

CipherLab User Guide

AG Utilities & Mobile Link

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

DOC Version 1.02



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RELEASE NOTES

Version	Date	Notes
1.02	Nov. 01, 2010	<ul style="list-style-type: none">▶ Modified: 3 Mobile Link — update screenshots▶ Modified: 3.2.1 View Link Status — 8000/8300 supports Auto Upload▶ Modified: 3.2.5 Change Data File Settings — update Auto File Name
1.01	Sep. 13, 2010	<ul style="list-style-type: none">▶ New: re-organize and add 8400▶ Modified: 1.3 ProgLoad — add support of .BIN file▶ Modified: 2.1 Data_Read — add support of Auto Upload▶ Modified: 3.2.1 View Link Status — add description that 8000/8300/8500 requires selecting "Upload Data" from the terminal menu▶ New: 4 DBF_Converter
1.00	Sep. 12, 2008	Initial release

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INTRODUCTION

FORGE Application Generator for 8000/8300/8400/8500 Series Mobile Computers, batch or WLAN version, is designed for the users to develop custom templates for the use with AG runtime preloaded on the mobile computers.

We also provide several utilities as alternatives when dealing with the following tasks:

- ▶ Download Application Template (Batch/WLAN)
- ▶ Download Lookup File (Batch only)
- ▶ Download Application Program (Batch/WLAN)
- ▶ Upload Data (Batch/WLAN)
- ▶ Upload Application Template (Batch only)
- ▶ DBF Converter (Batch only)

Instead of direct link, we now provide new utility **Mobile Link** that allows the mobile computer to establish a connection with the host computer over network. Ethernet Cradles are required for such net link. Most of all, multiple connections are made possible and easier.

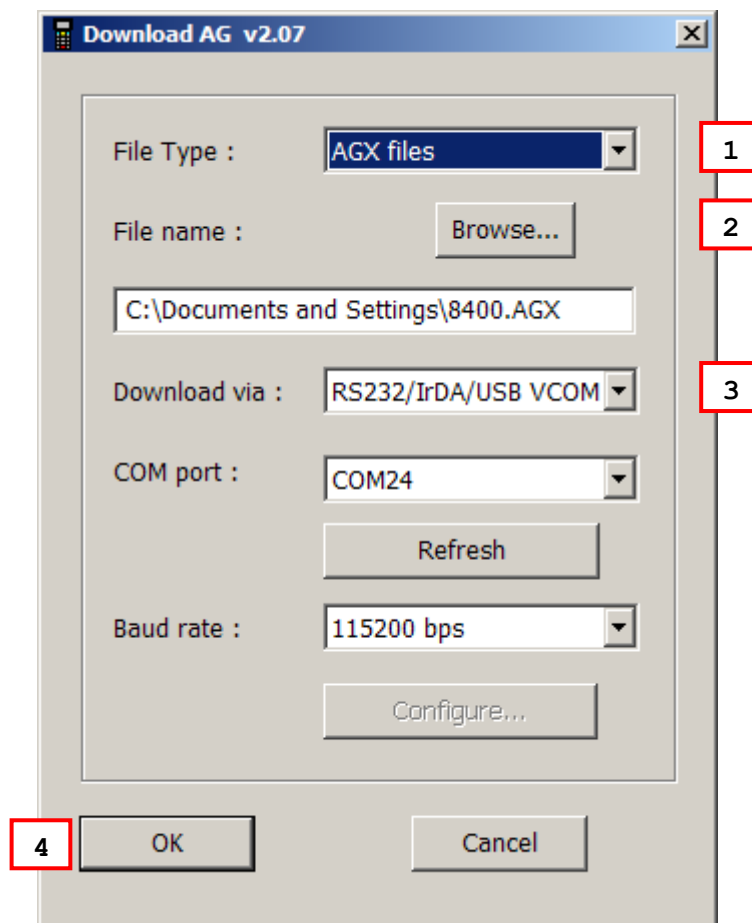
This manual serves to provide comprehensive understanding of these AG utilities. We recommend that you read the document thoroughly before use and keep it at hand for quick reference.

Thank you for choosing CipherLab products!

DOWNLOAD UTILITIES

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. Alternatively, you may use command lines in your own code.

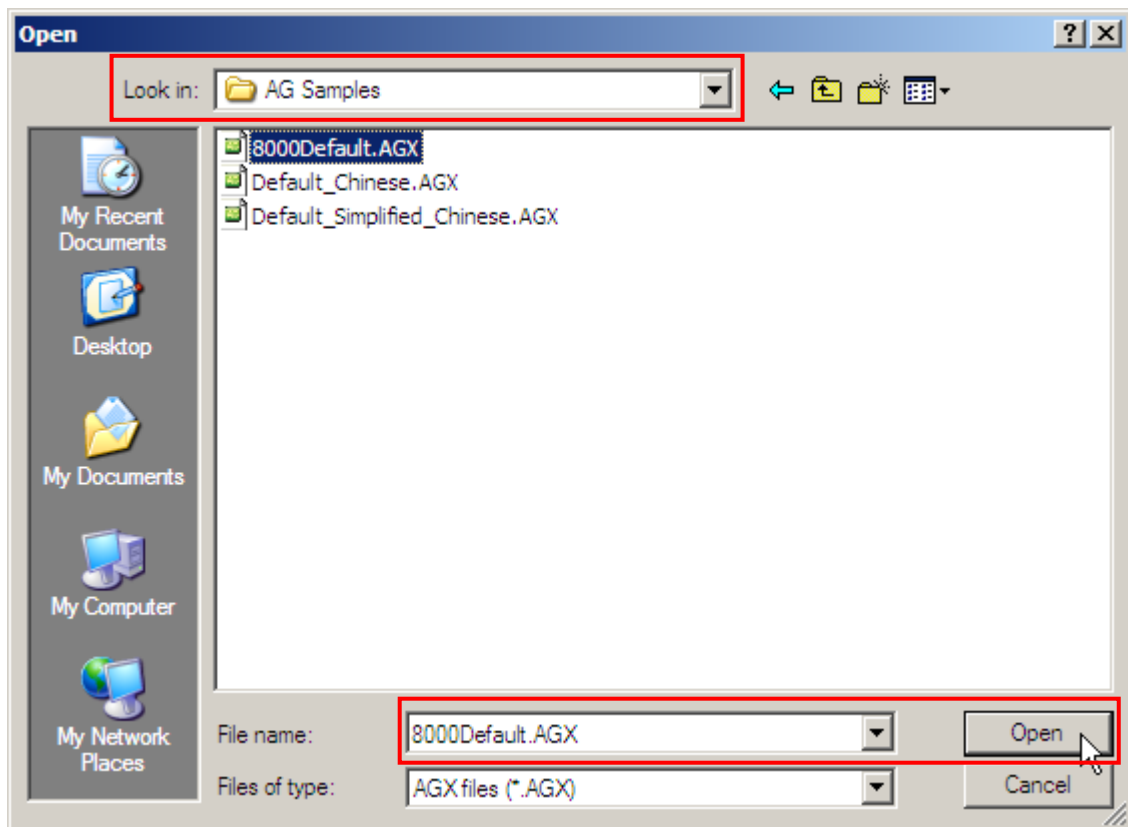


1.1.1 RUN AG_LOAD.EXE

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

File Type	Description
<div style="border: 1px solid black; padding: 2px;"> AGX files ATX files ATF files </div>	The AGX format is used by the template file of Forge AG program (Batch) for 8000/8300/8400/8500 Series Mobile Computers.
<div style="border: 1px solid black; padding: 2px;"> AGX files ATX files ATF files </div>	The ATX format is used by the template file of Batch AG program AG711*.exe for 711 Mobile Computer.
<div style="border: 1px solid black; padding: 2px;"> AGX files ATX files ATF files </div>	The ATF format is used by the template file of WLAN AG programs for 8000/8300/8400/8500 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.



3) In the **Download via** box, select the download interface.

Download via	Description
<div style="border: 1px solid black; padding: 2px;"> RS232/IrDA/USB VCOM Cradle-IR MODEM </div>	RS-232/IrDA/USB VCOM is available on 711/8000/8300/8400/8500 Series Mobile Computers. ▶ Proceed to configure COM port (1~255) and baud rate settings.
<div style="border: 1px solid black; padding: 2px;"> RS232/IrDA/USB VCOM Cradle-IR MODEM </div>	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.
<div style="border: 1px solid black; padding: 2px;"> RS232/IrDA/USB VCOM Cradle-IR MODEM </div>	Modem interface is available on 8000/8300/8400/8500 Series Mobile Computers. Modem Cradles are required. ▶ Proceed to configure modem if necessary.

Download AG v2.07

File Type : AGX files

File name :

C:\Documents and Settings\8400.AGX

Download via : **MODEM**

COM port : COM24

Baud rate : 115200 bps

Note: Mobile Link is provided for mobile computers to establish a connection with the host via Ethernet Cradles. However, it only allows uploading data currently.

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

1.1.2 RUN COMMAND LINE

You can use the command line to download the AG template file as well. At the command line prompt, use the following command line arguments:

```
AG_Load <File name>,<COM port>,<Baud rate>,<Download via>,<File type>
```

For example,

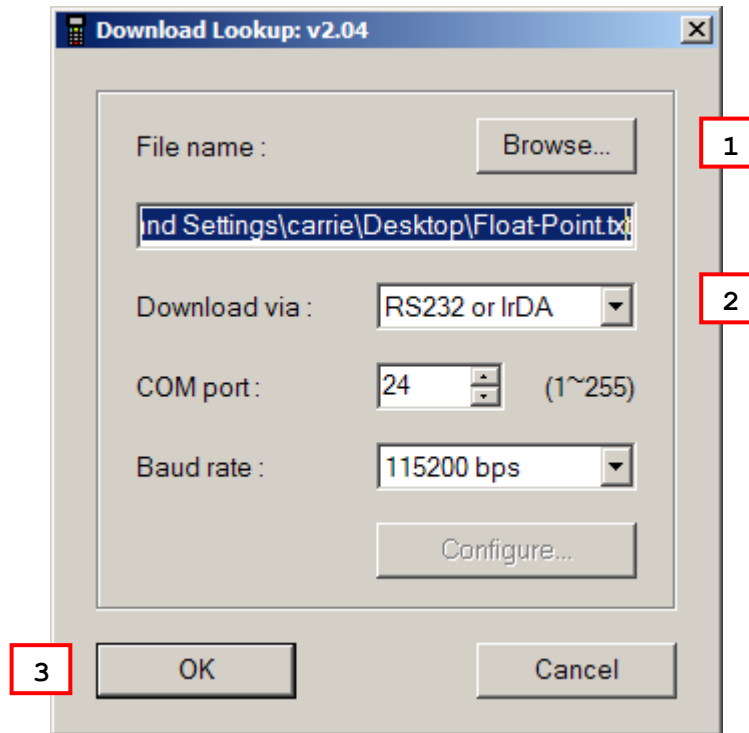
```
AG_Load SAMPLE.AGX,1,1,1,1 //COM 1, 115200 bps, RS-232/IrDA, AGX file
```

If command line arguments are not given, you may select the appropriate parameters from the dialog box that pops up. Each argument is explained in the table below.

Argument	Description
File name	Max length: 256 bytes
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
File type	Range: 1 ~ 3 (It is set to 1 by default in the utility program.) <ul style="list-style-type: none"> ▶ 1: AGX file ▶ 2: ATX file ▶ 3: ATF file

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. Alternatively, you may use command lines in your own code.

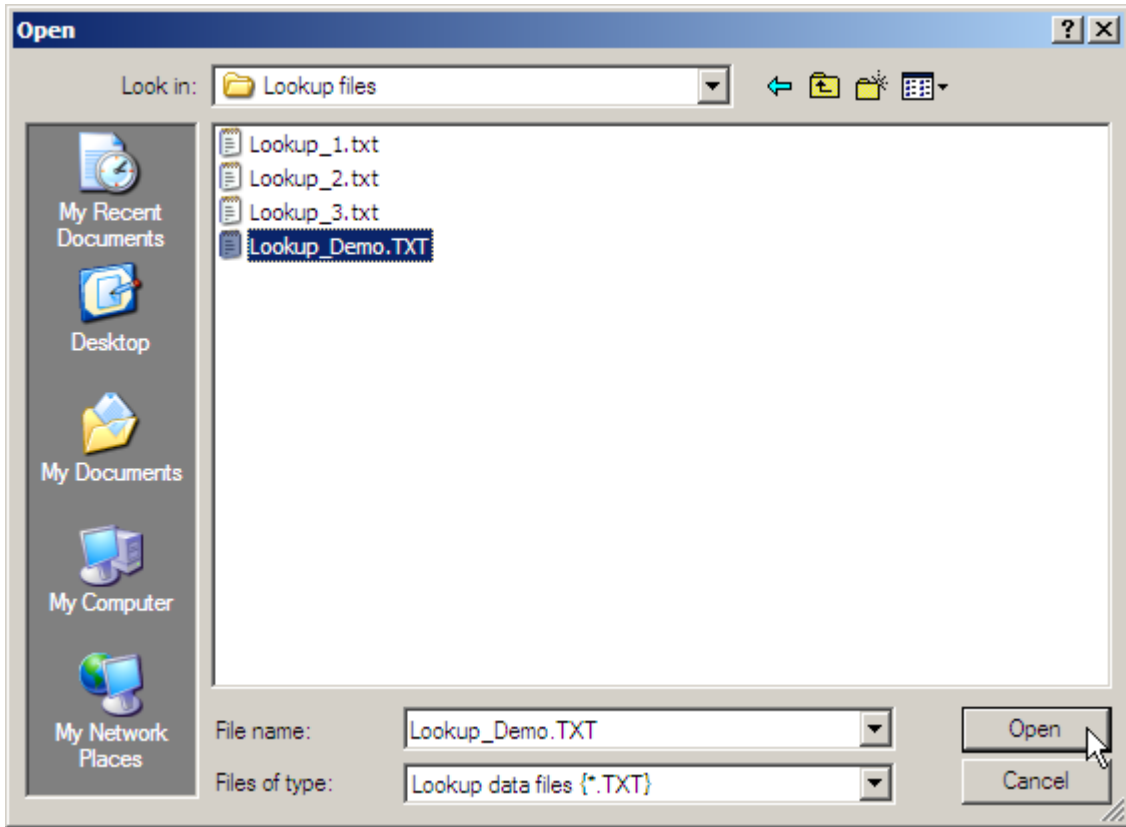


Note: (1) For 8400, USB Virtual COM shares the interface option of RS-232/IrDA.
(2) Cradle-IR is not supported on 8400.

1.2.1 RUN DLOOKUP.EXE

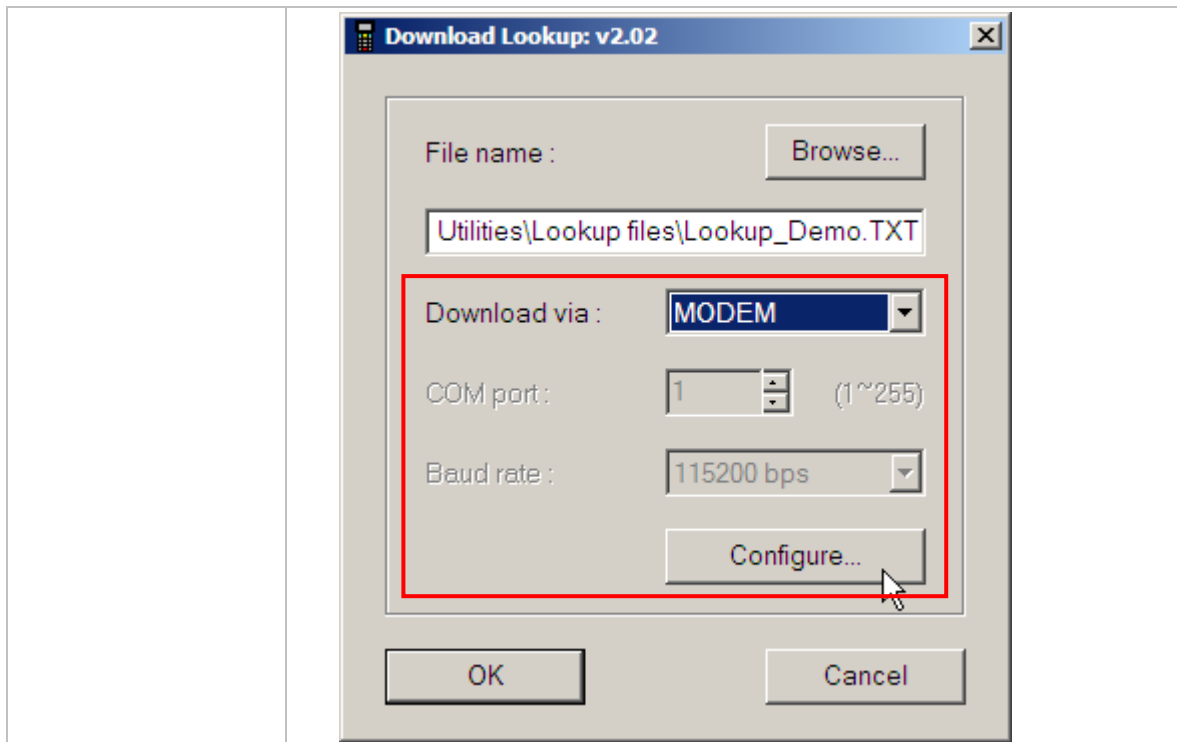
1) In the **File name** box, type the file path where the lookup file is located.

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



Note: Mobile Link is provided for mobile computers to establish a connection with the host via Ethernet Cradles. However, it only allows uploading data currently.

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

1.2.2 RUN COMMAND LINE

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>,<Download via>,<COM port>,<Baud rate>,<Show message box>
```

For example,

```
DLookup DEMO_LOOKUP.TXT,1,1,1,0
```

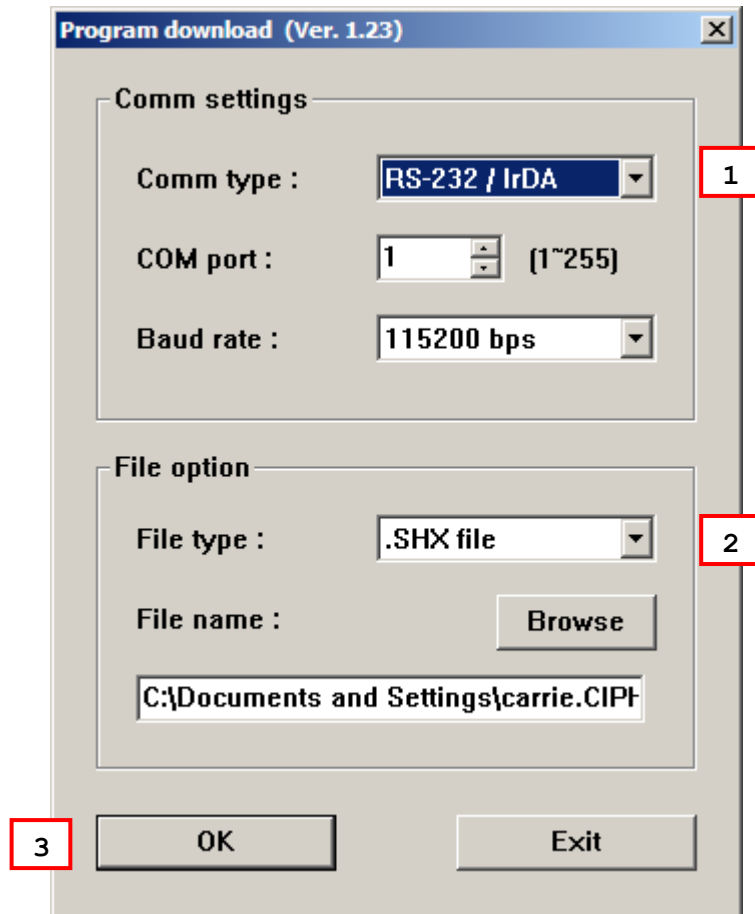
```
// RS-232/IrDA, COM 1, 115200 bps, No message box
```

If command line arguments are not given, you may select the appropriate parameters from the dialog box that pops up. Each argument is explained in the table below.

Argument	Description
File name	Max length: 256 bytes
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
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
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

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

1.3.1 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) In the **File type** 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 first.
.BIN file	Any C program ▶ Use PC utility "SHX2Bin.exe" to convert the program (.shx → .bin).

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

Note: Mobile Link is provided for mobile computers to establish a connection with the host via Ethernet Cradles. However, it only allows uploading data currently.

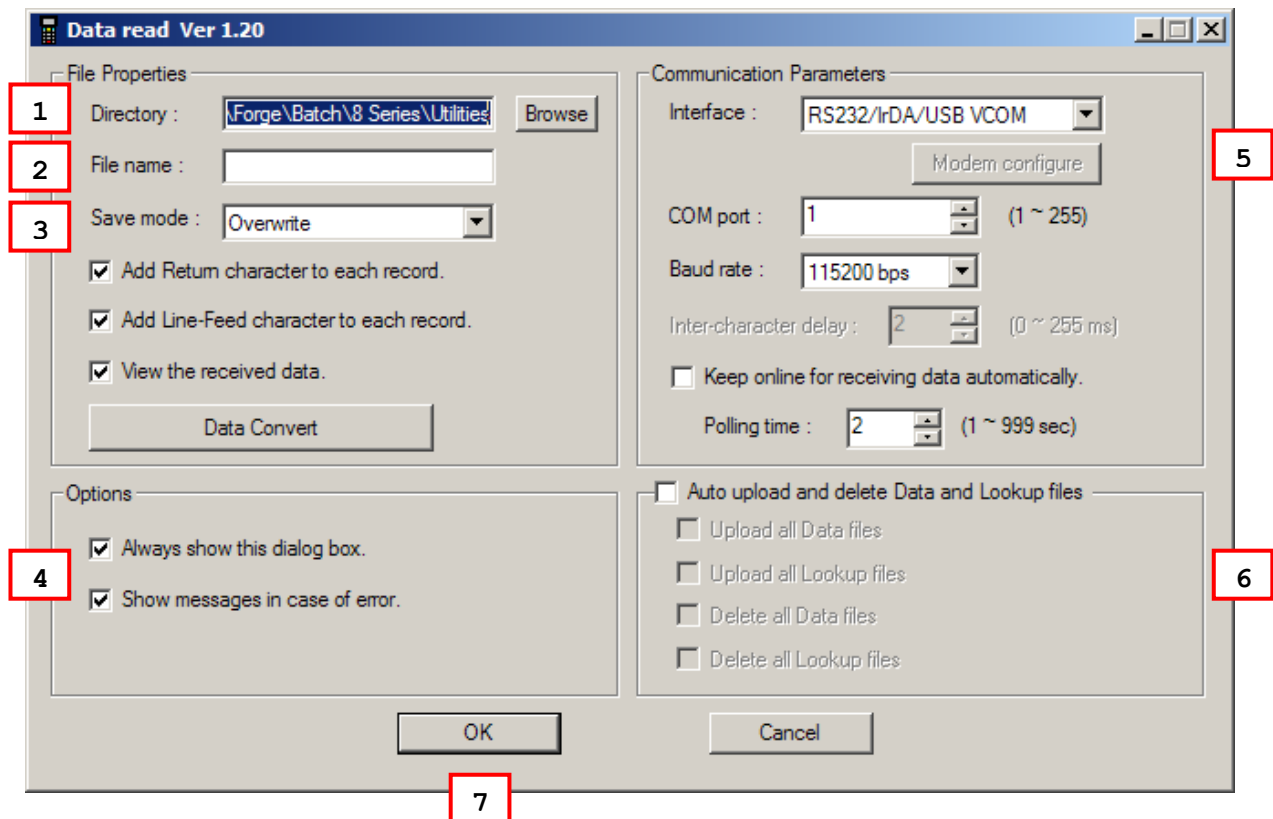
UPLOAD UTILITIES

2.1 DATA_READ

Without the need to run the Batch Application Generator program, you can use **Data_Read.exe** to receive the data file(s) uploaded from your mobile computer. Alternatively, you may use command lines in your own code. However, if you want to upload data files over the network via Ethernet Cradles, use [Mobile Link](#) instead.

It supports automatically uploading data to a host computer when the upload interface is properly configured — Cradle-IR, RS-232 or USB VCOM. 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 displayed on the upper-right corner of the screen, indicating the mobile computer is ready for auto upload. Please make sure the interface on the mobile computer is matching!

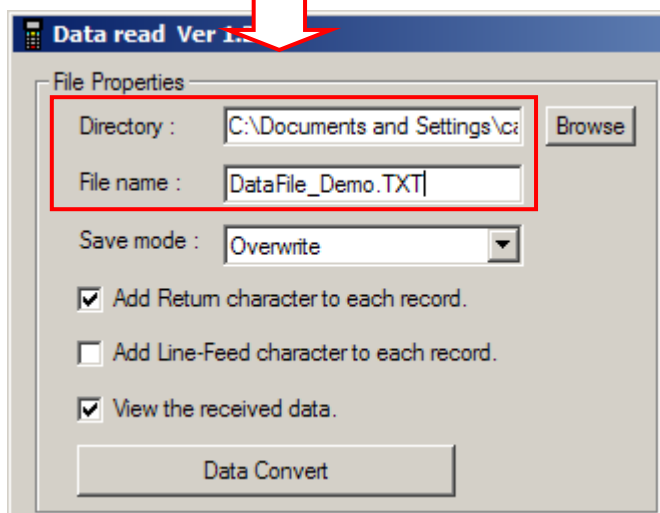
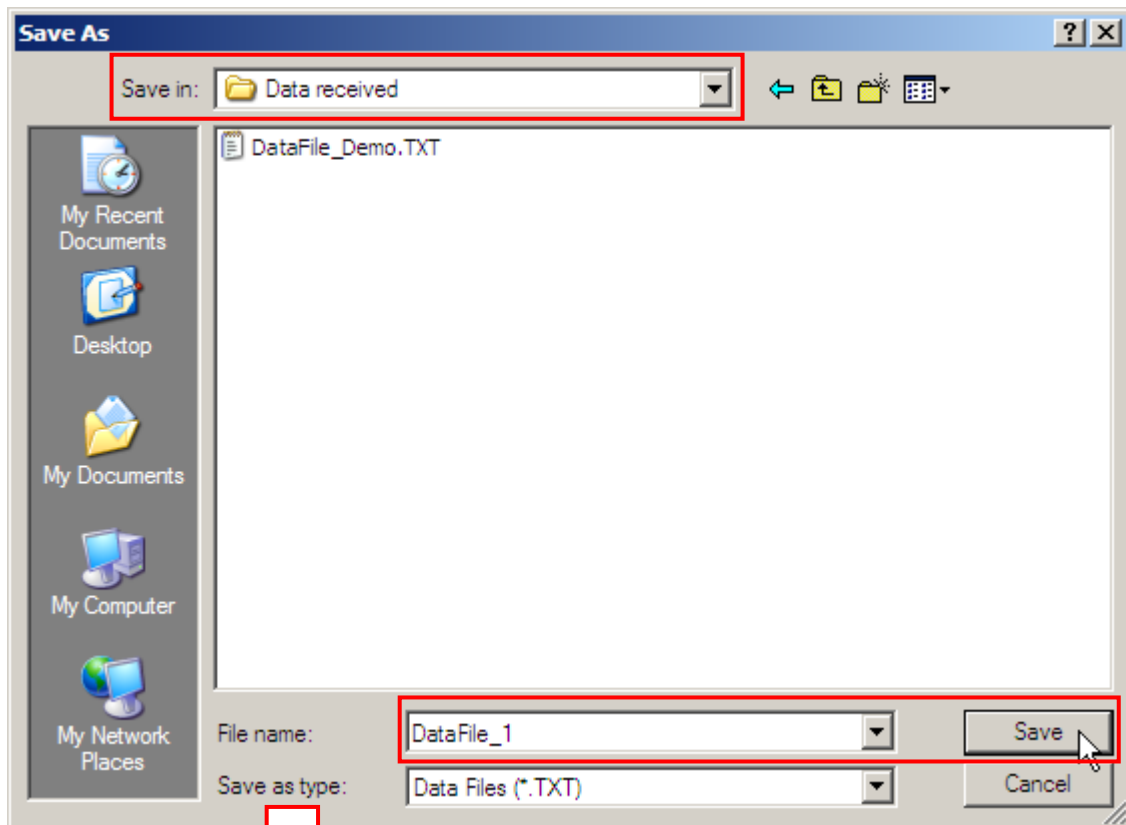
Auto Upload Support	8000	8300	8400	8500
Interface Required	Cradle-IR	Cradle-IR RS-232	RS-232 USB VCOM	Cradle-IR



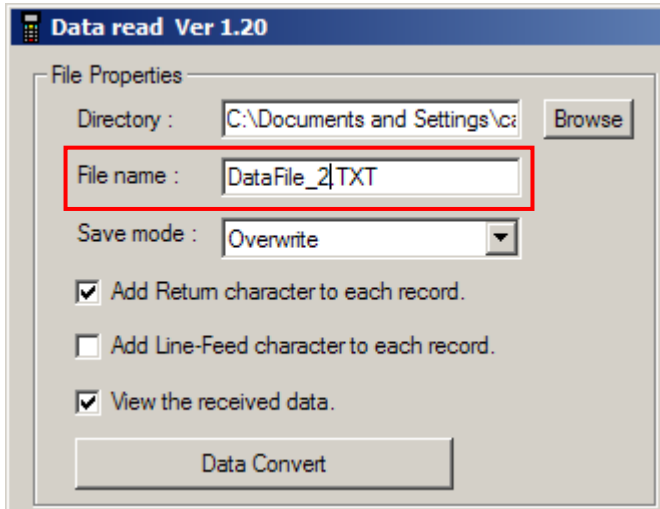
2.1.1 RUN DATA_READ.EXE

- l) In the **Directory** box under **File Properties**, type the file path where the data file will be saved to.

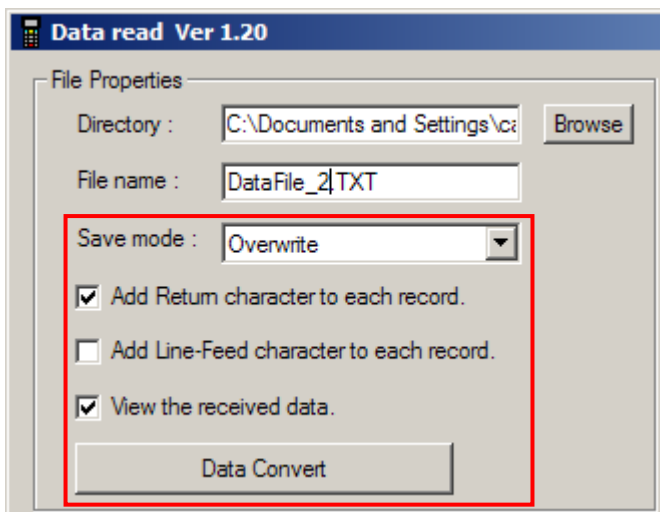
Otherwise, click **Browse** to select which directory the data file is saved to. Type the file name and click **Save** in the dialog box as shown below.



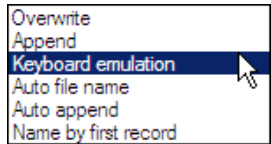
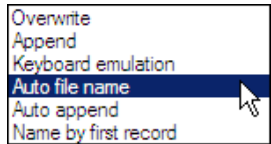
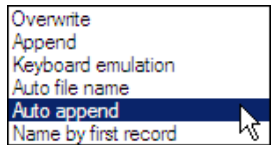
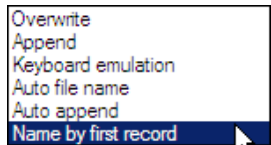
- 2) If you want to save another data file to the same directory as specified above, simply type the file name here.



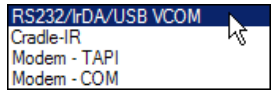
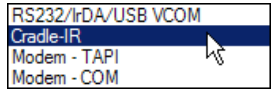
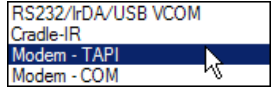
- 3) In the **Save mode** box under **File Properties**, select the appropriate file mode and configure related settings. You may click the [Data Convert] button to configure settings for converting the received data into an Excel file.

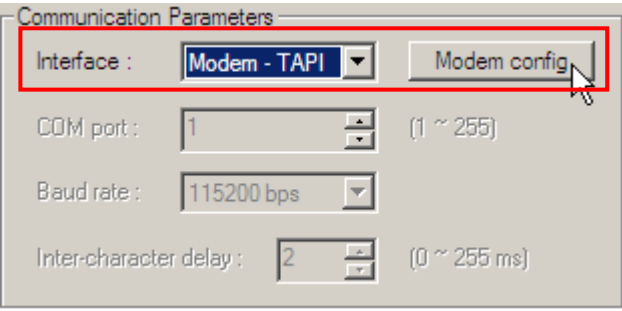
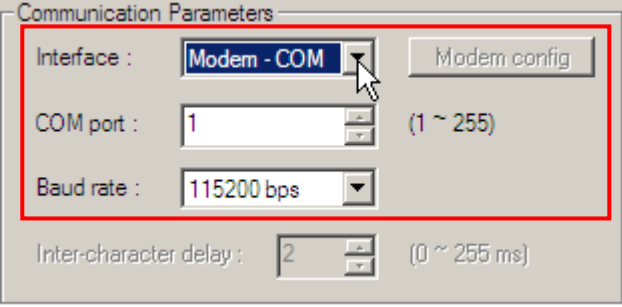


Save Mode	Description
<ul style="list-style-type: none"> Overwrite Append Keyboard emulation Auto file name Auto append Name by first record 	<p>Overwrite: If the file name you give is the same as of an existing file, the uploaded data will overwrite the original data. Otherwise, it will create a new file.</p>
<ul style="list-style-type: none"> Overwrite Append Keyboard emulation Auto file name Auto append Name by first record 	<p>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.</p>

Save Mode	Description
	<p>Keyboard emulation: Data is emulated as typed text and sent to the active window.</p> <ul style="list-style-type: none"> ▶ In the Inter-character delay box under Communication Parameters, type or select a value that matches the computer response time of the keyboard interface. Such delay time is inserted between every character being transmitted. The longer the delay time is, the slower the transmission speed will be.
	<p>Auto file name: 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.</p> <ul style="list-style-type: none"> ▶ The best practice requires specifying reasonable polling time with Keep online for receiving data automatically enabled.
	<p>Auto 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.</p> <ul style="list-style-type: none"> ▶ The best practice requires specifying reasonable polling time with Keep online for receiving data automatically enabled.
	<p>Name by the first record: The received data will be saved to a file named by its first record.</p> <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. However, if the file name you give is the same as of an existing file, the uploaded data will overwrite the original data.

- 4) Under **Options**, select appropriate settings for the file mode you selected in step 3.
- 5) In the **Interface** box under **Communication Parameters**, select the upload interface.

Interface	Description
	<p>RS-232/IrDA/USB VCOM is available on 711/8000/8300/8400/8500 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 8000/8300/8400/8500 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>Communication Parameters</p> <p>Interface : Modem - TAPI Modem config</p> <p>COM port : 1 (1 ~ 255)</p> <p>Baud rate : 115200 bps</p> <p>Inter-character delay : 2 (0 ~ 255 ms)</p>
<p>RS232/IrDA/USB VCOM Cradle-IR Modem - TAPI Modem - COM</p>	<p>Modem interface is available on 8000/8300/8400/8500 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.  <p>Communication Parameters</p> <p>Interface : Modem - COM Modem config</p> <p>COM port : 1 (1 ~ 255)</p> <p>Baud rate : 115200 bps</p> <p>Inter-character delay : 2 (0 ~ 255 ms)</p>

Note: Mobile Link is provided for mobile computers to establish a connection with the host via Ethernet Cradles. However, it only allows uploading data currently.

- 6) Select whether to delete the data file, as well as lookup files, upon completion of auto upload.
- 7) Click **OK** to start the upload process.

2.1.2 COMMAND LINE CONFIGURATION

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>
```

For example,

```
Data_Read DataFile_1.TXT,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
```

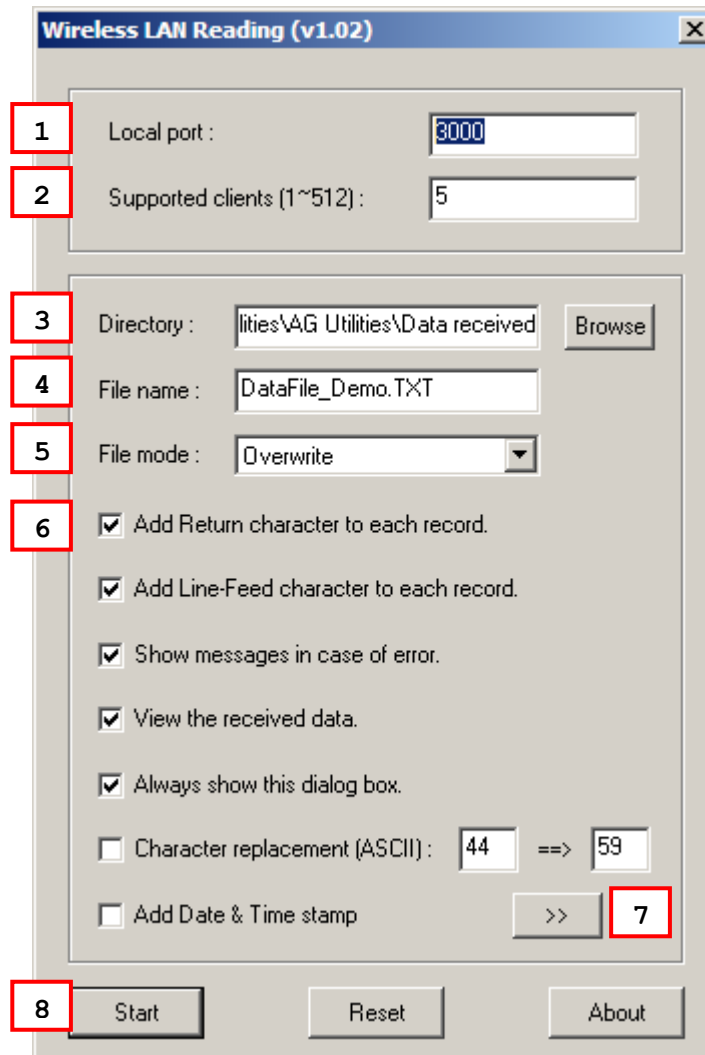
If command line arguments are not given, you may select the appropriate parameters from the dialog box that pops up. Each argument is explained in the table below.

Argument	Description
File name	Max length: 256 bytes
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: 1 ~ 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	Range: 0 ~ 1 ▶ 0: Disable ▶ 1: Enable	(It is set to 1 by default in the utility program.)
Add LF character	Range: 0 ~ 1 ▶ 0: Disable ▶ 1: Enable	(It is set to 1 by default in the utility program.)
Show error	Range: 0 ~ 1 ▶ 0: Disable ▶ 1: Enable	(It is set to 1 by default in the utility program.)
Show data	Range: 0 ~ 1 ▶ 0: Disable ▶ 1: Enable	(It is set to 1 by default in the utility program.)
Show dialog box	Range: 0 ~ 1 ▶ 0: Disable ▶ 1: Enable	(It is set to 1 by default in the utility program.)
Keep online	Range: 0 ~ 1 ▶ 0: Disable ▶ 1: Enable	(It is set to 0 by default in the utility program.)
Polling time	Range: 1 ~ 999 sec	(It is set to 2 by default in the utility program.)
Inter-Char delay	Range: 0 ~ 255 ms	(It is set to 2 by default in the utility program.)

2.2 WLAN_READ

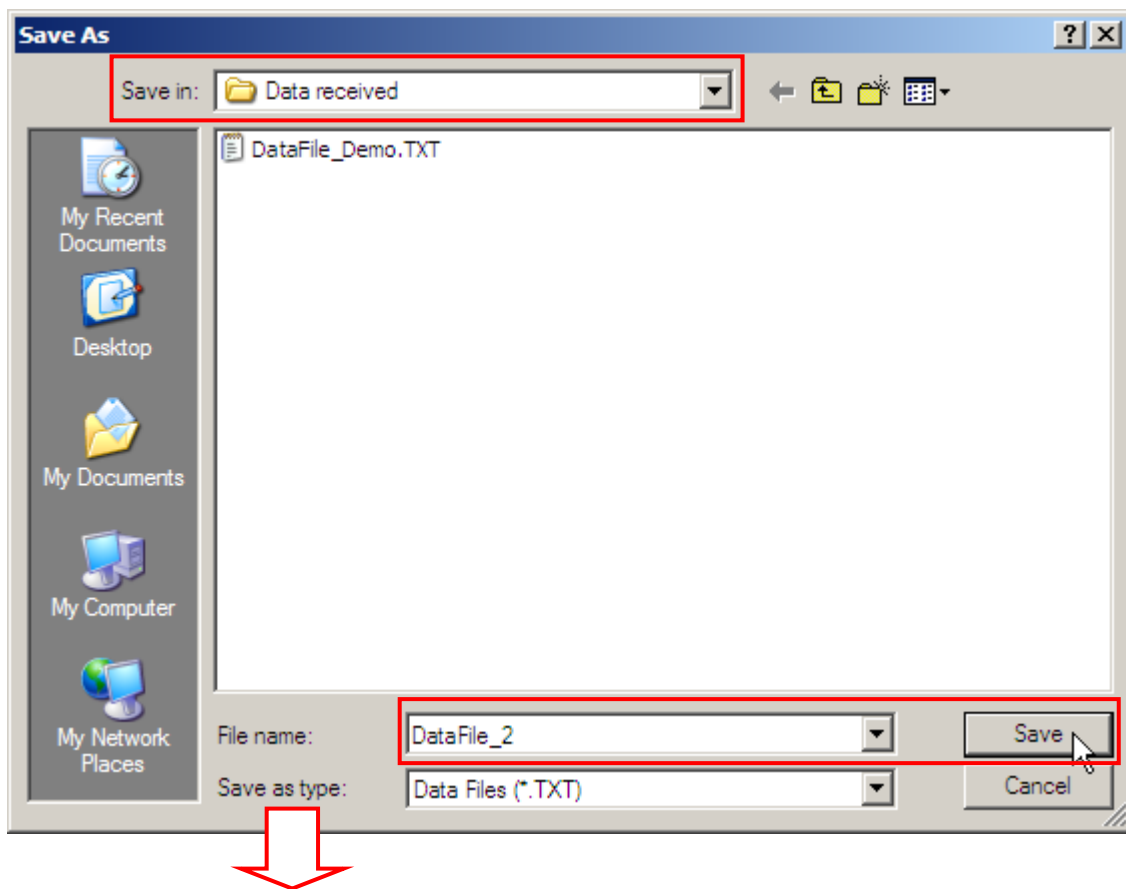
If no lookup file is in use, without the need to run the Wireless Database Manager programs, you can use **WLAN_Read.exe** to receive the collected data from your mobile computer in a real-time way.

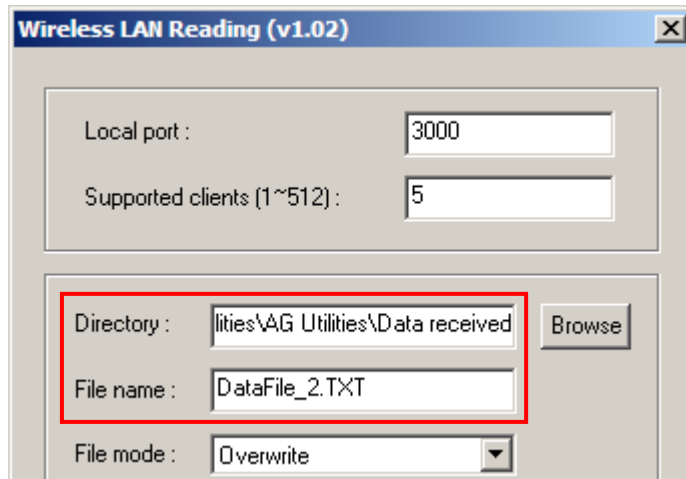


2.2.1 RUN WLAN_READ.EXE

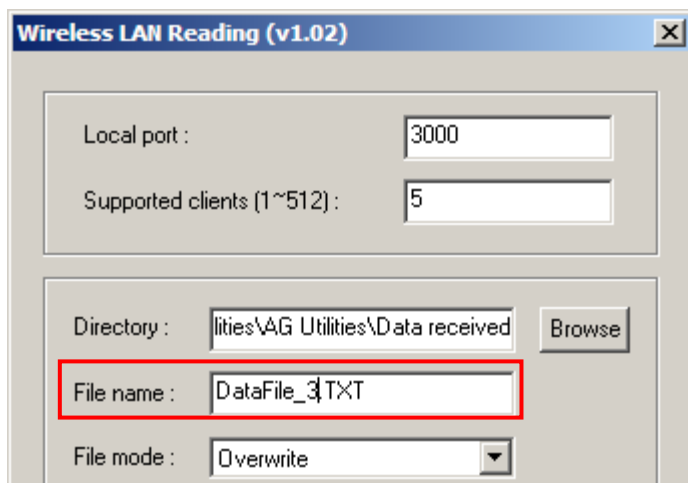
- 1) In the **Local port** box, type the local port you want to use.
- 2) In the **Supported clients** box, type the maximum number (1 ~ 512) of client devices that are allowed to connect to the local port.
- 3) In the **Directory** box, type the file path where the data will be saved to.

Otherwise, click **Browse** to select which directory the data file is saved to. Type the file name and click **Save** in the dialog box as shown below.






- 4) If you want to save data to another file under the same directory as specified above, simply type the file name here.

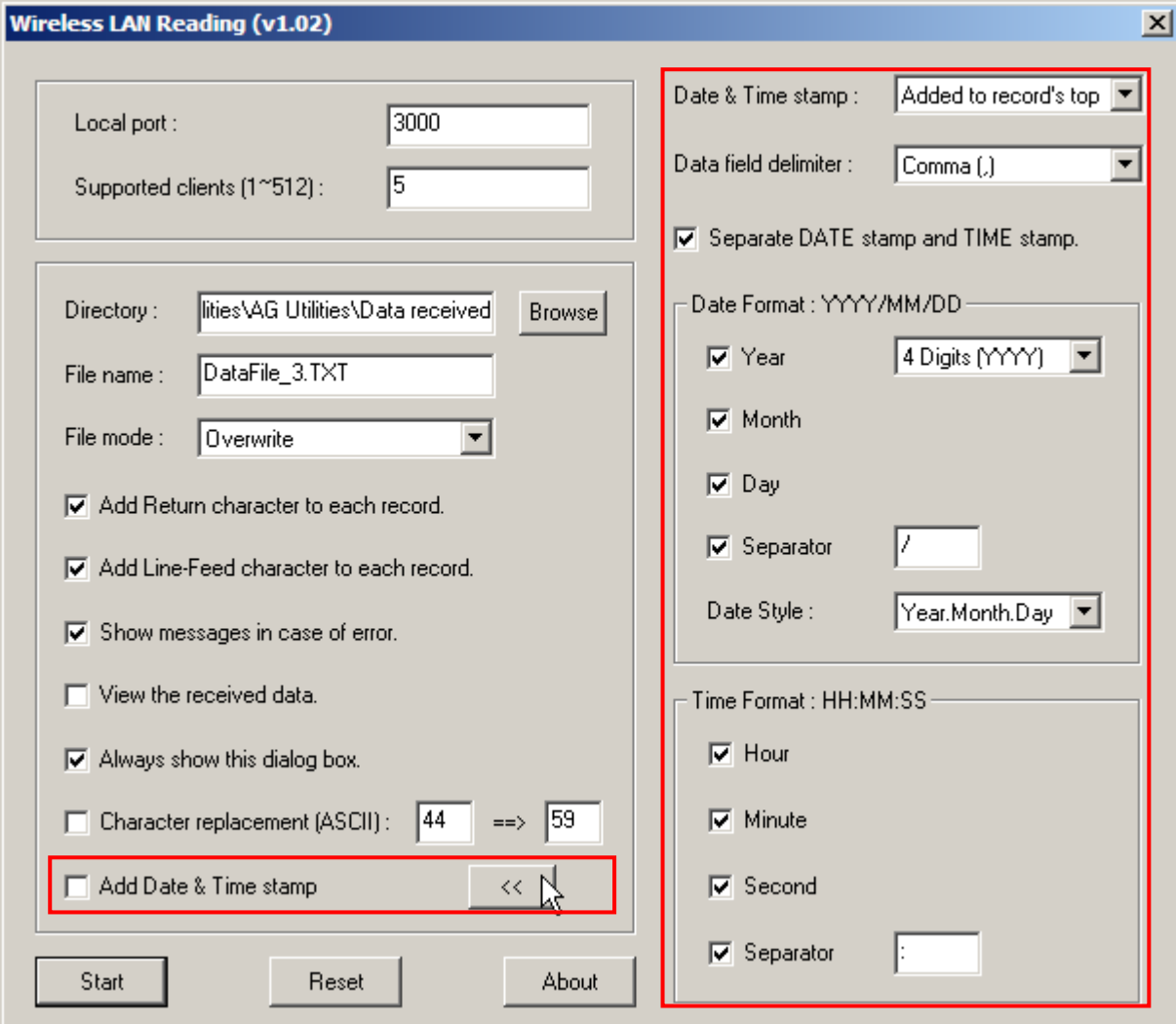


- 5) In the **File mode** box, select the appropriate file mode.
- 6) Under the **File mode** box are options associated with the file mode. Select appropriate settings for the file mode you selected in step 5.

File Mode	Description
<ul style="list-style-type: none"> Overwrite Append New name Named by the first record 	<p>Overwrite: If the file name you give is the same as of an existing file, the received data will overwrite the original data. Otherwise, it will create a new file.</p>
<ul style="list-style-type: none"> Overwrite Append New name Named by the first record 	<p>Append: If the file name you give is the same as of an existing file, the received data will be appended to the original data. Otherwise, it will create a new file.</p>

<ul style="list-style-type: none"> Overwrite Append New name Named by the first record 	<p>New name: If the file name you give is the same as of an existing file, it will fail to create file. Otherwise, it will create a new file.</p>
<ul style="list-style-type: none"> Overwrite Append New name Named by the first record 	<p>Name by the first record: The received data will be saved to a file named by its first record.</p> <ul style="list-style-type: none"> ▶ For example, in WLAN 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. However, if the file name you give is the same as of an existing file, the uploaded data will overwrite the original data.

- 7) Click  to view more options associated with the Date & Time stamp.



Wireless LAN Reading (v1.02)

Local port : 3000

Supported clients (1~512) : 5

Directory : lities\AG Utilities\Data received

File name : DataFile_3.TXT

File mode : Overwrite

Add Return character to each record.

Add Line-Feed character to each record.

Show messages in case of error.

View the received data.

Always show this dialog box.

Character replacement (ASCII) : 44 ==> 59

Add Date & Time stamp

Date & Time stamp : Added to record's top

Data field delimiter : Comma (,)

Separate DATE stamp and TIME stamp.

Date Format : YYYY/MM/DD

Year 4 Digits (YYYY)

Month

Day

Separator /

Date Style : Year.Month.Day

Time Format : HH:MM:SS

Hour

Minute

Second

Separator :

- 8) Click **Start** to receive data immediately.

2.2.2 COMMAND LINE CONFIGURATION

You can use the command line to download the lookup file as well. At the command line prompt, use the following command line arguments:

```
Wlan_Read <File name>,<File mode>,<Add CR character>,<Add LF character>,  

    <Show error>,<Show data>,<Show dialog box>,<Replace delimiter>,  

    <Character_1>,<Character_2>,<Add Date & Time stamp>,<Stamp position>,  

    <Separate Date & Time stamp>,<Field delimiter>,<Year>,<Year format>,  

    <Month>,<Day>,<Separate Date>,<Date separator>,<Date style>,  

    <Hour>,<Minute>,<Second>,<Separate Time>,<Time separator>,  

    <Local port>,<Supported client number>
```

If command line arguments are not given, you may select the appropriate parameters from the dialog box that pops up. Each argument is explained in the table below.

Argument	Description
File name	Max length: 256 bytes
File mode	Range: 1 ~ 4 (It is set to 1 by default in the utility program.) <ul style="list-style-type: none"> ▶ 1: Overwrite ▶ 2: Append ▶ 3: New name ▶ 4: Name by the first record
Add CR character	Range: 0 ~ 1 (It is set to 1 by default in the utility program.) <ul style="list-style-type: none"> ▶ 0: Disable ▶ 1: Enable
Add LF character	Range: 0 ~ 1 (It is set to 1 by default in the utility program.) <ul style="list-style-type: none"> ▶ 0: Disable ▶ 1: Enable
Show error	Range: 0 ~ 1 (It is set to 1 by default in the utility program.) <ul style="list-style-type: none"> ▶ 0: Disable ▶ 1: Enable
Show data	Range: 0 ~ 1 (It is set to 1 by default in the utility program.) <ul style="list-style-type: none"> ▶ 0: Disable ▶ 1: Enable

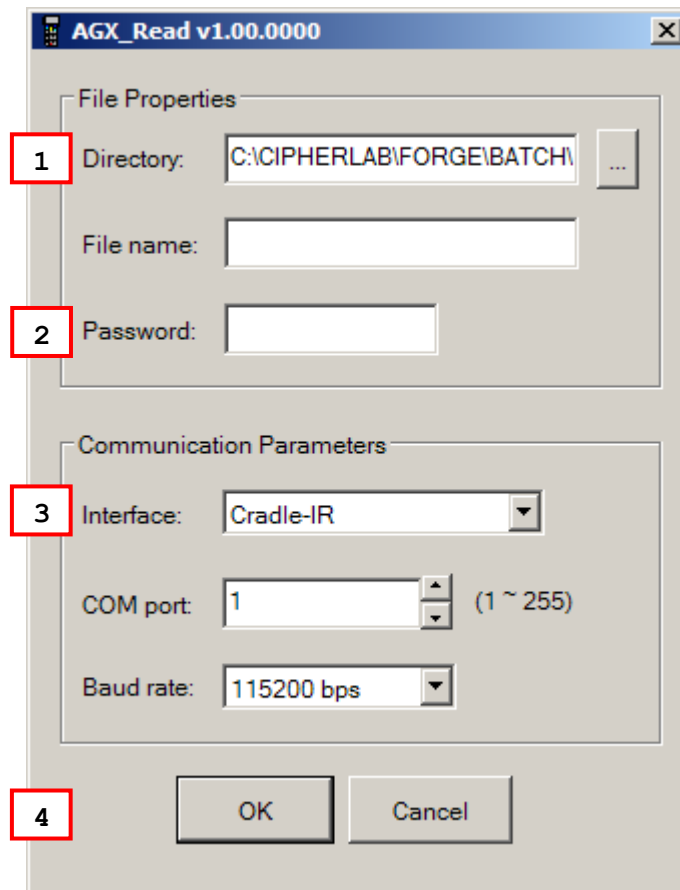
Show dialog box	Range: 0 ~ 1 ▶ 0: Disable ▶ 1: Enable	(It is set to 1 by default in the utility program.)
Replace delimiter	Range: 0 ~ 1 ▶ 0: Disable ▶ 1: Enable	(It is set to 0 by default in the utility program.)
Character_1	One ASCII character for the original delimiter	(It is set to 44 (comma) by default in the utility program.)
Character_2	One ASCII character for the new delimiter	(It is set to 59 (semicolon) by default in the utility program.)
Add Date & Time stamp	Range: 0 ~ 1 ▶ 0: Disable ▶ 1: Enable	(It is set to 0 by default in the utility program.)
Stamp position	Range: 0 ~ 1 ▶ 0: Top ▶ 1: Bottom	(It is set to 0 by default in the utility program.)
Separate Date & Time stamp	Range: 0 ~ 1 ▶ 0: Disable ▶ 1: Enable	(It is set to 1 by default in the utility program.)
Field delimiter	Range: 0 ~ 4 ▶ 0: Comma (,) ▶ 1: Colon (:) ▶ 2: Semicolon (;) ▶ 3: Slash (/) ▶ 4: Backslash (\)	(It is set to 0 by default in the utility program.)
Year – add info	Range: 0 ~ 1 ▶ 0: Disable ▶ 1: Enable	(It is set to 1 by default in the utility program.)
Year format	Range: 0 ~ 1 ▶ 0: 4 digits (YYYY) ▶ 1: 2 digits (YY)	(It is set to 0 by default in the utility program.)
Month – add info	Range: 0 ~ 1 ▶ 0: Disable ▶ 1: Enable	(It is set to 1 by default in the utility program.)
Day – add info	Range: 0 ~ 1 ▶ 0: Disable ▶ 1: Enable	(It is set to 1 by default in the utility program.)

Date – add separator	Range: 0 ~ 1 ▶ 0: Disable ▶ 1: Enable	(It is set to 1 by default in the utility program.)
Date separator	One character	(It is set to slash (/) by default in the utility program.)
Date style	Range: 0 ~ 2 ▶ 0: Year.Month.Day ▶ 1: Month.Day.Year ▶ 2: Day.Month.Year	(It is set to 0 by default in the utility program.)
Hour – add info	Range: 0 ~ 1 ▶ 0: Disable ▶ 1: Enable	(It is set to 1 by default in the utility program.)
Minute – add info	Range: 0 ~ 1 ▶ 0: Disable ▶ 1: Enable	(It is set to 1 by default in the utility program.)
Second – add info	Range: 0 ~ 1 ▶ 0: Disable ▶ 1: Enable	(It is set to 1 by default in the utility program.)
Time – add separator	Range: 0 ~ 1 ▶ 0: Disable ▶ 1: Enable	(It is set to 1 by default in the utility program.)
Time separator	One character	(It is set to colon (:) by default in the utility program.)
Local port	Range: 1 ~ 65535	(It is set to 3000 by default in the utility program.)
Supported client number	Range: 1 ~ 512	(It is set to 5 by default in the utility program.)

2.3 AGX_READ

When using the Forge AG program 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 8400.

2.3.1 RUN AGX.READ.EXE

- 1) In the **Directory** box, 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** box, enter the correct password for access to the template file.

- 3) In the **Interface** box, select the upload interface.

Comm Type	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.

Note: Mobile Link is provided for mobile computers to establish a connection with the host via Ethernet Cradles. However, it only allows uploading data currently.

MOBILE LINK

Mobile Link is provided for mobile computers to establish a connection with the host via Ethernet Cradles, and it only allows uploading data currently.

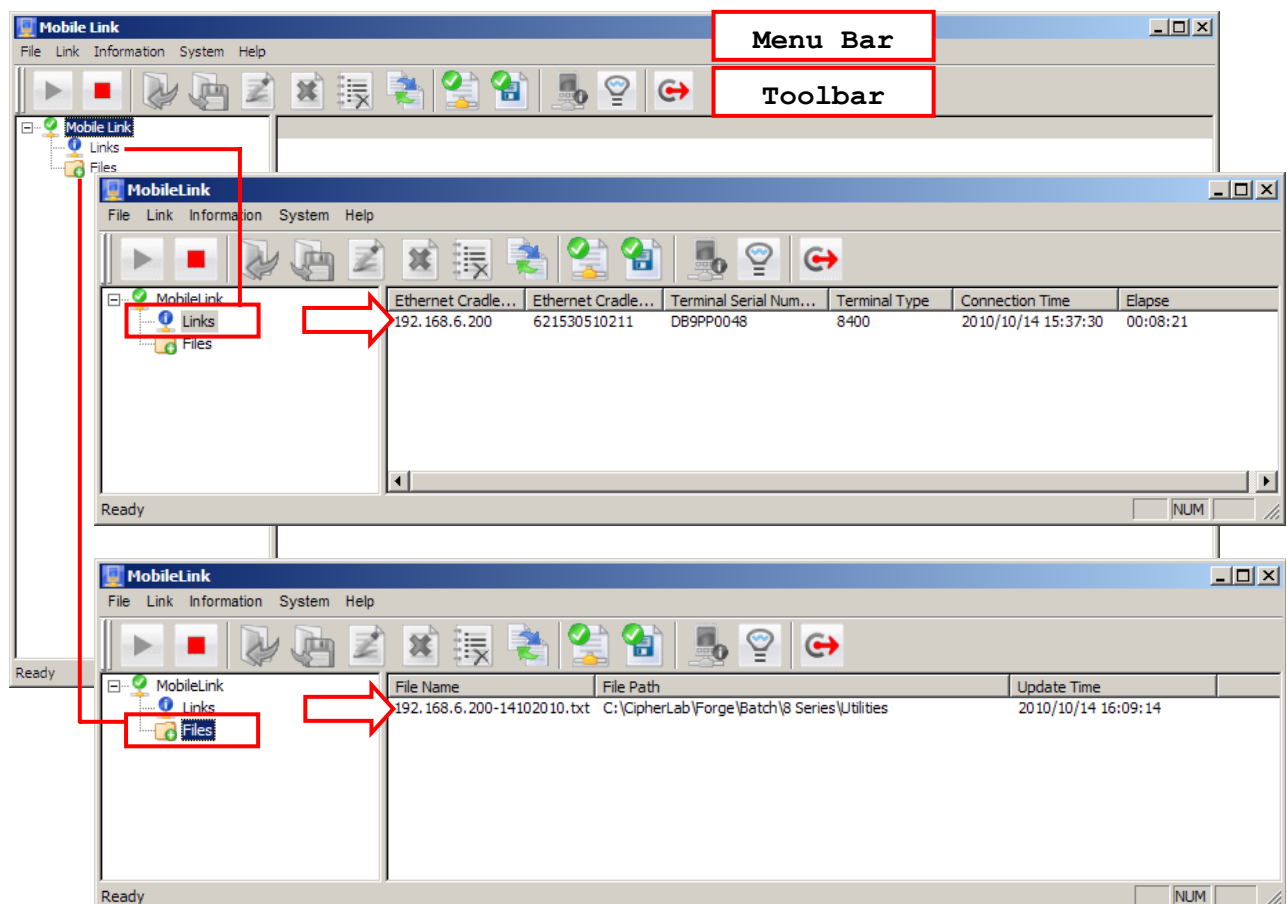
3.1 LOOKING AT THE WORK AREA

3.1.1 PREREQUISITES















By default, it is set to automatically start the link service upon execution of **Mobile Link**. Once you select to upload data from the mobile computer, you can view the link status and file status respectively as shown below.

- ▶ You must have configured your Ethernet Cradle to work in Data Mode and connect to the host computer with correct host IP and port number.
- ▶ You must select "Ethernet" for the upload interface on the mobile computer.

Note: On the **System** menu, click **Link Properties**, and then change the **Auto Start Link Service** setting.



3.1.2 MENU BAR & TOOLBAR BUTTONS

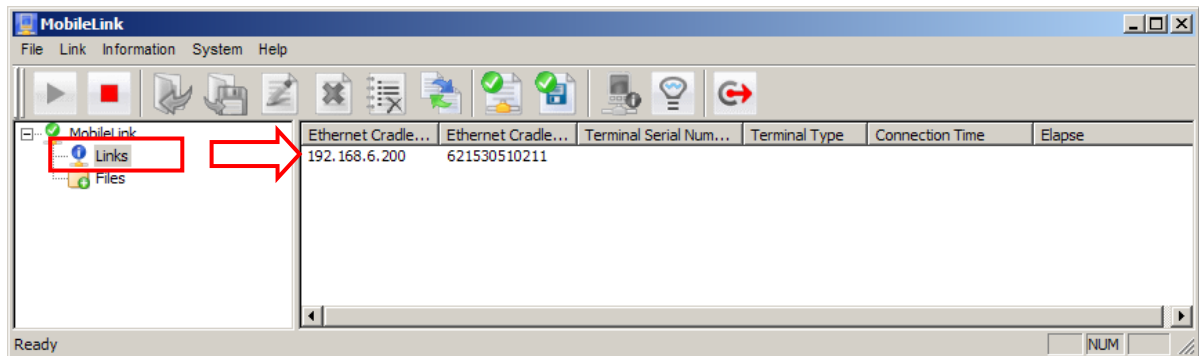
File Menu		
Open		Open a selected data file.
Save As		Save a selected data file to a different file path.
Rename		Rename a selected data file.
Delete File		Delete a selected data file.
Remove from List		Remove a selected data file from the file list.
Convert		Convert a selected data file to Excel file format.
Exit		Close the Mobile Link program.
Link Menu		
Start		Start the link service.
Restart		Re-start the link service.
Stop		Stop the link service.
Information Menu		
Device Information		Get system information about a specific mobile computer.
System Menu		
Link Properties		Configure link properties.
File Properties		Configure file properties.
Help Menu		
About Mobile Link		View information about the Mobile Link program.

3.2 RECEIVING DATA OVER THE NETWORK

3.2.1 VIEW LINK STATUS

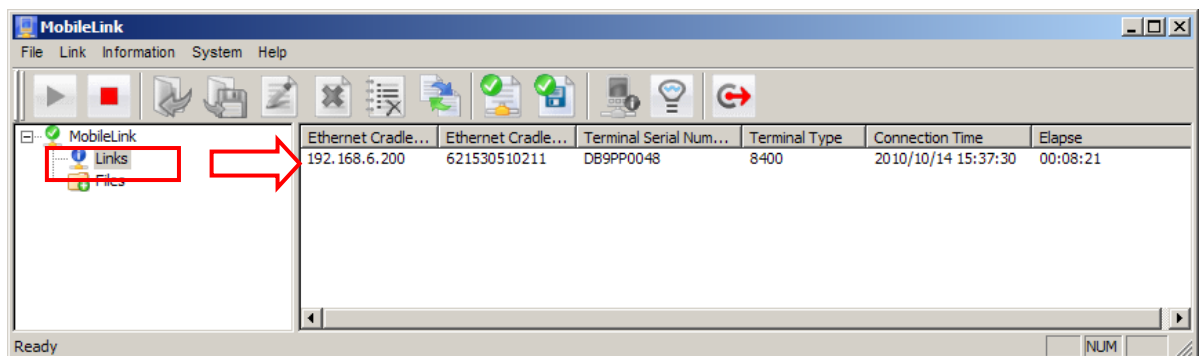
- 1) Connect your Ethernet Cradle to the host computer over the network.

In **Mobile Link**, click **Links** on the left pane of the work area and the IP and MAC address of Ethernet Cradle will be displayed on the right pane.



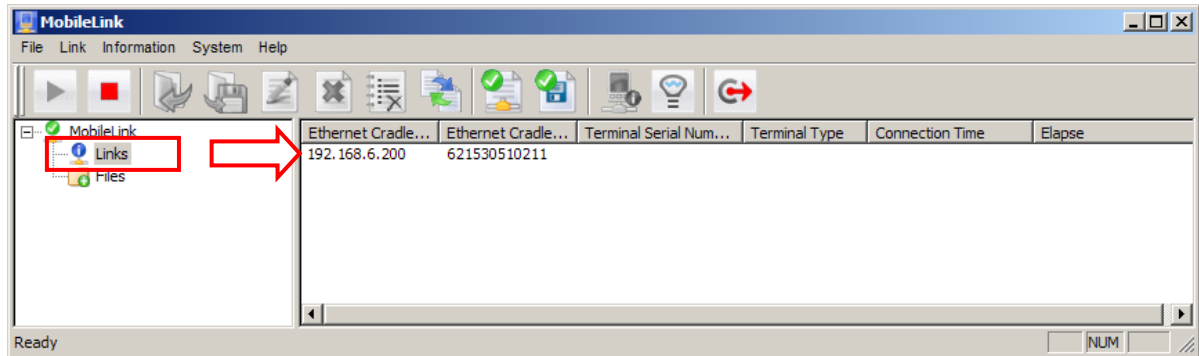
Note: You must have configured your Ethernet Cradle to connect to the host computer with correct host IP and port number.

- 2) Seat the mobile computer into your Ethernet Cradle, and start with uploading data. For 8000/8300/8400, it will automatically start uploading. For 8500, it requires selecting "Upload Data" from the main menu on the mobile computer.
- 3) In **Mobile Link**, more information about the connection will be displayed on the right pane. The connection details include:
 - ▶ Ethernet Cradle IP
 - ▶ Ethernet Cradle MAC Address
 - ▶ Terminal Serial Number (= the mobile computer)
 - ▶ Terminal Type (= the mobile computer)
 - ▶ Connect Time (start time)
 - ▶ Elapse (time elapsed upon completion of receiving data)



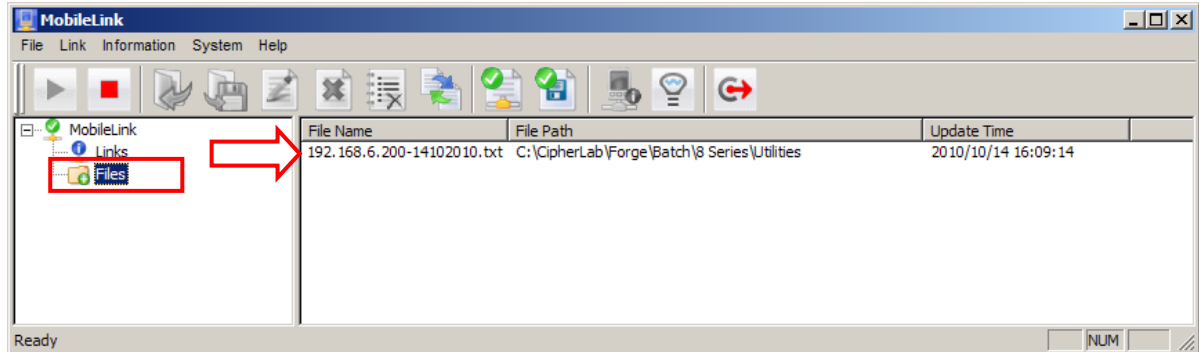
Note: You must select "Ethernet" for the upload interface on the mobile computer.

- 4) Except for Ethernet Cradle IP and MAC address, the rest information will be cleared upon completion of uploading data.



3.2.2 VIEW RECEIVED FILES

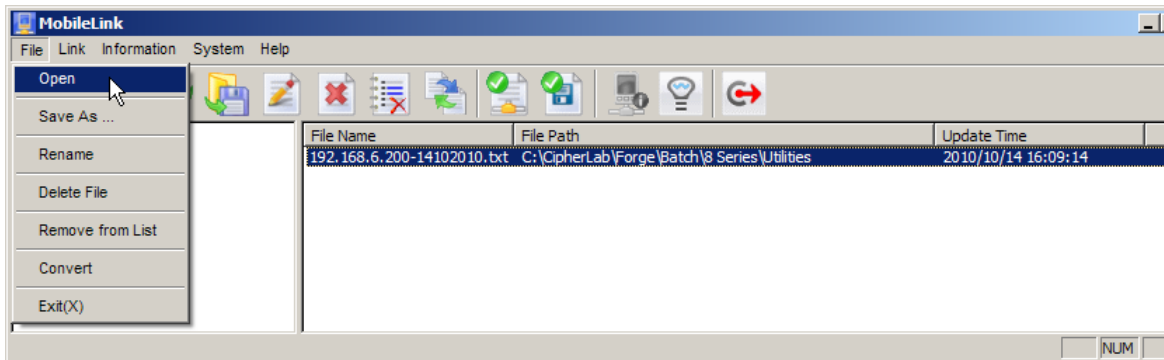
- 1) In **Mobile Link**, click **Files** on the left pane of the work area and the received file or files will be displayed on the right pane.



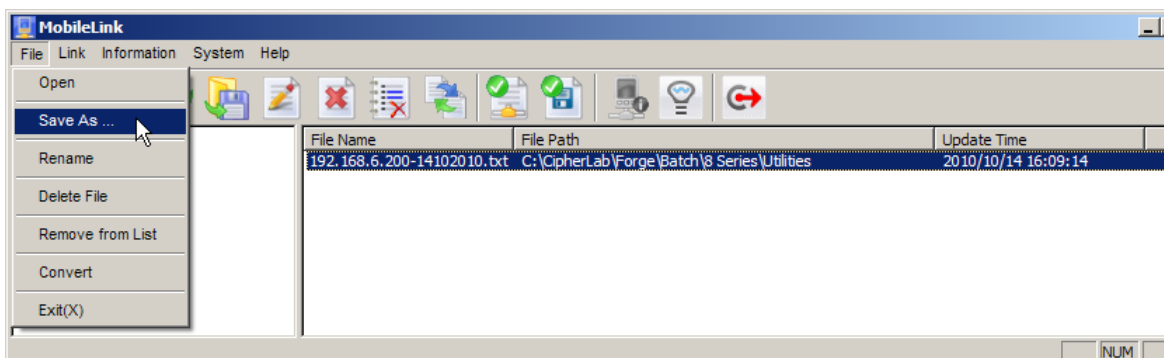
Note: You must have configured your Ethernet Cradle to connect to the host computer with correct host IP and port number.

- 2) Click a file from the file list, and choose a command from the **File** menu:

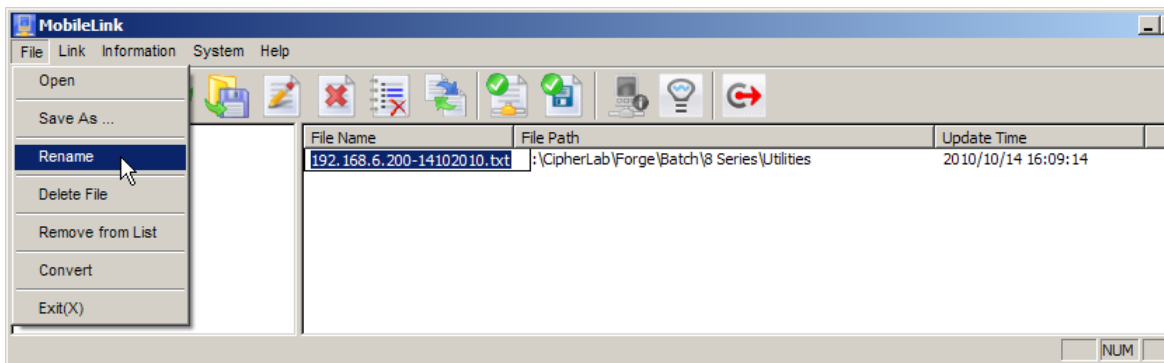
- ▶ On the **File** menu, click **Open** to open the selected data file.



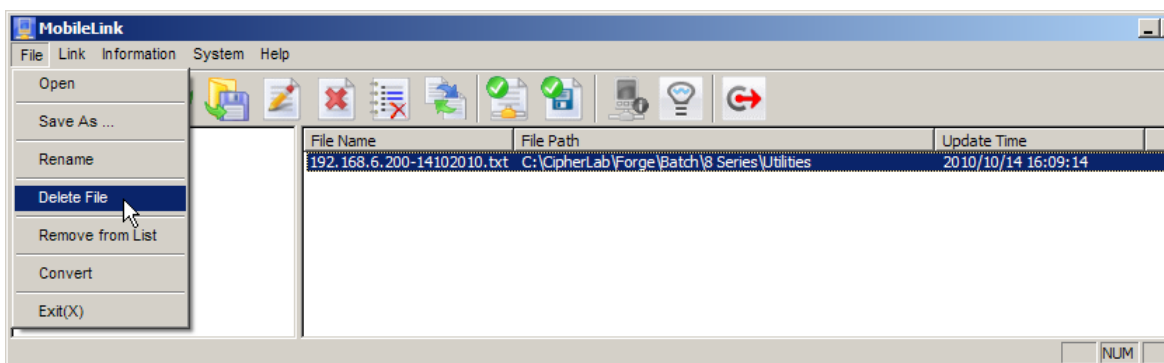
- ▶ On the **File** menu, click **Save As** to save the selected data file to a different file path.



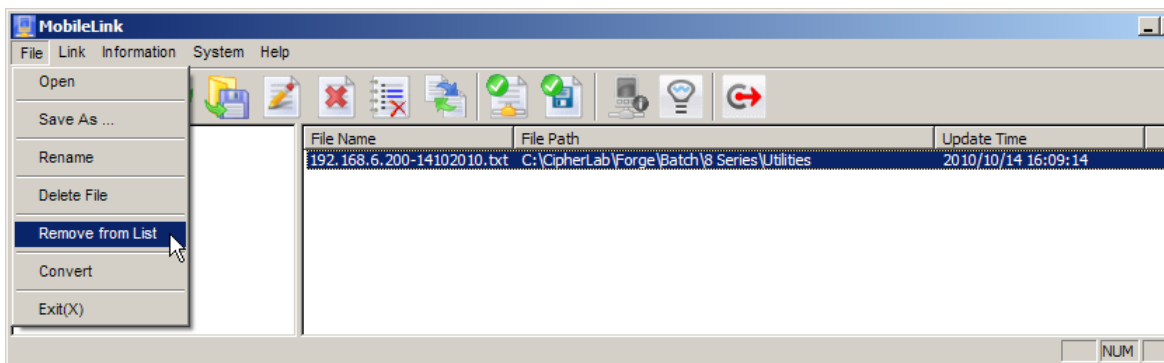
- ▶ On the **File** menu, click **Rename** to rename the selected data file.



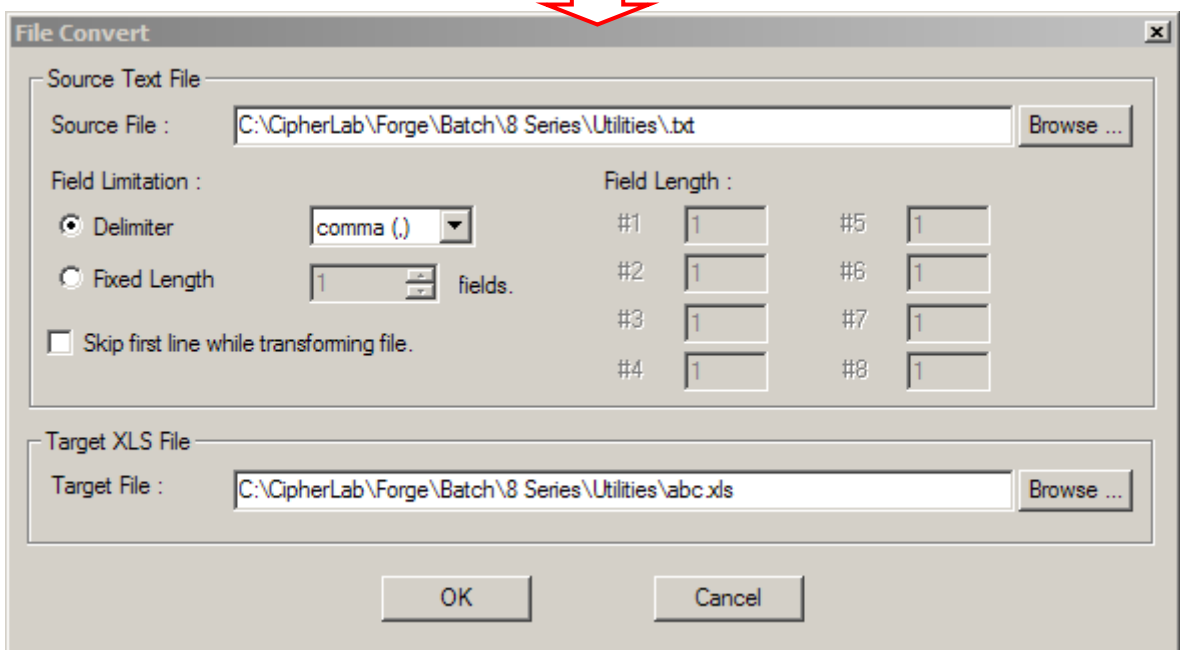
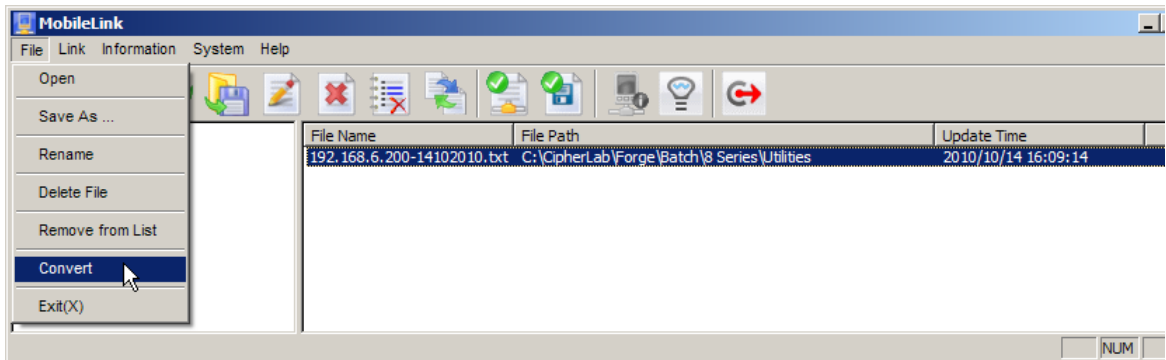
- ▶ On the **File** menu, click **Delete File** to delete the selected data file.



- ▶ On the **File** menu, click **Remove from List** to remove the selected data file from the file list.



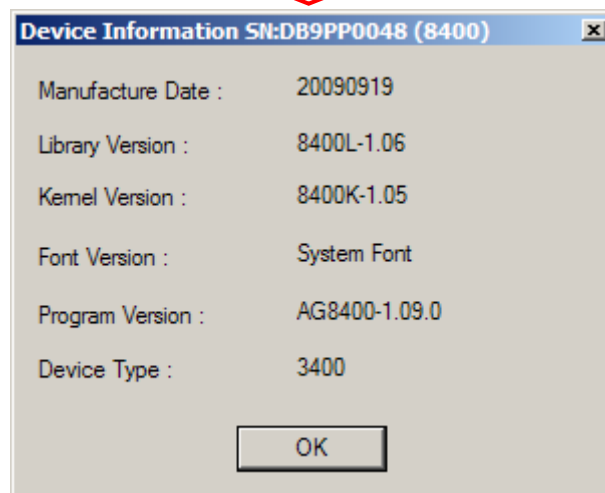
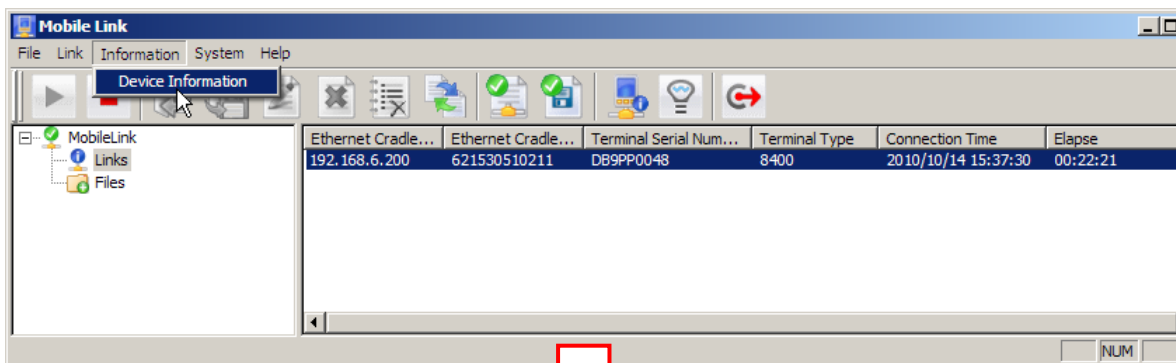
- ▶ On the **File** menu, click **Convert** to convert the selected data file to Excel file format.



3.2.3 VIEW DEVICE INFORMATION

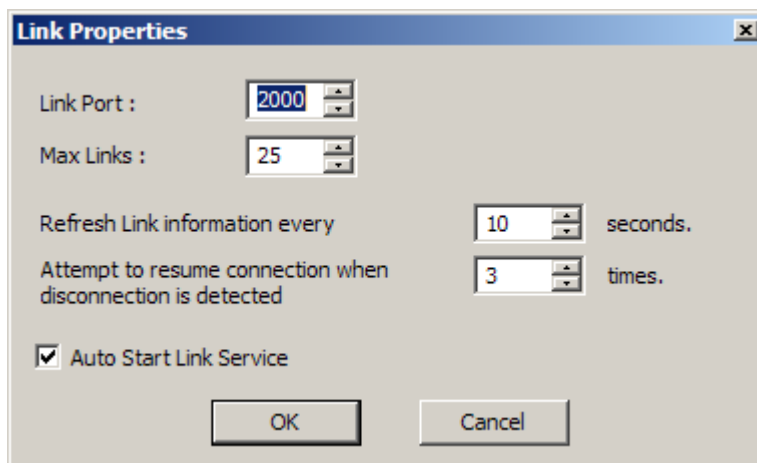
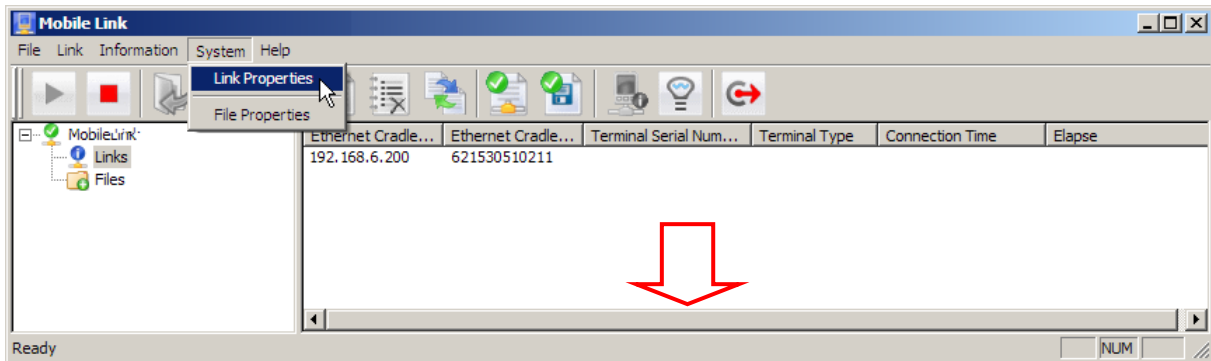
In **Mobile Link**, you can also view the device information while a mobile computer is uploading data.

- 1) Click an entry from the link list that provides detailed information on each of the current connections.
- 2) On the **Information** menu, click **Device Information** to view system information of a specific mobile computer, such as:
 - ▶ Serial Number (on the title of the dialog box)
 - ▶ Manufacture Date
 - ▶ Library Version
 - ▶ Kernel Version
 - ▶ Font Version
 - ▶ Program Version
 - ▶ Device Type



3.2.4 CHANGE CONNECTION SETTINGS

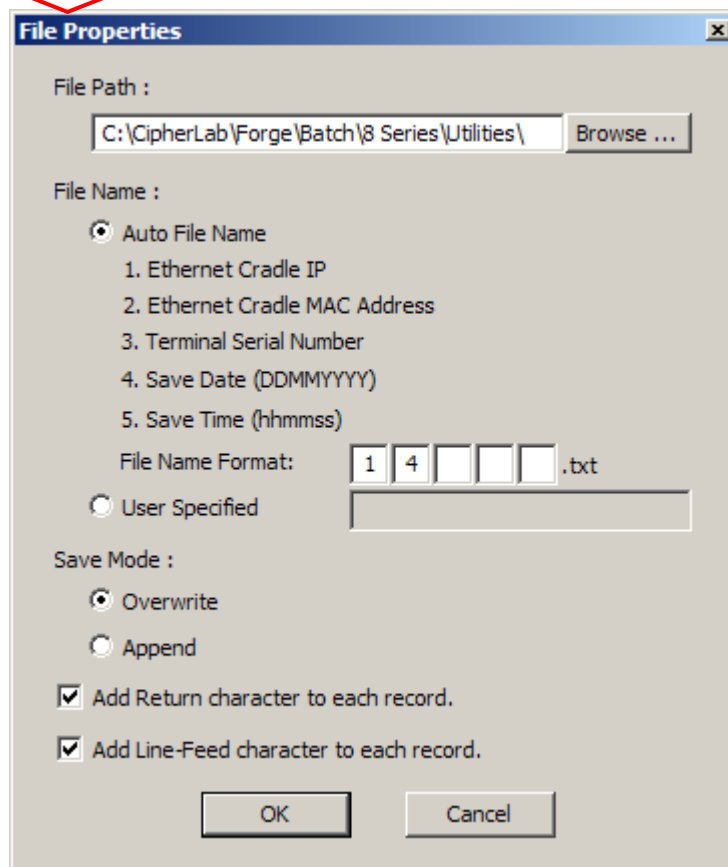
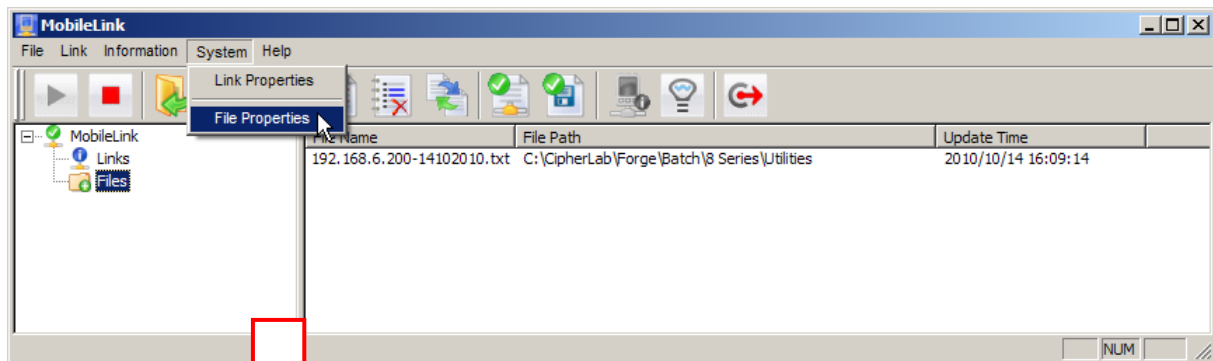
You must have configured your Ethernet Cradle to connect to the host computer with correct host IP and port number. On the **System** menu, click **Link Properties** to change the following settings:



- ▶ **Link Port:** The port number is “2000” by default. You may change it in **Mobile Link**, as well as on your Ethernet Cradle.
- ▶ **Maximum Links:** It allows up to 25 mobile computers to upload data by default. You may change the number to meet your needs.
- ▶ **Refresh Link Information:** Type or select an appropriate period of time for **Mobile Link** to refresh the link status, in units of second.
- ▶ **Attempt to resume connection when disconnection is detected:** Type or select how many times **Mobile Link** will try to resume connection.
- ▶ **Auto Start Link Service:** By default, it is set to automatically start the link service upon execution of **Mobile Link**. You may disable it if necessary.

3.2.5 CHANGE DATA FILE SETTINGS

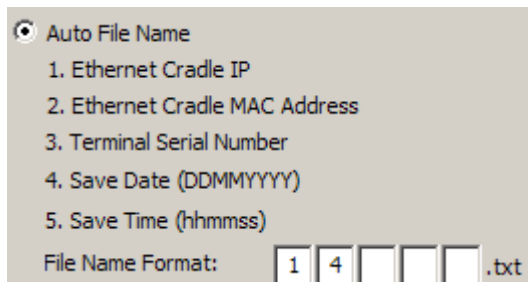
On the **System** menu, click **File Properties** to change the following settings:



File Path

By default, the received data files will be saved in the same folder where the **Mobile Link** program is saved. Type the file path where the data files will be saved.

File Name: Auto File Name



Auto File Name

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

File Name Format: .txt

By default, each data file will be saved by automatically giving it a blank name. However, you may specify the format of the file name by selecting more than one element from the five listed above. For example, selecting 1 and 4 will result in a file name based on the information from which Ethernet Cradle IP the data comes and the date when it is received. You may select a combination to make a proper file name.

File Name: User Specified

In the **User Specify** box, type the file name you want to use.

Save Mode: Overwrite

If the file name is the same as of an existing file, the uploaded data will overwrite the original data. Otherwise, it will create a new file.

Save Mode: Append

If the file name 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.

Append Return character to each record.

By default, it will add Return character to each record. However, you may change it if necessary.

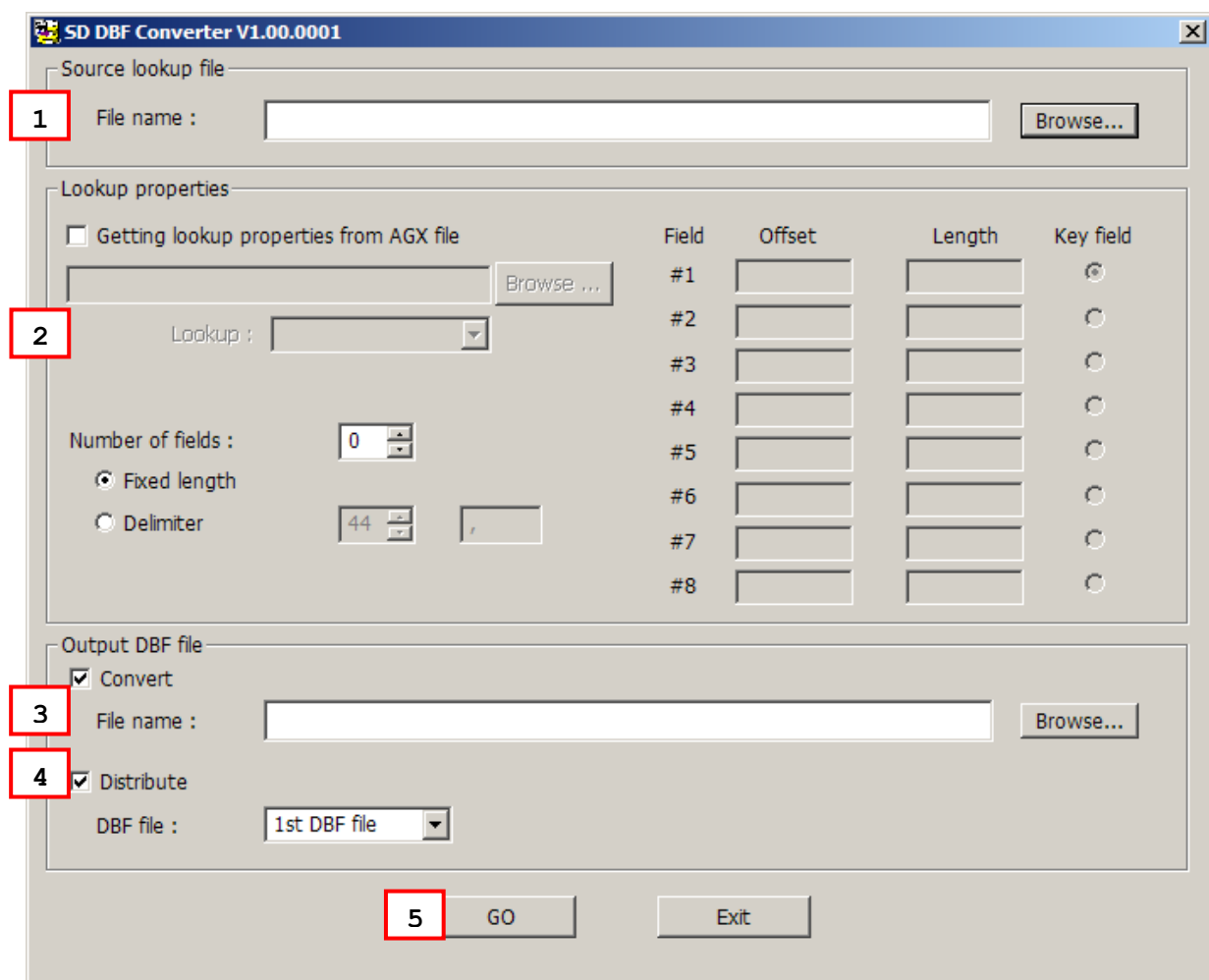
Add Line-Feed character to each record.

By default, it will add Line-Feed character to each record. However, you may change it if necessary.

DBF_CONVERTER (8400 ONLY)

For 8400, it allows downloading template file (.AGX) and lookup files via SD card. Before you download the lookup files, you must convert text files (.TXT) to DBF format (.DB0, .DB1). The result files will be copied to the directory automatically when the "Distribute" setting is enabled.

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



- 1) For the source lookup file, select 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 select an existing DBF file to save the result file on PC side.
- 4) On 8400, select **3. Utilities | 8. Load Lookup File** and identify the lookup file.

Note: The download interface must be set to "SD".

- 5) Click [Go].
 - ▶ It will convert the source file to DBF format and save the result file on PC side.
 - ▶ If you have selected the check box of [Distribute], it will automatically copy the result file to the import directory "\\AG\DBF" on SD card.
- 6) On 8400, 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.

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