Go].
- ▶ It will convert the source file to DBF format and save the result files on PC side.
 - ▶ If you have selected the check box of [Distribute], it will automatically copy the result files to the import directory "\AG\DBF" on SD card.
- 6) On 8200/8400/8700, press [Enter] to confirm copying files to SD card and checking DBF format.
- ▶ Depending on the DBF location specified in the template file, it will either (1) load the associated lookup file(s) to SRAM via SD card, or (2) keep the files on SD card for direct access. Refer to [3.2.4 DBF File Location \(8200/8400/8700 Only\)](#).
-

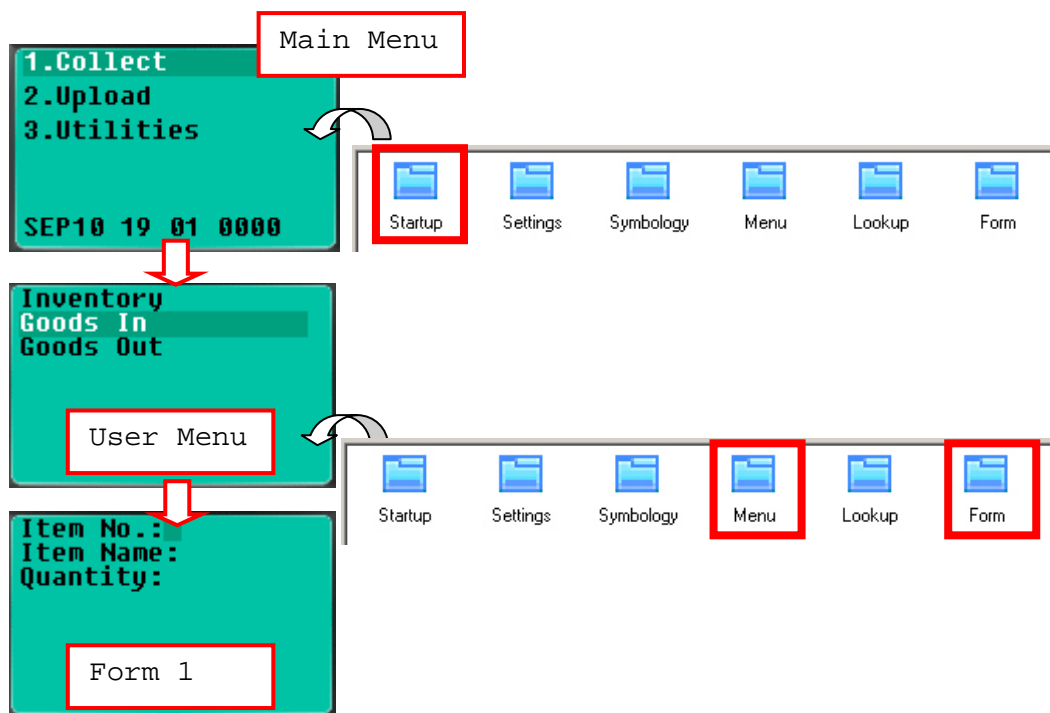
Note: It is suggested that you check DBF format upon completion of downloading lookup files.

7.5 PROGRAM SIMULATION

When you have completed the entire configuration, you may click **Tools | Simulator** to run the program simulator and verify whether these program sequences meet your requirements.



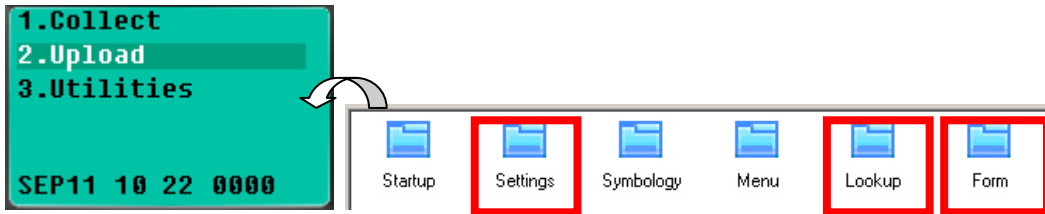
Collect Data



Upload Data

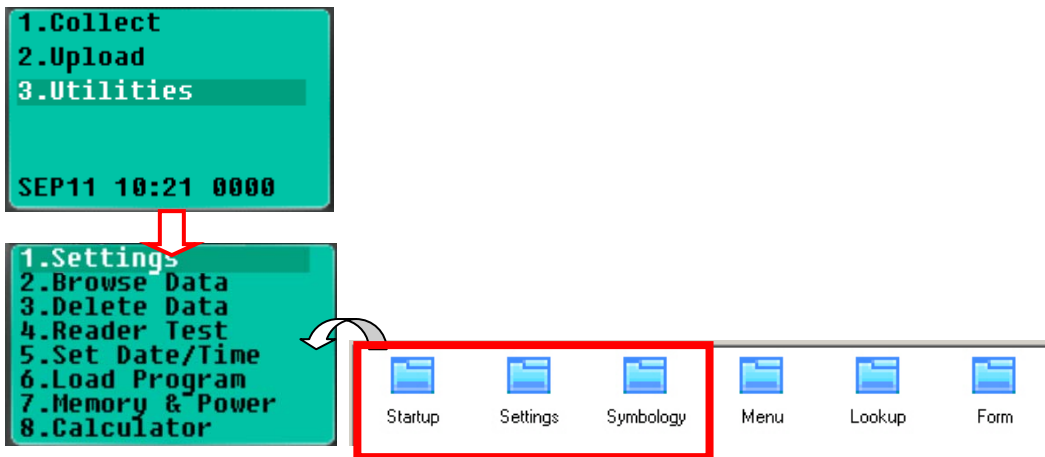
No simulation.

- ▶ Refer to 1.2.3 Record and 3.3.2 Lookup Data Can Be Uploaded. Normally, it will proceed to connect via the selected upload port.
- ▶ Refer to [5.1.1 Data Manipulation](#) for “Data Deletion” upon completion of uploading data.



Utilities

Only partial simulation is allowed.



Note: If a lookup file is specified in use on the Lookup property page, **3. Utilities** | **8. Calculator** will be replaced by **3. Utilities** | **8. Load Lookup File** after you have downloaded the template file to the real mobile computer.

SCAN ENGINE SETTINGS

The **FORGE Batch Application Generator** allows configuring the following reader types, depending on the module equipped on your mobile computer:

	8000	8200	8300	8400	8500	8700
Barcode Reader						
<i>1D CCD Scan Engine</i>	✓	✓	✓	✓	✓	✓
<i>1D Laser Scan Engine</i>	✓	✓	✓	✓	✓	✓
<i>1D Long Range Laser Scan Engine (LR)</i>	✗	✗	✓	✗	✓	✓
<i>1D Extra Long Range Laser Scan Engine (ELR)</i>	✗	✗	✗	✗	✓	✗
<i>2D Scan Engine</i>	✗	✓	✗	✓	✓	✓
RFID Reader						
<i>ACG_RFID Module v0.9</i>	✗	✗	✗	✗	✓	✗
<i>ACG_RFID Module v1.0</i>	✗	✗	✓	✗	✓	✗
<i>MP_RFID Module</i>	✗	✗	✗	✗	✗	✓

Options of different reader combination are allowed, such as 1D+RFID and 2D+RFID. For each combination, both readers can be initialized and ready for scanning at the same time (dual mode operation). For example, if you press the [Scan] button while running the AG run-time program on the mobile computer, it will read a barcode in position or an RFID tag in proximity depending on which one comes first.

Note: You cannot have 1D+2D scan engines installed on the mobile computer because they are both barcode readers!

SYMBOLOGIES SUPPORTED

Varying by the scan engine installed, the supported symbologies or tag types are listed below. For details on configuring associated settings, please refer to each Appendix separately.

	CCD, Laser	LR, ELR	2D
Codabar	✓	✓	✓
Code 11	x	(✓) ^{Note}	✓

Note: Code 11 supported on LR, ELR scan engine is for 8300 only.

Code 93		✓	✓	✓
Composite Code		x	x	✓
MSI		✓	✓	✓
Plessey		✓	x	x
Postal Codes		x	x	✓
Telepen		✓	x	x
Code 128	Code 128	✓	✓	✓
	GS1-128 (EAN-128)	✓	✓	✓
	ISBT 128	✓	✓	✓
Code 2 of 5	Industrial 25 (Discrete 25)	✓	✓	✓
	Interleaved 25	✓	✓	✓
	Matrix 25	✓	x	(✓) ^{Note}
	Chinese 25	x	x	(✓) ^{Note}
	Coop 25	(✓) ^{Note}	x	x

Note: (1) Matrix 25 and Chinese 25 are supported on 2D scan engine for 8200/8400/8700 only.

(2) Coop 25 is supported on CCD/Laser scan engine for 8000/8200/8300/8400/8700 only.

Code 3 of 9	Code 39	✓	✓	✓
	Trioptic Code 39	x	✓	✓
	Italian Pharmacode (Code 32)	✓	✓	✓
	French Pharmacode	✓	x	x
EAN/UPC	EAN-8	✓	✓	✓
	EAN-13	✓	✓	✓
	Bookland EAN (ISBN)	✓	✓	✓

UPC-E0	✓	✓	✓
UPC-E1	✓	✓	✓

	UPC-A	✓	✓	✓
GS1 DataBar (RSS)	GS1 DataBar Omnidirectional (RSS-14)	✓	✓	✓
	GS1 DataBar Truncated	✓	✓	✓
	GS1 DataBar Stacked	✓	✓	✓
	GS1 DataBar Stacked Omnidirectional	✓	✓	✓
	GS1 DataBar Limited (RSS Limited)	✓	✓	✓
	GS1 DataBar Expanded (RSS Expanded)	✓	✓	✓
	GS1 DataBar Expanded Stacked	✓	✓	✓
2D Symbologies	PDF417	x	x	✓
	MicroPDF417	x	x	✓
	Data Matrix	x	x	✓
	Maxicode	x	x	✓
	QR Code	x	x	✓
	MicroQR	x	x	(✓) ^{Note}
	Aztec	x	x	(✓) ^{Note}

Note: MicroQR and Aztec are supported on 2D scan engine for 8200/8400/8700 only.

RFID TAGS SUPPORTED

The RFID reader supports read/write operations depending on the tags. The supported labels include ISO 15693, Icode®, ISO 14443A, and ISO 14443B. Currently, the performance of some tags has been confirmed, and the results are listed below for your reference. The results found with RFID module version 1.0 are different from those found with version 0.9 or older versions.

Note: You should study the specifications of RFID tags before use. The "Write Page" functionality may not be supported.

ACG_RFID Module Version 1.0		UID Only	Read Page	Write Page*
ISO 14443A	Mifare Standard 1K	✓	✓	✓
	Mifare Standard 4K	✓	✓	✓
	Mifare Ultralight	✓	✓	✓
	Mifare DESFire	✓	---	---
	Mifare S50	✓	✓	✓
	SLE44R35	✓	---	---
	SLE66R35	✓	✓	✓
ISO 14443B	SRIX 4K	✓	✓	✓
	SR176	✓	✓	✓
ISO 15693	ICODE SLI	✓	✓	✓
	SRF55V02P	✓	---	---
	SRF55V02S	✓	---	---
	SRF55V10P	✓	---	---
	TI Tag-it HF-I	✓	✓	✓
ICODE® (Phillips)	ICODE	✓	✓	✓
ACG_RFID Module Version 0.9		UID Only	Read Page	Write Page*
ISO 14443A	Mifare Standard 1K	✓	---	---
	Mifare Standard 4K	✓	---	---
	Mifare DESFire	✓	---	---
	Mifare S50	✓	---	---
	SLE44R35	✓	---	---
	SLE66R35	✓	---	---

ISO 15693	ICODE SLI	✓	✓	✓
	SRF55V02P	✓	✓	✓
	SRF55V02S	✓	---	---
	SRF55V10P	✓	✓	✓
	TI Tag-it HF-I	✓	✓	✓
	ST LRI64	✓	✓	✓
	ST LRI512	✓	✓	✓
Tagit®	Tagit	✓	✓	✓
ICODE® (Phillips)	ICODE	✓	✓	✓

CCD/LASER SCAN ENGINE

The tables below list reader settings as well as symbology settings for the CCD or Laser scan engine.

READER SETTINGS TABLE

CCD/Laser Engine	Description	Default
Scan Mode		Laser mode
Continuous Mode	Non-stop scanning ▶ To decode the same barcode repeatedly, move away the scan beam and target it at the barcode for each scanning.	
Test Mode	Non-stop scanning ▶ Capable of decoding the same barcode repeatedly	
Repeat Mode	Non-stop scanning ▶ Capable of re-transmitting barcode data if triggering within one second after a successful decoding	
Momentary Mode	Hold down the scan trigger to start with scanning. ▶ The scanning won't stop until you release the trigger.	
Alternate Mode	Press the scan trigger to start with scanning. ▶ The scanning won't stop until you press the trigger again.	
Aiming Mode	Press the scan trigger to aim at a barcode. Within one second, press the trigger again to decode the barcode. ▶ The scanning won't stop until (a) a barcode is decoded, (b) the pre-set timeout expires, or (c) you release the trigger.	
Laser Mode	Hold down the scan trigger to start with scanning. ▶ The scanning won't stop until (a) a barcode is read, (b) the preset timeout expires, or (c) you release the trigger.	
Auto Off Mode	Press the scan trigger to start with scanning. ▶ The scanning won't stop until (a) a barcode is read or (b) the preset timeout expires.	
Auto Power Off Mode	Press the scan trigger to start with scanning. ▶ The scanning won't stop until the preset timeout expires, and, the preset timeout period re-counts after each successful decoding.	

Read Redundancy		None
None	No redundancy means one successful decoding will make the reading valid and induce the "READER Event".	
One time, Two times, or Three times	<p>The higher the reading security is (that is, the more redundancy the user selects), the slower the reading speed gets.</p> <ul style="list-style-type: none"> ▶ If "Three Times" is selected, it will take a total of four consecutive successful decodings of the same barcode to make the reading valid. 	
Time-out		3 sec.
0~255 (second)	<p>Set the maximum time for decoding to continue during a scan attempt. It applies to the following scan modes only –</p> <ul style="list-style-type: none"> ▶ Aiming mode ▶ Laser mode ▶ Auto Off mode ▶ Auto Power Off mode 	
Aiming Duration		3 sec.
1~255 (second)	<p>Set the maximum time for decoding to continue during a scan attempt.</p> <ul style="list-style-type: none"> ▶ It applies to Aiming mode only. 	

Note: Aiming Duration is supported on CCD/Laser scan engine for 8000/8200/8300/8400/8500/8700 only.

SYMBOLGY SETTINGS TABLE

CCD/Laser Engine	Description	Default
Codabar		Enable
Transmit Start/Stop Character	Decide whether to include the start/stop characters in the data being transmitted. If "Transmit Start/Stop Characters" is desired, select one set: <ul style="list-style-type: none"> ▶ abcd / abcd ▶ abcd / tn*e ▶ ABCD / ABCD ▶ ABCD / TN*E 	No
Code 128		Enable
GS1-128		Enable
Transmit Code ID (for GS1-128)	Decide whether to include Code ID ("]C1") will be included in the data being transmitted.	No
Replace Field Separator	Decide whether to replace the field separator. If the barcode contains Field Separator "0x1D", it will be changed to the desired Field Separator. For example, type the desired character ";" (semicolon) as the new field separator. Then if the barcode contains Field Separator "0x1D", it will be changed to ";".	No
ISBT 128		Enable
Industrial 25 (Discrete 25)		Enable
Start/Stop Selection	This decides the readability of all 2 of 5 symbology variants. For example, flight tickets actually use an Industrial 2 of 5 barcode but with Interleaved 2 of 5 start/stop pattern. In order to read this barcode, the start/stop pattern selection parameter of Industrial 2 of 5 should set to "Interleaved 25".	Industrial 25
Verify Check Digit	Decide whether to verify the check digit. If the check digit is incorrect, the barcode will not be accepted.	No
Transmit Check Digit	Decide whether to include the check digit in the data being transmitted.	Yes
Select Length	<ul style="list-style-type: none"> ▶ One or two fixed lengths ▶ Range 	1~127
Interleaved 25		Enable
Start/Stop Selection	Refer to Industrial 25.	Interleaved 25
Verify Check Digit	Decide whether to verify the check digit. If the check digit is incorrect, the barcode will not be accepted.	No
Transmit Check Digit	Decide whether to include the check digit in the data being transmitted.	Yes

Select Length	<ul style="list-style-type: none"> ▶ One or two fixed lengths ▶ Range 	1~127
Matrix 25		Disable
Start/Stop Selection	Refer to Industrial 25.	Matrix 25
Verify Check Digit	Decide whether to verify the check digit. If the check digit is incorrect, the barcode will not be accepted.	No
Transmit Check Digit	Decide whether to include the check digit in the data being transmitted.	Yes
Select Length	<ul style="list-style-type: none"> ▶ One or two fixed lengths ▶ Range 	1~127
Coop 25		Disable
Verify Check Digit	Decide whether to verify the check digit. If the check digit is incorrect, the barcode will not be accepted.	No
Transmit Check Digit	Decide whether to include the check digit in the data being transmitted.	Yes

Note: Coop 25 is supported on CCD/Laser scan engine for 8000/8200/8300/8400/8700 only.

French Pharmacode		Disable
Transmit Check Digit	Decide whether to include the check digit in the data being transmitted.	Yes
Italian Pharmacode (Code 32)		Disable
Transmit Check Digit	Decide whether to include the check digit in the data being transmitted.	Yes

Note: For French/Italian Pharmacode, "Transmit Start/Stop Character" is not provided in UI but it is controlled by the same setting of Code 39.

Code 39		Enable
Transmit Start/Stop Character	Decide whether to include the start/stop characters "*" in the data being transmitted.	No
Verify Check Digit	Decide whether to verify the check digit. If the check digit is incorrect, the barcode will not be accepted.	No
Transmit Check Digit	Decide whether to include the check digit in the data being transmitted.	Yes
Code 39 Full ASCII	Code 39 Full ASCII includes all the alphanumeric and special characters.	No
Code 93		Enable

MSI		Disable
Verify Check Digit	Select one of the three calculation formulas to verify the check digit. If the check digit is incorrect, the barcode will not be accepted. <ul style="list-style-type: none"> ▶ Single Modulo 10 ▶ Double Modulo 10 ▶ Modulo 11 & 10 	Single Modulo 10
Transmit Check Digit	Decide whether to include the check digit in the data being transmitted. <ul style="list-style-type: none"> ▶ Last digit not transmitted ▶ Both digits transmitted ▶ Both digits not transmitted 	Both digits transmitted
Select Length	<ul style="list-style-type: none"> ▶ One or two fixed lengths ▶ Range 	1~127
Negative Barcode		Enable
Plessey		Disable
Convert to UK Plessey	When applied, each occurrence of the character "A" in the barcode data will be replaced by the character "X".	No
Transmit Check Digit	Decide whether to include the two check digits in the data being transmitted.	Yes
Telepen		Disable
Original Telepen (Numeric)	The original Telepen includes numeric characters.	No
AIM Telepen (Full ASCII)	AIM Telepen (Full ASCII) includes all the alphanumeric and special characters.	Yes
GS1 Databar-14/Expanded		Disable
GS1 Databar-14	Transmit Code ID Decide whether to include Code ID ("je0") will be included in the data being transmitted. GS1 DataBar-14 is short for GS1 DataBar Omnidirectional. This group consists of (1) GS1 DataBar Omnidirectional, (2) GS1 DataBar Truncated, (3) GS1 DataBar Stacked, and (4) GS1 DataBar Stacked Omnidirectional.	Yes
GS1 Databar Expanded	Transmit Code ID Decide whether to include Code ID ("je0") will be included in the data being transmitted. This group consists of (1) GS1 DataBar Expanded, and (2) GS1 DataBar Expanded Stacked.	
Transmit Application ID	Decide whether to include the Application ID ("01") in the data being transmitted.	Yes
Transmit Check Digit	Decide whether to include the check digit in the data being transmitted.	Yes

GS1 Databar Limited		Disable
Transmit Code ID	Decide whether to include Code ID ("]e0") will be included in the data being transmitted.	Yes
Transmit Application ID	Decide whether to include the Application ID ("01") in the data being transmitted.	Yes
Transmit Check Digit	Decide whether to include the check digit in the data being transmitted.	Yes
EAN-8		Enable
Convert to EAN-13	The EAN-8 barcode will be expanded into EAN-13, and the next processing will follow the settings configured for EAN-13. ▶ After conversion, the data follows EAN-13 format and is affected by EAN-13 programming selections (e.g. Check Digit).	No
Transmit Check Digit	Decide whether to include the check digit in the data being transmitted.	Yes
Addon 2 / Addon 5	Decide whether to decode EAN-8 with supplementals.	No
EAN-13 & UPC-A		Enable
ISBN Conversion	The EAN-13 barcode starting with 978 and 979 will be converted to ISBN.	No
ISSN Conversion	The EAN-13 barcode starting with 977 will be converted to ISSN.	No
GTIN for EAN-13	The EAN-13 barcode will be expanded into 14-digit Global Trade Item Number (GTIN).	No
Transmit Check Digit	Decide whether to include the check digit in the data being transmitted.	Yes
Addon 2 / Addon 5	Decide whether to decode EAN-13/UPC-A with supplementals.	No
(UPC-A) Convert to EAN-13	The UPC-A barcode will be expanded into EAN-13, and the next processing will follow the settings configured for EAN-13. ▶ After conversion, the data follows EAN-13 format and is affected by EAN-13 programming selections (e.g. Check Digit).	Yes
(UPC-A) Transmit Check Digit	Decide whether to include the UPC-A check digit in the data being transmitted.	Yes
(UPC-A) Transmit System Number	Decide whether to include the UPC-A System Number in the data being transmitted.	Yes
UPC-E (= UPC-E0)		Enable
Convert to UPC-A	The UPC-E barcode will be expanded into UPC-A, and the next processing will follow the settings configured for UPC-A. ▶ After conversion, the data follows UPC-A format and is affected by UPC-A programming selections (e.g. System Number, Check Digit).	No

Transmit Check Digit	Decide whether to include the UPC-E check digit in the data being transmitted.	Yes
Transmit System Number	Decide whether to include the UPC-E System Number in the data being transmitted.	No
Addon 2 / Addon 5	Decide whether to decode UPC-E with supplementals.	No
UPC-E1		Disable
UPC-E1 Triple Check	<p>Decide whether to apply read redundancy to the UPC-E1 barcode. If true, the same UPC-E1 barcode has to be read three times to make a valid reading.</p> <ul style="list-style-type: none"> ▶ This is helpful when the barcode is defaced and requires more attempts to read it successfully. 	No

LR/ELR LASER SCAN ENGINE

The tables below list reader settings as well as symbology settings for the Long Range Laser (LR) or Extra Long Range Laser (ELR) scan engine.

READER SETTINGS TABLE

LR/ELR Engine	Description	Default
Scan Mode		Laser mode
Continuous Mode	Non-stop scanning <ul style="list-style-type: none"> ▶ To decode the same barcode repeatedly, move away the scan beam and target it at the barcode for each scanning. 	
Test Mode	Non-stop scanning <ul style="list-style-type: none"> ▶ Capable of decoding the same barcode repeatedly 	
Alternate Mode	Press the scan trigger to start with scanning. <ul style="list-style-type: none"> ▶ The scanning won't stop until you press the trigger again. 	
Aiming Mode	Press the scan trigger to aim at a barcode. Within one second, press the trigger again to decode the barcode. <ul style="list-style-type: none"> ▶ The scanning won't stop until (a) a barcode is decoded, (b) the pre-set timeout expires, or (c) you release the trigger. 	
Laser Mode	Hold down the scan trigger to start with scanning. <ul style="list-style-type: none"> ▶ The scanning won't stop until (a) a barcode is read, (b) the preset timeout expires, or (c) you release the trigger. 	
Auto Off Mode	Press the scan trigger to start with scanning. <ul style="list-style-type: none"> ▶ The scanning won't stop until (a) a barcode is read or (b) the preset timeout expires. 	
Time-out		3 sec.
0~255 (second)	Set the maximum time for decoding to continue during a scan attempt. It applies to the following scan modes only – <ul style="list-style-type: none"> ▶ Aiming mode ▶ Laser mode ▶ Auto Off mode 	
Aiming Duration		3 sec.
1~255 (second)	Set the maximum time for decoding to continue during a scan attempt. <ul style="list-style-type: none"> ▶ It applies to Aiming mode only. 	

Note: Scan Mode options and Aiming Duration are supported on Long Range Laser scan engine for 8300/8700.

SYMBOLGY SETTINGS TABLE (8300/8500)

LR/ELR Engine	Description	Default
Codabar		Enable
Transmit Start/Stop Character	Decide whether to include the start/stop characters in the data being transmitted.	No
Select Length	<ul style="list-style-type: none"> ▶ Any Length ▶ One or two fixed lengths ▶ Range (1~55) 	Any Length
Code 128		Enable
GS1-128		Enable
Replace Field Separator	Decide whether to replace the field separator. If the barcode contains Field Separator "0x1D", it will be changed to the desired Field Separator. For example, type the desired character ";" (semicolon) as the new field separator. Then if the barcode contains Field Separator "0x1D", it will be changed to ";".	No
ISBT 128		Enable
Industrial 25 (Discrete 25)		Enable
Select Length	<ul style="list-style-type: none"> ▶ Any Length ▶ One or two fixed lengths ▶ Range (1~55) 	Any Length
Interleaved 25		Enable
Convert to EAN-13	Convert a 14-character barcode into EAN-13 if the following requirements are met: <ul style="list-style-type: none"> ▶ The barcode must have a leading 0 and a valid EAN-13 check digit. 	No
Verify Check Digit	Decide whether to verify the check digit. If desired, select one of the algorithms below. If the check digit is incorrect, the barcode will not be accepted. <ul style="list-style-type: none"> ▶ No ▶ USS algorithm ▶ OPCC algorithm 	No
Transmit Check Digit	Decide whether to include the check digit in the data being transmitted.	No
Select Length	<ul style="list-style-type: none"> ▶ Any Length ▶ One or two fixed lengths ▶ Range (1~55) 	Any Length
Code 39		Enable
Convert to Code 32	Convert to Italian Pharmacode.	No
Verify Check Digit	Decide whether to verify the check digit. If the check digit is incorrect, the barcode will not be accepted.	No

Transmit Check Digit	Decide whether to include the check digit in the data being transmitted. <ul style="list-style-type: none"> ▶ "Verify Check Digit" must be enabled so that the check digit can be left out (= "Transmit Check Digit" disabled). 	No						
Code 39 Full ASCII	Code 39 Full ASCII includes all the alphanumeric and special characters.	Disable						
Trioptic Code 39	Decide whether to decode Trioptic Code 39. <ul style="list-style-type: none"> ▶ Trioptic Code 39 is a variant of Code 39 used in the marking of computer tape cartridges. It always contains six characters. 	Disable						
Select Length	<ul style="list-style-type: none"> ▶ Any Length ▶ One or two fixed lengths ▶ Range (1~55) 	Any Length						
Code 93		Enable						
Select Length	<ul style="list-style-type: none"> ▶ Any Length ▶ One or two fixed lengths ▶ Range (1~55) 	Any Length						
MSI		Enable						
Verify Check Digit	If Two Check Digits option is selected, an additional verification is required to ensure integrity. Select one of the algorithms below. If the check digit is incorrect, the barcode will not be accepted. <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">Check Digit</th> <th style="text-align: left;">Algorithm</th> </tr> </thead> <tbody> <tr> <td>One Check Digit</td> <td>Single Modulo 10</td> </tr> <tr> <td>Two Check Digits</td> <td> <ul style="list-style-type: none"> ▶ Mod 10/Mod 11 ▶ Mod 10/Mod 10 </td> </tr> </tbody> </table>	Check Digit	Algorithm	One Check Digit	Single Modulo 10	Two Check Digits	<ul style="list-style-type: none"> ▶ Mod 10/Mod 11 ▶ Mod 10/Mod 10 	Single Modulo 10
Check Digit	Algorithm							
One Check Digit	Single Modulo 10							
Two Check Digits	<ul style="list-style-type: none"> ▶ Mod 10/Mod 11 ▶ Mod 10/Mod 10 							
Transmit Check Digit	Decide whether to include the check digit in the data being transmitted.	No						
Select Length	<ul style="list-style-type: none"> ▶ Any Length ▶ One or two fixed lengths ▶ Range (1~55) 	Any Length						
GS1 Databar		---						
GS1 Databar-14	GS1 DataBar-14 is short for GS1 DataBar Omnidirectional. This group consists of (1) GS1 DataBar Omnidirectional, (2) GS1 DataBar Truncated, (3) GS1 DataBar Stacked, and (4) GS1 DataBar Stacked Omnidirectional.	Enable						
GS1 Databar Limited		Enable						
GS1 Databar Expanded	This group consists of (1) GS1 DataBar Expanded, and (2) GS1 DataBar Expanded Stacked.	Enable						

Convert RSS to UPC/EAN	<p>"Convert to UPC/EAN" only applies to GS1 Databar-14 and GS1 Databar Limited barcodes not decoded as part of a Composite barcode.</p> <table border="1"> <tr> <td>Convert to EAN-13</td> </tr> <tr> <td>Strip the leading "010" from barcodes. ▶ "01" is the Application ID and must be followed by a single zero (the first digit encoded)</td> </tr> <tr> <td>Convert to UPC-A</td> </tr> <tr> <td>Strip the leading "0100" from barcodes. ▶ "01" is the Application ID and must be followed by two or more zeros (but not six zeros)</td> </tr> </table>	Convert to EAN-13	Strip the leading "010" from barcodes. ▶ "01" is the Application ID and must be followed by a single zero (the first digit encoded)	Convert to UPC-A	Strip the leading "0100" from barcodes. ▶ "01" is the Application ID and must be followed by two or more zeros (but not six zeros)	No
Convert to EAN-13						
Strip the leading "010" from barcodes. ▶ "01" is the Application ID and must be followed by a single zero (the first digit encoded)						
Convert to UPC-A						
Strip the leading "0100" from barcodes. ▶ "01" is the Application ID and must be followed by two or more zeros (but not six zeros)						
EAN-8		Enable				
Convert to EAN-13	The EAN-8 barcode will be expanded into EAN-13, and the next processing will follow the settings configured for EAN-13.	No				
Addon 2 / Addon 5	Refer to UPC/EAN Addon setting.					
EAN-13		Enable				
Addon 2 / Addon 5	Refer to UPC/EAN Addon setting.					
Bookland EAN (= Bookland ISBN-10)	<p>The EAN-13 barcode starting with 978 will be converted to ISBN.</p> <p>▶ Data starting with 979 is not considered Bookland in this mode.</p>	No				
UPC-A		Enable				
Transmit Check Digit	Decide whether to include the UPC-A check digit in the data being transmitted.	Yes				
Transmit Preamble	Decide whether to include the UPC-A preamble System Number (and Country Code) in the data being transmitted.	System Number				
Addon 2 / Addon 5	Refer to UPC/EAN Addon setting.					
UPC-E (= UPC-E0)		Enable				
Transmit Check Digit	Decide whether to include the UPC-E0 check digit in the data being transmitted.	Yes				
Transmit Preamble	Decide whether to include the UPC-E0 preamble System Number (and Country Code) in the data being transmitted.	System Number				
Addon 2 / Addon 5	Refer to UPC/EAN Addon setting.					
Convert to UPC-A	The UPC-E0 barcode will be expanded into UPC-A, and the next processing will follow the settings configured for UPC-A.	No				
UPC-E1		Disable				
Transmit Check Digit	Decide whether to include the UPC-E1 check digit in the data being transmitted.	Yes				
Transmit Preamble	Decide whether to include the UPC-E1 preamble System Number (and Country Code) in the data being transmitted.	System Number				

Addon 2 / Addon 5	Refer to UPC/EAN Addon setting.	
Convert to UPC-A	The UPC-E1 barcode will be expanded into UPC-A, and the next processing will follow the settings configured for UPC-A.	No
UCC Coupon Extended Code		Disable
Read UPC-A barcodes starting with digit "5", EAN-13 barcodes starting with digits "99", and UPC-A/GS1-128 Coupon Codes. ▶ UPC-A, EAN-13, and GS1-128 must be enabled first!		
UPC/EAN Addon		---
Addon 2 / Addon 5	Decide whether to decode EAN-8, EAN-13, UPC-E0, UPC-E1, UPC-A with addons. ▶ Ignore Addons ▶ Decode Only With Addons ▶ Decode With Addons (= Auto-discriminate)	Ignore...
Code 11		Enable
Verify Check Digit	Decide whether to verify the check digit. If the check digit is incorrect, the barcode will not be accepted. ▶ No verification ▶ One Check Digit ▶ Two Check Digits	No
Select Length	▶ Any Length ▶ One or two fixed lengths ▶ Range (1~55)	Any Length

Note: Code 11 is supported on Long Range Laser scan engine for 8300 only.

SYMBOLGY SETTINGS TABLE (8700)

LR/ELR Engine	Description	Default
Codabar		Enable
Transmit Start/Stop Character	Decide whether to include the start/stop characters in the data being transmitted. If "Transmit Start/Stop Characters" is desired, select one set: <ul style="list-style-type: none"> ▶ abcd / abcd ▶ abcd / tn*e ▶ ABCD / ABCD ▶ ABCD / TN*E 	No
Code 128		Enable
GS1-128		Enable
Transmit Code ID (for GS1-128)	Decide whether to include Code ID ("]C1") in the data being transmitted.	No
Field Separator Replacement	Decide whether to replace the field separator. If the barcode contains Field Separator "0x1D", it will be changed to the desired Field Separator. For example, type the desired character ";" (semicolon) as the new field separator. Then if the barcode contains Field Separator "0x1D", it will be changed to ";".	No
ISBT 128		Enable
Industrial 25 (= Discrete 25)		Enable
Start/Stop Selection	This decides the readability of all 2 of 5 symbology variants. For example, flight tickets actually use an Industrial 2 of 5 barcode but with Interleaved 2 of 5 start/stop pattern. In order to read this barcode, the start/stop pattern selection parameter of Industrial 2 of 5 should be set to "Interleaved 25".	Industrial 25
Verify Check Digit	Decide whether to verify the check digit. If the check digit is incorrect, the barcode will not be accepted.	No
Transmit Check Digit	Decide whether to include the check digit in the data being transmitted.	Yes
Select Length	<ul style="list-style-type: none"> ▶ One or two fixed lengths ▶ Range 	1~127
Interleaved 25		Enable
Start/Stop Selection	Refer to Industrial 25.	Interleaved 25
Verify Check Digit	Decide whether to verify the check digit. If the check digit is incorrect, the barcode will not be accepted.	No
Transmit Check Digit	Decide whether to include the check digit in the data being transmitted.	Yes

Select Length	<ul style="list-style-type: none"> ▶ One or two fixed lengths ▶ Range 	1~126
Matrix 25		Disable
Start/Stop Selection	Refer to Industrial 25.	Matrix 25
Verify Check Digit	Decide whether to verify the check digit. If the check digit is incorrect, the barcode will not be accepted.	No
Transmit Check Digit	Decide whether to include the check digit in the data being transmitted.	Yes
Select Length	<ul style="list-style-type: none"> ▶ One or two fixed lengths ▶ Range 	1~127
Coop 25		Disable
Verify Check Digit	Decide whether to verify the check digit. If the check digit is incorrect, the barcode will not be accepted.	No
Transmit Check Digit	Decide whether to include the check digit in the data being transmitted.	Yes
French Pharmacode		Disable
Transmit Check Digit	Decide whether to include the check digit in the data being transmitted.	Yes
Italian Pharmacode (= Code 32)		Disable
Transmit Check Digit	Decide whether to include the check digit in the data being transmitted.	Yes

Note: For French/Italian Pharmacode, "Transmit Start/Stop Character" is not provided in UI but it is controlled by the same setting of Code 39.

Code 39		Enable
Transmit Start/Stop Character	Decide whether to include the start/stop characters "*" in the data being transmitted.	No
Verify Check Digit	Decide whether to verify the check digit. If the check digit is incorrect, the barcode will not be accepted.	No
Transmit Check Digit	Decide whether to include the check digit in the data being transmitted.	Yes
Code 39 Full ASCII	Code 39 Full ASCII includes all the alphanumeric and special characters.	Disable
Code 93		Enable
MSI		Disable
Verify Check Digit	<p>Select one of the three calculation formulas to verify the check digit. If the check digit is incorrect, the barcode will not be accepted.</p> <ul style="list-style-type: none"> ▶ Single Modulo 10 ▶ Double Modulo 10 ▶ Modulo 11 & 10 	Single Modulo 10

Transmit Check Digit	Decide whether to include the check digit in the data being transmitted. <ul style="list-style-type: none"> ▶ Last digit not transmitted ▶ Both digits transmitted ▶ Both digits not transmitted 	Both digits transmitted
Select Length	<ul style="list-style-type: none"> ▶ One or two fixed lengths ▶ Range 	1~127
Plessey		Disable
Convert to UK Plessey	When applied, each occurrence of the character "A" in the barcode data will be replaced by the character "X".	No
Transmit Check Digit	Decide whether to include the two check digits in the data being transmitted.	Yes
Telepen		Disable
Original Telepen (Numeric)	The original Telepen includes numeric characters.	No
AIM Telepen (Full ASCII)	AIM Telepen (Full ASCII) includes all the alphanumeric and special characters.	Yes
GS1 Databar		Disable
GS1 DataBar is short for GS1 DataBar Omnidirectional. This group consists of (1) GS1 DataBar Omnidirectional, (2) GS1 DataBar Truncated, (3) GS1 DataBar Stacked, and (4) GS1 DataBar Stacked Omnidirectional.		
Transmit Code ID	Decide whether to include Code ID ("]e0") will be included in the data being transmitted.	Yes
Transmit Application ID	Decide whether to include the Application ID ("01") in the data being transmitted.	Yes
Transmit Check Digit	Decide whether to include the check digit in the data being transmitted.	Yes
GS1 Databar Limited		Disable
Transmit Code ID	Refer to GS1 Databar.	Yes
Transmit Application ID	Refer to GS1 Databar.	Yes
Transmit Check Digit	Refer to GS1 Databar.	Yes
GS1 Databar Expanded		Disable
This group consists of (1) GS1 DataBar Expanded, and (2) GS1 DataBar Expanded Stacked.		
Transmit Code ID	Refer to GS1 Databar.	Yes
EAN-8		Enable
Convert to EAN-13	The EAN-8 barcode will be expanded into EAN-13, and the next processing will follow the settings configured for EAN-13. <ul style="list-style-type: none"> ▶ After conversion, the data follows EAN-13 format and is affected by EAN-13 programming selections (e.g. Check Digit). 	No

Transmit Check Digit	Decide whether to include the check digit in the data being transmitted.	Yes
Addon 2 / Addon 5	Decide whether to decode EAN-8 with addons.	No
EAN-13 / UPC-A		Enable
ISBN Conversion	The EAN-13 barcode starting with 978 and 979 will be converted to ISBN.	No
ISSN Conversion	The EAN-13 barcode starting with 977 will be converted to ISSN.	No
Transmit Check Digit	Decide whether to include the check digit in the data being transmitted.	Yes
(UPC-A) Transmit System Number	Decide whether to include the UPC-A System Number in the data being transmitted.	Yes
(UPC-A) Transmit Check Digit	Decide whether to include the UPC-A check digit in the data being transmitted.	Yes
(UPC-A) Convert to EAN-13	The UPC-A barcode will be expanded into EAN-13, and the next processing will follow the settings configured for EAN-13. <ul style="list-style-type: none"> ▶ After conversion, the data follows EAN-13 format and is affected by EAN-13 programming selections (e.g. Check Digit). 	Yes
GTIN for EAN-13	The EAN-13 barcode will be expanded into 14-digit Global Trade Item Number (GTIN).	No
Addon 2 / Addon 5	Decide whether to decode EAN-13/UPC-A with addons.	No
UPC-E		Enable
Convert to UPC-A	The UPC-E barcode will be expanded into UPC-A, and the next processing will follow the settings configured for UPC-A. <ul style="list-style-type: none"> ▶ After conversion, the data follows UPC-A format and is affected by UPC-A programming selections (e.g. System Number, Check Digit). 	No
Transmit System Number	Decide whether to include the UPC-E System Number in the data being transmitted.	No
Transmit Check Digit	Decide whether to include the UPC-E check digit in the data being transmitted.	Yes
Enable UPC-E1	Decide whether to decode both UPC-E0 and UPC-E1 barcodes. <ul style="list-style-type: none"> ▶ By default, it decodes the UPC-E0 barcodes only. 	No
Enable UPC-E1 Triple Check	Decide whether to apply read redundancy to the UPC-E1 barcode. <ul style="list-style-type: none"> ▶ When applied, the same UPC-E1 barcode has to be read three times to make a valid reading. This is helpful when the barcode is defaced and requires more attempts to read it successfully. 	No
Addon 2 / Addon 5	Decide whether to decode UPC-E with addons.	No

2D SCAN ENGINE

The tables below list reader settings as well as symbology settings for the 2D scan engine.

READER SETTINGS TABLE

2D Engine	Description	Default
Scan Mode		Laser mode
Continuous Mode	Non-stop scanning <ul style="list-style-type: none"> ▶ To decode the same barcode repeatedly, move away the scan beam and target it at the barcode for each scanning. 	
Test Mode	Non-stop scanning <ul style="list-style-type: none"> ▶ Capable of decoding the same barcode repeatedly 	
Alternate Mode	Press the scan trigger to start with scanning. <ul style="list-style-type: none"> ▶ The scanning won't stop until you press the trigger again. 	
Aiming Mode	Press the scan trigger to aim at a barcode. Within one second, press the trigger again to decode the barcode. <ul style="list-style-type: none"> ▶ The scanning won't stop until (a) a barcode is decoded, (b) the pre-set timeout expires, or (c) you release the trigger. 	
Laser Mode	Hold down the scan trigger to start with scanning. <ul style="list-style-type: none"> ▶ The scanning won't stop until (a) a barcode is read, (b) the preset timeout expires, or (c) you release the trigger. 	
Auto Off Mode	Press the scan trigger to start with scanning. <ul style="list-style-type: none"> ▶ The scanning won't stop until (a) a barcode is read or (b) the preset timeout expires. 	
Decode Illumination	Decide whether to flash illumination on every barcode capture to aid decoding. <ul style="list-style-type: none"> ▶ Turn On (Internal LED) ▶ Turn Off 	On
Aiming Pattern	Decide whether to project the aiming pattern during barcode capture. <ul style="list-style-type: none"> ▶ Turn On ▶ Turn Off 	On

Time-out		3 sec.
0~255 (second)	<p>Set the maximum time for decoding to continue during a scan attempt.</p> <p>It applies to the following scan modes only –</p> <ul style="list-style-type: none"> ▶ Aiming mode ▶ Laser mode ▶ Auto Off mode 	
Aiming Duration		3 sec.
1~255 (second)	<p>Set the maximum time for decoding to continue during a scan attempt.</p> <ul style="list-style-type: none"> ▶ It applies to Aiming mode only. 	
Picklist Mode	<p>Picklist mode enables the decoder to decode only barcodes aligned under the center of the laser aiming pattern.</p> <ul style="list-style-type: none"> ▶ Enable ▶ Disable 	Disable
1D Inverse Decode	<p>1D Inverse Decoder:</p> <ul style="list-style-type: none"> ▶ Decode regular 1D barcode only ▶ Decode inverse 1D barcode only ▶ Decode both regular and inverse 	Decode regular 1D barcode only

Note: Scan Mode options, Decode Illumination, Aiming Pattern, Aiming Duration, Picklist Mode and 1D Inverse Decoding are supported on 2D scan engine for 8200/8400/8700 only.

SYMBOLGY SETTINGS TABLE

1D SYMBOLOGIES

2D Engine	Description	Default
Codabar		Enable
Transmit Start/Stop Character	Decide whether to include the start/stop characters in the data being transmitted.	No
Select Length	<ul style="list-style-type: none"> ▶ Any Length ▶ One or two fixed lengths ▶ Range (1~55) 	Any Length
Code 128		Enable
GS1-128		Enable
Replace Field Separator	Decide whether to replace the field separator. If the barcode contains Field Separator "0x1D", it will be changed to the desired Field Separator. For example, type the desired character ";" (semicolon) as the new field separator. Then if the barcode contains Field Separator "0x1D", it will be changed to ";".	No
ISBT 128		Enable
Industrial 25 (Discrete 25)		Enable
Select Length	<ul style="list-style-type: none"> ▶ Any Length ▶ One or two fixed lengths ▶ Range (1~55) 	Any Length
Interleaved 25		Enable
Convert to EAN-13	Convert a 14-character barcode into EAN-13 if the following requirements are met: <ul style="list-style-type: none"> ▶ The barcode must have a leading 0 and a valid EAN-13 check digit. 	No
Verify Check Digit	Decide whether to verify the check digit. If desired, select one of the algorithms below. If the check digit is incorrect, the barcode will not be accepted. <ul style="list-style-type: none"> ▶ No ▶ USS algorithm ▶ OPCC algorithm 	No
Transmit Check Digit	Decide whether to include the check digit in the data being transmitted.	No
Select Length	<ul style="list-style-type: none"> ▶ Any Length ▶ One or two fixed lengths ▶ Range (1~55) 	Any Length

Matrix 25		Disable
Verify Check Digit	Decide whether to verify the check digit. If the check digit is incorrect, the barcode will not be accepted.	No
Transmit Check Digit	Decide whether to include the check digit in the data being transmitted.	No
Select Length	<ul style="list-style-type: none"> ▶ Any Length ▶ One or two fixed lengths ▶ Range (1~55) 	Any Length
Chinese 25		Disable

Note: Matrix 25 and Chinese 25 are supported on 2D scan engine for 8200/8400/8700.

Code 39		Enable
Convert to Code 32	Convert to Italian Pharmacode.	No
Verify Check Digit	Decide whether to verify the check digit. If the check digit is incorrect, the barcode will not be accepted.	No
Transmit Check Digit	Decide whether to include the check digit in the data being transmitted. <ul style="list-style-type: none"> ▶ "Verify Check Digit" must be enabled so that the check digit can be left out (= "Transmit Check Digit" disabled). 	No
Code 39 Full ASCII	Code 39 Full ASCII includes all the alphanumeric and special characters.	Disable
Trioptic Code 39	Decide whether to decode Trioptic Code 39. <ul style="list-style-type: none"> ▶ Trioptic Code 39 is a variant of Code 39 used in the marking of computer tape cartridges. It always contains six characters. 	Disable
Select Length	<ul style="list-style-type: none"> ▶ Any Length ▶ One or two fixed lengths ▶ Range (1~55) 	Any Length
Code 93		Enable
Select Length	<ul style="list-style-type: none"> ▶ Any Length ▶ One or two fixed lengths ▶ Range (1~55) 	Any Length
MSI		Disable
Verify Check Digit	If Two Check Digits option is selected, an additional verification is required to ensure integrity. Select one of the algorithms below. If the check digit is incorrect, the barcode will not be accepted.	Single Modulo 10

	Check Digit	Algorithm			
	One Check Digit	Single Modulo 10			
	Two Check Digits	<ul style="list-style-type: none"> ▶ Mod 10/Mod 11 ▶ Mod 10/Mod 10 			
Transmit Check Digit	Decide whether to include the check digit in the data being transmitted.		No		
Select Length	<ul style="list-style-type: none"> ▶ Any Length ▶ One or two fixed lengths ▶ Range (1~55) 		Any Length		
GS1 Databar			---		
GS1 Databar-14	GS1 DataBar-14 is short for GS1 DataBar Omnidirectional. This group consists of (1) GS1 DataBar Omnidirectional, (2) GS1 DataBar Truncated, (3) GS1 DataBar Stacked, and (4) GS1 DataBar Stacked Omnidirectional.		Enable		
GS1 Databar Limited			Enable		
GS1 Databar Expanded	This group consists of (1) GS1 DataBar Expanded, and (2) GS1 DataBar Expanded Stacked.		Enable		
Convert RSS to UPC/EAN	<p>"Convert to UPC/EAN" only applies to GS1 Databar-14 and GS1 Databar Limited barcodes not decoded as part of a Composite barcode.</p> <table border="1" style="width: 100%;"> <tr> <td> <p>Convert to EAN-13</p> <p>Strip the leading "010" from barcodes.</p> <ul style="list-style-type: none"> ▶ "01" is the Application ID and must be followed by a single zero (the first digit encoded) </td> </tr> <tr> <td> <p>Convert to UPC-A</p> <p>Strip the leading "0100" from barcodes.</p> <ul style="list-style-type: none"> ▶ "01" is the Application ID and must be followed by two or more zeros (but not six zeros) </td> </tr> </table>		<p>Convert to EAN-13</p> <p>Strip the leading "010" from barcodes.</p> <ul style="list-style-type: none"> ▶ "01" is the Application ID and must be followed by a single zero (the first digit encoded) 	<p>Convert to UPC-A</p> <p>Strip the leading "0100" from barcodes.</p> <ul style="list-style-type: none"> ▶ "01" is the Application ID and must be followed by two or more zeros (but not six zeros) 	No
<p>Convert to EAN-13</p> <p>Strip the leading "010" from barcodes.</p> <ul style="list-style-type: none"> ▶ "01" is the Application ID and must be followed by a single zero (the first digit encoded) 					
<p>Convert to UPC-A</p> <p>Strip the leading "0100" from barcodes.</p> <ul style="list-style-type: none"> ▶ "01" is the Application ID and must be followed by two or more zeros (but not six zeros) 					
EAN-8			Enable		
Convert to EAN-13	The EAN-8 barcode will be expanded into EAN-13, and the next processing will follow the settings configured for EAN-13.		No		
Addon 2 / Addon 5	Refer to UPC/EAN Addon setting.				
EAN-13			Enable		
Addon 2 / Addon 5	Refer to UPC/EAN Addon setting.				
Bookland EAN (= Bookland ISBN-10)	<p>The EAN-13 barcode starting with 978 will be converted to ISBN.</p> <ul style="list-style-type: none"> ▶ Data starting with 979 is not considered Bookland in this mode. 		No		

Bookland ISBN-13	Barcode data, starting with either 978 or 979, will be reported in 13-digit format to meet the 2007 ISBN-13 protocol.	No
------------------	---	----

Note: Bookland ISBN-13 is supported on 2D scan engine for 8200/8400/8700.

UPC-A		Enable
Transmit Check Digit	Decide whether to include the UPC-A check digit in the data being transmitted.	Yes
Transmit Preamble	Decide whether to include the UPC-A preamble System Number (and Country Code) in the data being transmitted.	System Number
Addon 2 / Addon 5	Refer to UPC/EAN Addon setting.	
UPC-E (= UPC-E0)		Enable
Transmit Check Digit	Decide whether to include the UPC-E0 check digit in the data being transmitted.	Yes
Transmit Preamble	Decide whether to include the UPC-E0 preamble System Number (and Country Code) in the data being transmitted.	System Number
Addon 2 / Addon 5	Refer to UPC/EAN Addon setting.	
Convert to UPC-A	The UPC-E0 barcode will be expanded into UPC-A, and the next processing will follow the settings configured for UPC-A.	No
UPC-E1		Disable
Transmit Check Digit	Decide whether to include the UPC-E1 check digit in the data being transmitted.	Yes
Transmit Preamble	Decide whether to include the UPC-E1 preamble System Number (and Country Code) in the data being transmitted.	System Number
Addon 2 / Addon 5	Refer to UPC/EAN Addon setting.	
Convert to UPC-A	The UPC-E1 barcode will be expanded into UPC-A, and the next processing will follow the settings configured for UPC-A.	No
UCC Coupon Extended Code		Disable
Read UPC-A barcodes starting with digit "5", EAN-13 barcodes starting with digits "99", and UPC-A/GS1-128 Coupon Codes. ▶ UPC-A, EAN-13, and GS1-128 must be enabled first!		
UPC/EAN Addon		---
Addon 2 / Addon 5	Decide whether to decode EAN-8, EAN-13, UPC-E0, UPC-E1, UPC-A with addons. ▶ Ignore Addons ▶ Decode Only With Addons ▶ Decode With Addons (= Auto-discriminate)	Ignore...

Code 11		Disable
Verify Check Digit	Decide whether to verify the check digit. If the check digit is incorrect, the barcode will not be accepted. <ul style="list-style-type: none"> ▶ No verification ▶ One Check Digit ▶ Two Check Digits 	No
Select Length	<ul style="list-style-type: none"> ▶ Any Length ▶ One or two fixed lengths ▶ Range (1~55) 	Any Length
Postal Codes		---
US Postnet		Enable
US Planet		Enable
Transmit US Postal Check Digit	US Postnet or US Planet must be enabled first!	Enable
UK Postal		Enable
Transmit UK Postal Check Digit	UK Postal must be enabled first!	Enable
Japan Postal		Enable
Australian Postal		Enable
Dutch Postal		Enable
UPU FICS Postal		Disable
USPS 4CB/One Code/Intelligent Mail		Disable

Note: UPU FICS Postal and USPS 4CB/One Code/Intelligent Mail are supported on 2D scan engine for 8200/8400/8700 only.

Composite Codes		---
Composite CC-C		Disable
Composite CC-A/B		Disable
Composite TLC-39		Enable
GS1-128 Emulation Mode for UCC/EAN Composite Codes	Transmit UCC/EAN Composite Code data as if it was encoded in GS1-128 barcodes.	Disable
UPC Composite Mode	UPC barcodes can be "linked" with a 2D barcode during transmission as if they were one barcode.	UPC Always Linked
	<div style="border: 1px solid black; padding: 2px; margin-bottom: 2px;">UPC Never Linked</div> Transmit UPC barcodes regardless of whether a 2D barcode is detected.	

	UPC Always Linked	
	Transmit UPC barcodes and the 2D portion. If the 2D portion is not detected, the UPC barcode will not be transmitted.	
	▶ CC-A/B or CC-C must be enabled!	
	Auto-discriminate UPC Composites	
	Transmit UPC barcodes as well as the 2D portion if present.	

2D SYMBOLOGIES

2D Engine	Description	Default						
2D Symbologies		---						
PDF417		Enable						
MicroPDF417		Enable						
Data Matrix		Enable						
Data Matrix Inverse	<p>Decide whether to decode Data Matrix Inverse.</p> <table border="1"> <tr> <td>Regular Only</td> </tr> <tr> <td>Decode regular Data Matrix barcodes only.</td> </tr> <tr> <td>Inverse Only</td> </tr> <tr> <td>Decode inverse Data Matrix barcodes only.</td> </tr> <tr> <td>Inverse Autodetect</td> </tr> <tr> <td>Decode both regular and inverse Data Matrix barcodes.</td> </tr> </table>	Regular Only	Decode regular Data Matrix barcodes only.	Inverse Only	Decode inverse Data Matrix barcodes only.	Inverse Autodetect	Decode both regular and inverse Data Matrix barcodes.	Regular Only
Regular Only								
Decode regular Data Matrix barcodes only.								
Inverse Only								
Decode inverse Data Matrix barcodes only.								
Inverse Autodetect								
Decode both regular and inverse Data Matrix barcodes.								
Mirror Image (for Data Matrix)	<p>Decide whether to decode mirror image Data Matrix barcodes.</p> <table border="1"> <tr> <td>Never</td> </tr> <tr> <td>Do not decode Data Matrix barcodes that are mirror images.</td> </tr> <tr> <td>Always</td> </tr> <tr> <td>Decode only Data Matrix barcodes that are mirror images.</td> </tr> <tr> <td>Auto</td> </tr> <tr> <td>Decode both mirrored and unmirrored Data Matrix barcodes.</td> </tr> </table>	Never	Do not decode Data Matrix barcodes that are mirror images.	Always	Decode only Data Matrix barcodes that are mirror images.	Auto	Decode both mirrored and unmirrored Data Matrix barcodes.	Never
Never								
Do not decode Data Matrix barcodes that are mirror images.								
Always								
Decode only Data Matrix barcodes that are mirror images.								
Auto								
Decode both mirrored and unmirrored Data Matrix barcodes.								
Maxicode		Enable						
QR Code		Enable						

QR Code Inverse	Decide whether to decode QR Code Inverse.	Regular Only
	Regular Only	
	Decode regular QR Code only.	
	Inverse Only	
	Decode inverse QR Code only.	
	Inverse Autodetect	
	Decode both regular and inverse QR Code.	
MicroQR		Enable
Aztec		Enable
Aztec Inverse	Decide whether to decode Aztec Inverse.	Regular Only
	Regular Only	
	Decode regular Aztec barcodes only.	
	Inverse Only	
	Decode inverse Aztec barcodes only.	
	Inverse Autodetect	
	Decode both regular and inverse Aztec barcodes.	

Note: Data Matrix Mirror, MicroQR, Aztec, and 2D Inverse are supported on 2D scan engine for 8200/8400/8700 only.

2D Symbologies - Macro PDF		---
Macro PDF is a special feature for concatenating multiple PDF barcodes into one file, known as Macro PDF417 or Macro MicroPDF417.		
Transmit/Decode Mode	Decide how to handle Macro PDF decoding.	Passthrough All Symbols
	Buffer All Symbols / Transmit Macro PDF When Complete	
	Transmit all decoded data from an entire Macro PDF sequence only when the entire sequence is scanned and decoded. If the decoded data exceeds the limit of 50 symbols, no transmission because the entire sequence was not scanned!	
	Transmit Any Symbol in Set / No Particular Order	
	Transmit data from each Macro PDF symbol as decoded, regardless of the sequence.	

	<p>Passthrough All Symbols</p> <p>Transmit and decode all Macro PDF symbols and perform no processing. In this mode, the host is responsible for detecting and parsing the Macro PDF sequences.</p>	
ESC Characters	<p>When enabled, it uses the backslash "\" as an Escape character for systems that can process transmissions containing special data sequences. It will format special data according to the Global Label Identifier (GLI) protocol, which only affects the data portion of a Macro PDF symbol transmission. The Control Header, if enabled, is always sent with GLI formatting.</p>	None

Note: When printing barcodes, keep each Macro PDF sequence separate, as each has a unique identifier. Do not mix barcodes from several Macro PDF sequences, even if they encode the same data. When you scan Macro PDF sequences, scan the entire Macro PDF sequence without interruption!

COMMAND LINE SYNTAX

This is intended for users who are experienced with command line use. You may issue a command or run a script for executing any of the following utilities:

Shortcut Name of Utility	Program Name	Usage
DLookup	DLookup.exe	To download associated lookup file(s) to the mobile computer
Prog_Load	ProgLoad.exe	To download the AG runtime or font file (.SHX) to the mobile computer.
Data_Read	Data_Read.exe	To receive data via Data_Read utility. It also synchronizes date/time on every host connection.

DOWNLOAD UTILITIES

DLOOKUP

Command Line Syntax

You can use the command line to download the lookup file as well. At the command line prompt, use the following command line arguments:

```
DLookup <File name>,<COM port>,<Baud rate>,<Download via>,<Show message box>
```

Argument

Each argument is explained in the table below. If command line arguments are not given, you may select the appropriate parameters from the dialog box that pops up.

Argument	Description
File name	Max length: 256 bytes Full-path file name is required when file is not in the current working directory.
COM port	Range: 1~255 It is set to 1 by default in the utility program.
Baud rate	Range: 1~5 It is set to 1 by default in the utility program. <ul style="list-style-type: none"> ▶ 1: 115200 bps ▶ 2: 57600 bps ▶ 3: 38400 bps ▶ 4: 19200 bps ▶ 5: 9600 bps
Download via	Range: 1~3 It is set to 1 by default in the utility program. <ul style="list-style-type: none"> ▶ 1: RS-232 or IrDA ▶ 2: Cradle-IR ▶ 3: Modem
Show message box	Range: 0~1 It is set to 1 by default in the utility program. <ul style="list-style-type: none"> ▶ 0: Disable ▶ 1: Enable

Example

```
DLookup DEMO_LOOKUP.TXT,1,1,1,0
// COM 1, 115200 bps, RS-232/IrDA, Do not show message
```


PROGLOAD

Command Line Syntax

You can use the command line to download a program file as well. At the command line prompt, use the following command line arguments:

```
ProgLoad <File name>,<Download via>,<COM port>,<Baud rate>,<File type>,  
      <Operation mode>
```

Argument

Each argument is explained in the table below. If command line arguments are not given, you may select the appropriate parameters from the dialog box that pops up.

Argument	Description
File name	Max length: 256 bytes Full-path file name is required when file is not in the current working directory.
Download via	Range: 1~3 It is set to 1 by default in the utility program. <ul style="list-style-type: none"> ▶ 1: RS-232 or IrDA ▶ 2: Cradle-IR ▶ 3: TCP/IP
COM port	COM port: 1~255 It is set to 1 by default in the utility program. TCP port: 1~65535 It is set to 3000 by default in the utility program.
Baud rate	Range: 1~5 It is set to 1 by default in the utility program. <ul style="list-style-type: none"> ▶ 1: 115200 bps ▶ 2: 57600 bps ▶ 3: 38400 bps ▶ 4: 19200 bps ▶ 5: 9600 bps
File type	Range: 0~2 It is set to 0 by default in the utility program. <ul style="list-style-type: none"> ▶ 0: .SHX file ▶ 1: .SYN file ▶ 2: .BIN file

Operation mode	Range: 0~1 It is set to 0 by default in the utility program. <ul style="list-style-type: none">▶ 0: Show property settings for confirmation before download▶ 1: Auto download file
----------------	--

Example

```
ProgLoad C:\U8400.shx,1,1,1,0,1
// RS-232/IrDA, COM 1, 115200 bps, .SHX, Auto download file
```

UPLOAD UTILITIES

DATA_READ

Command Line Syntax

You can use the command line to download the lookup file as well. At the command line prompt, use the following command line arguments:

```
Data_Read <File name>,<Upload via>,<COM Port>,<Baud rate>,<Save mode>,  
        <Add CR character>,<Add LF character>,<Show error>,<Show data>,  
        <Show dialog box>,<Keep online>,<Polling time>,<Inter-Char delay>
```

Argument

Each argument is explained in the table below. If command line arguments are not given, you may select the appropriate parameters from the dialog box that pops up.

Argument	Description
File name	Max length: 256 bytes Full-path file name is required when file is not in the current working directory.
Upload via	Range: 1~4 It is set to 1 by default in the utility program. <ul style="list-style-type: none"> ▶ 1 (R) : RS-232 or IrDA ▶ 2 (I) : Cradle-IR ▶ 3 (T) : Modem-TAPI ▶ 4 (M) : Modem-COM
COM port	Range: 1~255 It is set to 1 by default in the utility program.
Baud rate	Range: 1~5 It is set to 1 by default in the utility program. <ul style="list-style-type: none"> ▶ 1 (115200) : 115200 bps ▶ 2 (57600) : 57600 bps ▶ 3 (38400) : 38400 bps ▶ 4 (19200) : 19200 bps ▶ 5 (9600) : 9600 bps
Save mode	Range: 0~5 It is set to 1 by default in the utility program.

	<ul style="list-style-type: none"> ▶ 1: Overwrite ▶ 2: Append ▶ 3: Keyboard emulation ▶ 4: Auto file name ▶ 5: Auto append
Add CR character	<p>Range: 0~1</p> <p>It is set to 1 by default in the utility program.</p> <ul style="list-style-type: none"> ▶ 0: Disable ▶ 1: Enable
Add LF character	<p>Range: 0~1</p> <p>It is set to 1 by default in the utility program.</p> <ul style="list-style-type: none"> ▶ 0: Disable ▶ 1: Enable
Show error	<p>Range: 0~1</p> <p>It is set to 1 by default in the utility program.</p> <ul style="list-style-type: none"> ▶ 0: Disable ▶ 1: Enable
Show data	<p>Range: 0~1</p> <p>It is set to 1 by default in the utility program.</p> <ul style="list-style-type: none"> ▶ 0: Disable ▶ 1: Enable
Show dialog box	<p>Range: 0~1</p> <p>It is set to 1 by default in the utility program.</p> <ul style="list-style-type: none"> ▶ 0: Disable ▶ 1: Enable
Keep online	<p>Range: 0~1</p> <p>It is set to 1 by default in the utility program.</p> <ul style="list-style-type: none"> ▶ 0: Disable ▶ 1: Enable
Polling time	<p>Range: 1~999 sec (It is set to 2 by default in the utility program.)</p>
Inter-Char delay	<p>Range: 0~255 ms (It is set to 2 by default in the utility program.)</p>

Example

```
Data_Read DataFile_1.TXT,1,1,1,1,1,1,1,1,1,0,1,2,0
```

```
// RS-232/IrDA, COM 1, 115200 bps, Overwrite, Add CR, Add LF, Show error message, Show data, Hide dialog box, Keep online, Polling time 2 seconds, No Inter-Char delay
```