

MC Toolkit Modem Code Download Instruction Manual

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About This Document

Abstract

This document provides descriptions and procedures for the upgrading the MC Toolkit Modem firmware using the Code Download Application.

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Release Information

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MC Toolkit Modem Code Download	34-ST-25-33	Revision 1	October 2010

References

The following list identifies all documents that may be sources of reference for material discussed in this publication.

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MC Toolkit User Manual	34-ST-25-20	Revision 9	October 2010

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Introduction

Overview

The MC Toolkit Modem Code Download application allows the user to upgrade the modem firmware in the following devices.

- MC Toolkit 101 (MCT101)
- MC Toolkit 202 (MCT202)

In addition to upgrade it also allows user to save modem firmware to Pocket PC (PPC) and test current firmware version of the modem. The application supports the standard serial port communication and can be executed using a PPC. The firmware, which can be obtained from the Honeywell TAC website, is downloadable from the PPC to the Flash memory in the device. The entire process requires approximately 5 minutes.

Modem Code Download Application - Main Screen

The following screen will be displayed after you launch the Modem Code Download application. The Installation and Launch procedure of the program is listed under. **“Installation of Modem Code Download Application”**

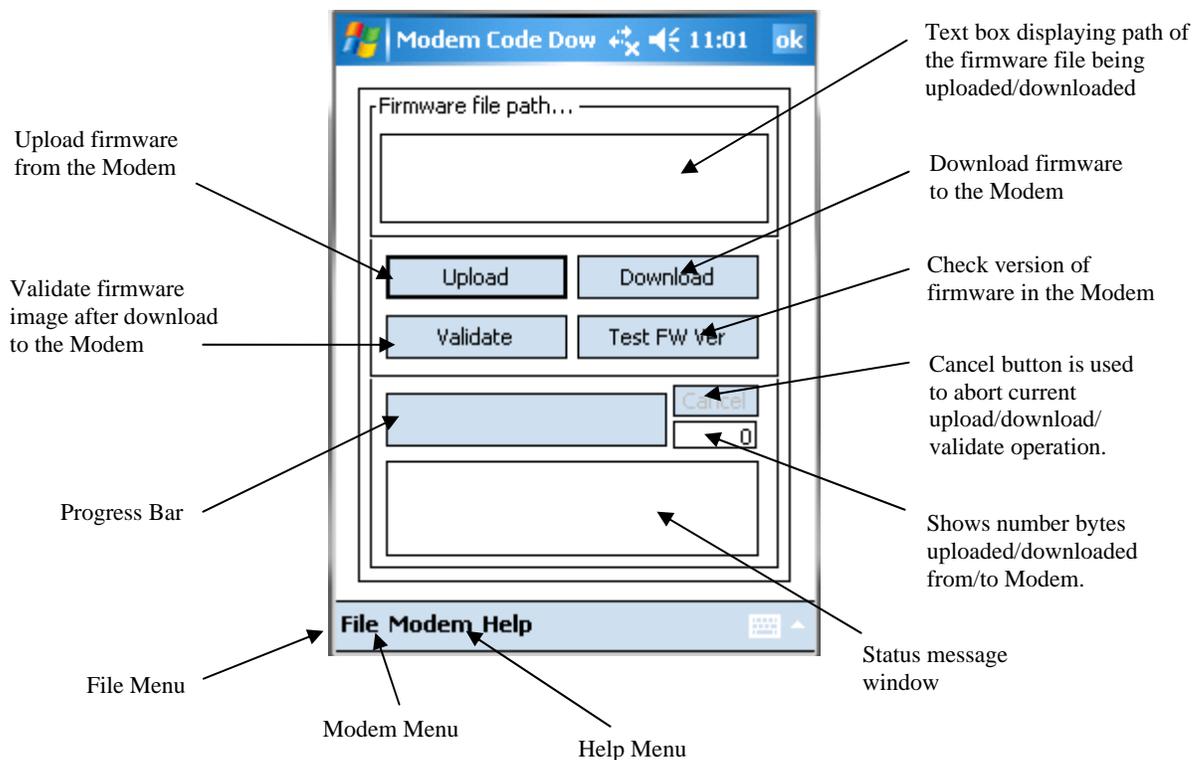


Figure 1 Modem Code Download Application - Main Screen

Installation, Connection and Launch of the Modem Code Download Application

System Requirements

Table 1 System Requirements

Item	Description
Pocket PC Model	HP iPAQ 2490 Microsoft Active Sync version 4 or higher must be installed on the PC to communicate with the PPC using the Active Sync cable.
Pocket PC Platform	Windows Mobile 5.0

Install / Upgrade Procedure

The ModemCodeDownload program installation is part of the MCToolkit product CD. If the MCToolkit product is already installed, you should see the short cut "ModemCodeDownload" Under "Start" or "Start\Programs" menu. Skip this section if it is already installed.

To upgrade the MC Toolkit Modem Code Download program in the Host PPC, follow the steps in Table 2.

Table 2 Install/Upgrade Procedure

Step	Action
1	If the Host PPC has the previously installed 'Honeywell ModemCodeDownload' application, follow the steps below to remove this program from the PPC. a. Select Start/Settings/System/Memory/Remove Programs b. Select 'ModemCodeDownload' (If this program is not listed, that means it was not installed on this PPC before) c. Select Remove, select Yes on the Remove Program dialog d. Soft Reset the PPC
2	Setup ActiveSync connection between the Host PPC and the Desktop PC
3	If the Desktop PC has the previously installed 'ModemCodeDownload' application, follow the steps below to remove this program from the PC. Steps: a. Select Start/Settings/Control Panel/Add Remove Programs b. Select 'ModemCodeDownload' (If a program is not listed, that means it was not installed on this PC before) c. Select Change/Remove d. On the "Welcome Dialog" select "Remove", hit Next. e. Click Yes on "Do you want to completely remove..." prompt.
4	From the 'Configuration Tools Web Site' listed under World Wide Web, Download the ' MC Toolkit Modem Code Download Installation Setup ' (Zip file) into your PC.

5	Unzip the file saved in Step 4 to a folder on the PC (ex: ModemCodeDownloadSetup.exe) - Setup.exe file will be extracted
6	Run ModemCodeDownloadSetup.exe
7	Select Next on the Welcome Screen
8	Select 'Agree' on the License agreement details after reading and agreeing to these terms.
9	Enter User Name and Company Name.
10	Accept the default location for all the files that will be installed on the PC, or select a new path (these files will be installed on the PPC on the next step). Select Next.
11	After the Setup steps on the PC are complete, check the PPC screen. PPC prompts "Choose a location to Install...".
12	Select SD Card as the installation location. Select Install.
13	After successful installation, user will see the message " Honeywell MCToolKit CodeDownload.CAB was successfully installed on your device ". Select OK.
14	You should see a shortcut to the 'MCToolkitCodeDownload' on the PPC Start Menu or under Start/Programs.

Connections

MCT 101 Connections

Setup the Connections between the MCT 101 PPC and the modem using the RS-232 cable that is provided with the MCT 101.

MCT 202 Connections

In the MCT202 unit, the modem is integrated inside the unit. So, no further connections are needed.

NOTE: You do not need to be connected to any Transmitter during the execution of the Modem Code Download application.

Launching the Modem Code download Application

Select Start / MCToolkitCodeDownload

This will display the Main Application Screen shown in Figure 2.

Note: If you cannot see the 'MCToolkitCodeDownload' application listed under the Start menu, look under Start/Programs menu. Depending upon the number of programs listed under Start Menu, the PPC moves some of the shortcuts to Start/Programs menu.

Modem Code Download Operations

Menu selections

Modem Code Download application has File, Modem and Help Menus

File Menu

File Menu offers Settings and Exit Options

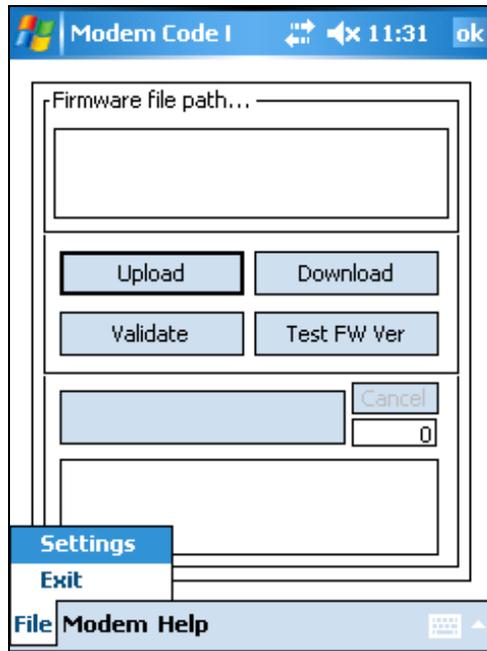


Figure 2 File Menu

Settings

Use File→Settings to setup the COM Port for data transfer between the Modem and the Modem Code Download application on the PPC

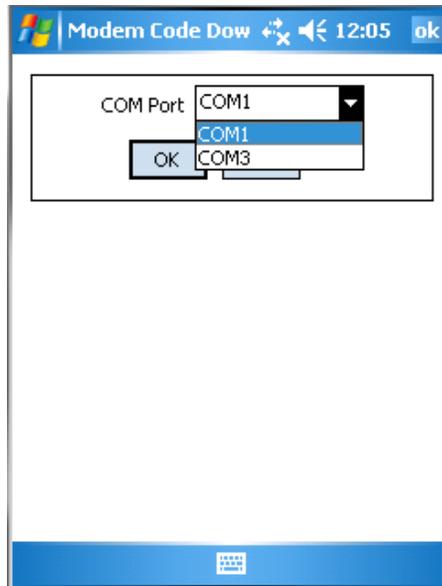


Figure 3 COM Port Settings

Note: The user can change COM Port settings using this dialog. But, the current PPC Model supports only COM Port 1.

Exit

Use File / Exit to Exit from the application. The following confirmation screen will be displayed

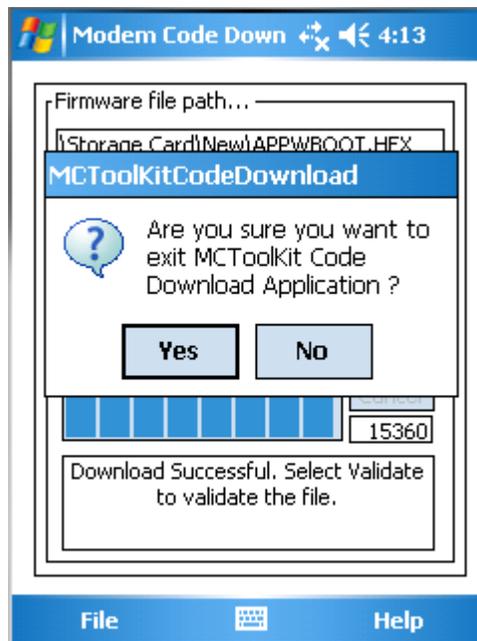


Figure 4 Exit Download Application

Modem Menu

Modem Menu offers the 'Modem Diagnostics' option.

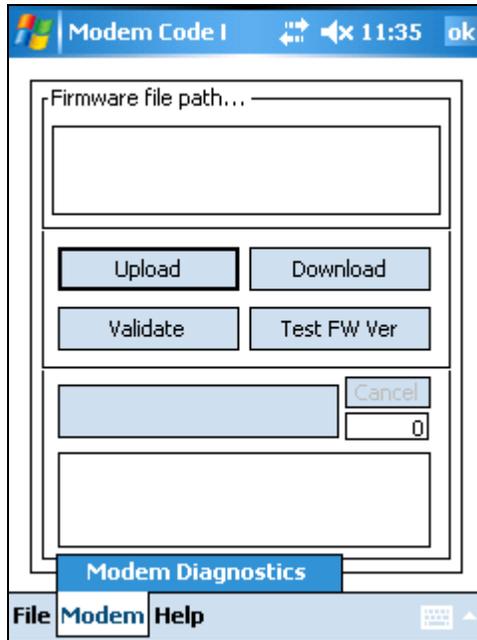


Figure 5 Modem Menu

Modem Diagnostics

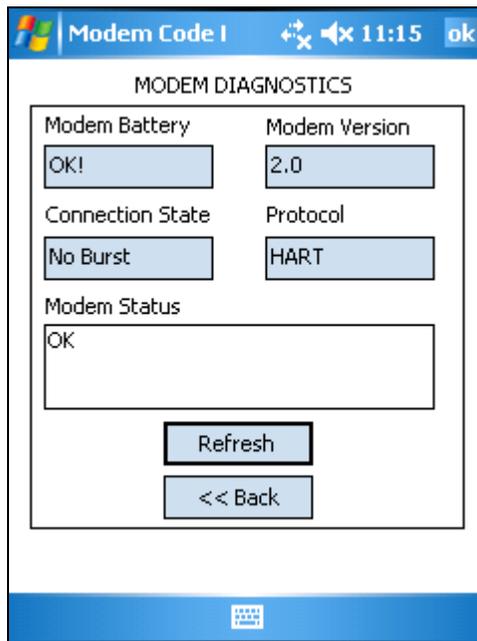


Figure 6 Modem Diagnostics

Modem Battery

Indicates whether the Modem battery is OK or Low

Modem Version:

Indicates the current Modem Firmware Version

Connection State:

This indicates the state of the network. Since Modem will not be connected to DE or HART network during the execution of this application, the default state will be displayed which is No Burst State

Protocol:

This indicates the protocol the Mode is set to. Since Modem will not be connected to DE or HART network during the execution of this application, the default state will be displayed all the time which is HART

Modem Status:

Indicates the following Status information:

- Battery Condition: OK, Low
- ROM failures
- RAM failures

Help Menu

Help Menu offers the 'About' option

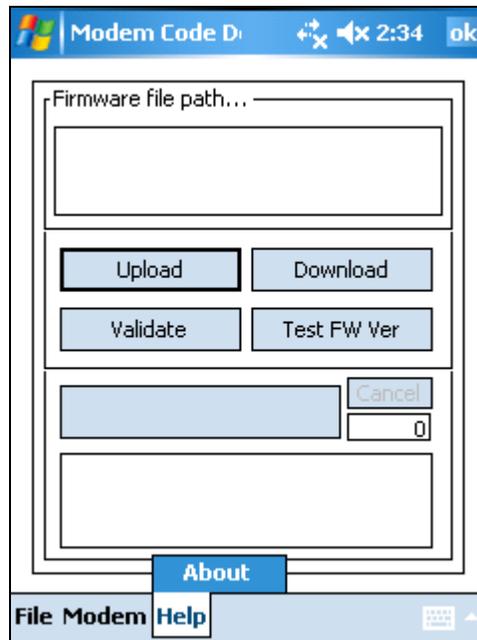


Figure 7 Help Menu

About

Select Help\About to see the version of the Modem Code Download Application



Figure 8 About Box Version Number

Upload / Download Operations

NOTE: Before you begin Upload or Download operation it is important to make sure that the modem status is good. From the Menu, select Modem\Modem Diagnostics and make sure that BOTH Modem Battery and Modem Status are OK (as in Figure 6). Do not continue in case of any bad status.

Download Operation

The Download operation will allow the user to Upgrade the Modem firmware in the factory or in the field

Step 1.

Press Download button on the Main screen of the Modem Code Download Application. It will open the “Open” dialog box

- Select folder : My documents
- Select Type : Hex or Binary

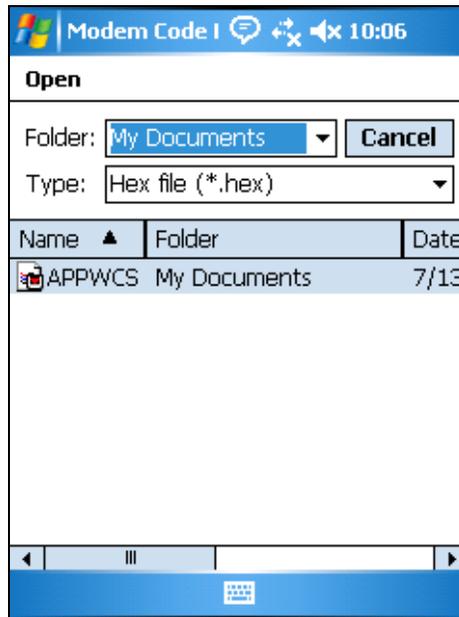


Figure 9 Download Screen

On selecting the File, the confirmation screen will be displayed. Select Yes to proceed

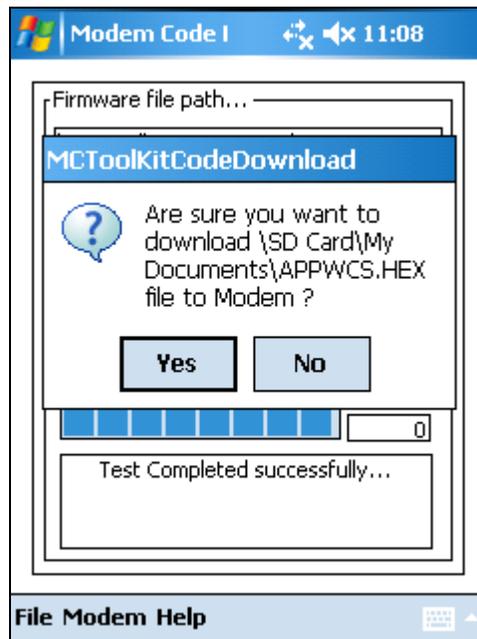


Figure 10 Download Confirmation

Step 2:

The download will start.

The Firmware will be downloaded from the PPC to the Modem

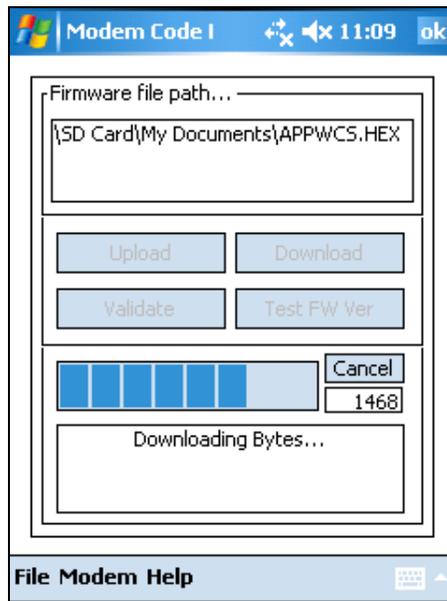


Figure 11 Download Status

Download Status will be displayed in the end.

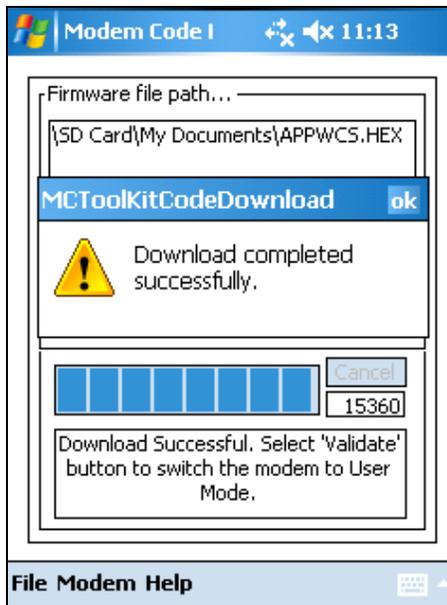


Figure 12 Download Complete

Note: The 'Cancel' option is provided to Cancel the Download at any point. But it is not recommended to Cancel the Download as it requires another Download to bring the modem back to normal state

Step 3: Validate

Upon successful download, the user MUST Validate the firmware image just downloaded, to set the modem to User Mode.

To Validate, select the “Validate” Button and wait for the operation to complete. Status message will display the Validation Stage.

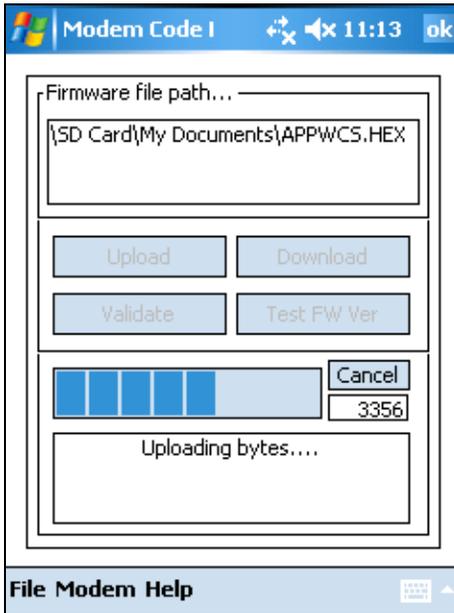


Figure 13 Validation Status

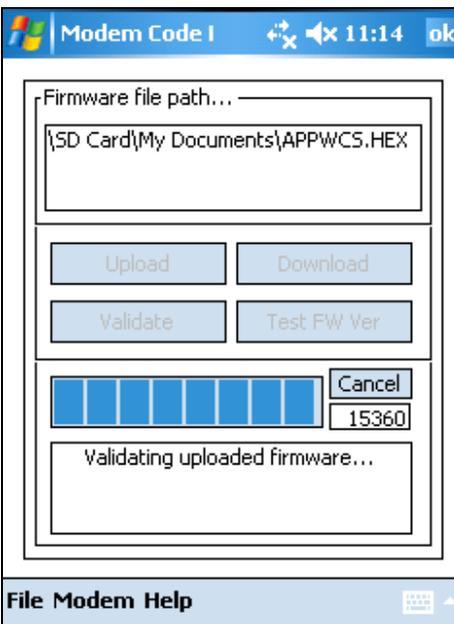


Figure 14 Validating Firmware

After the successful Validation, perform the Step 4 to check the Modem Firmware Version.

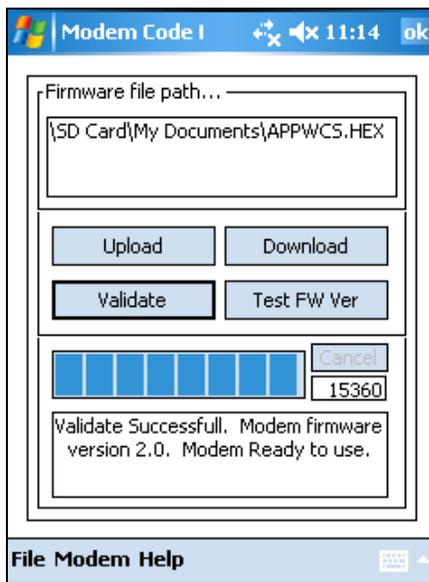


Figure 15 Modem Firmware version

Step 4: Test Firmware Image

Use this feature to check the latest firmware version in the Modem. Select “Test FW Ver” button. A message box with the version number will be displayed.

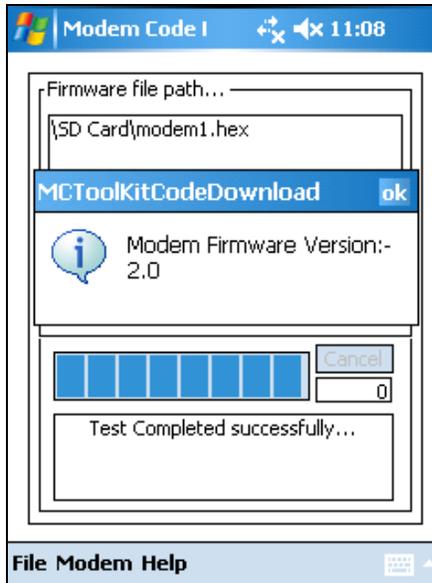


Figure 16 Test Firmware Version

NOTE: Test Firmware Version can only be started when Modem is in Application Mode (User Mode)

Step 5: Exit

After the successful Validation and Test, select File / Exit to exit the application. Modem is now ready to use.

Upload Operation

The Upload operation will allow the user to Upload the Modem firmware into the PPC.

Step 1: Press Upload button on the Main screen of the Modem Code Download Application. It will open the “Save” dialog box.

- Enter the file name to Upload the firmware image from the modem (without any file extensions)
- Select Folder : SD Card
- Type : Hex or Binary
- Location : SD Card
- Select Save

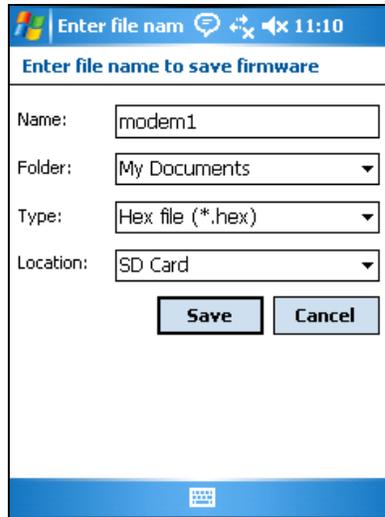


Figure 17 Save Firmware

The confirmation screen will be displayed after selecting Save. Select Yes to proceed

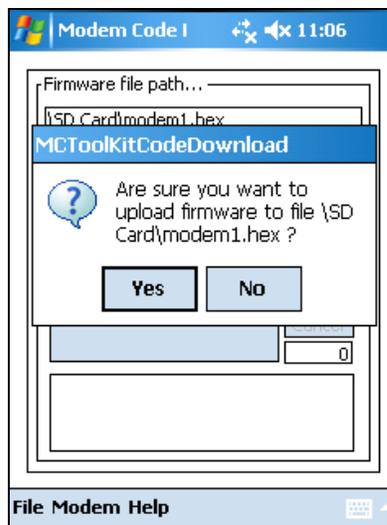


Figure 18 Save Firmware Confirmation

Step 2: The Upload will start

The firmware will be uploaded from the Modem to the PPC.

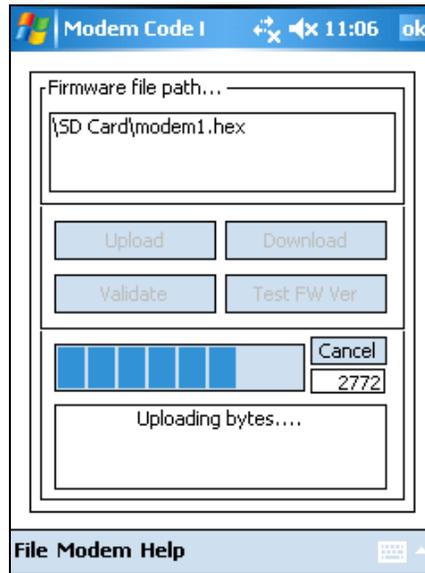


Figure 19 Firmware Upload from Modem to PPC

Upload status will be displayed in the Status Message Window

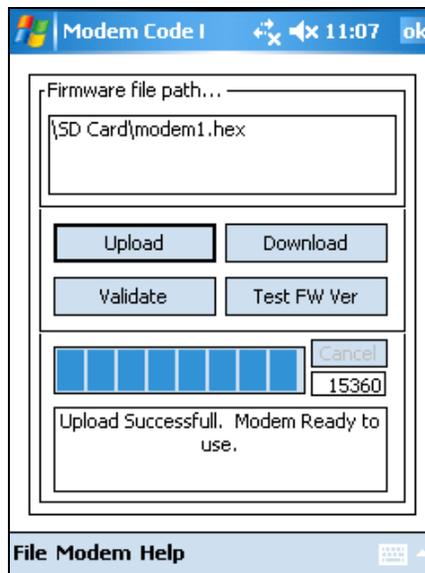


Figure 20 Upload Complete

NOTE: Upload operations can only be started when Modem is in Application mode (User Mode) i.e. when it contains valid firmware image.

Step 3: Exit

Select File / Exit to exit the application.

Troubleshooting

This section provides some suggestions on possible remedies to problems that may occur during the operation of the application.

Table 3 Troubleshooting

Installation		
Symptom	Probable Cause	Corrective Action
Unable to complete setup procedure for Code Download application installation.	Insufficient disk free space on the PC.	Check to make sure that there is enough free disk space on the PC's fixed disk to allow installation of the Code Download application and its associated files
Unable to run setup and installation utility for the Code Download application.	You do not have write (Admin) privileges in the directories specified for the installation.	See your system administrator
Code Download Application		
Symptom	Probable Cause	Corrective Action
No response from the device	The modem is not connected to the PPC	Make connections between the PPC and the modem using the RS-232 cable supplied with the MC Toolkit product
	Modem has Low battery condition	Modem reports Low battery when $1.5V < \text{battery Voltage} < 2.5V$. For best results replace the battery when the modem starts to report Low battery condition

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