

GATEWAY FIRMWARE UPGRADE MANUAL



Document #	-
Revision	Rev 5.0

3066 Beta Avenue Burnaby, B.C. V5G 4K4
Phone: 604.294.4465
Fax: 604.294.4471
support@cypress.bc.ca

This document contains information which is proprietary and confidential to Cypress Solutions Inc. Disclosure to persons other than the officers, employees, agents, or subcontractors of the Company or licensee of this document without the prior written permission of Cypress Solutions Inc. is strictly prohibited.

Revision Control

Author	Description	Revision	Date
Mickey Cho	Created and formatted initial document	revision 1.0	20-October-2008
Rochelle Garrison	Re-designed the visual elements. Removed COM7.5 as instructed	revision 2.0	29-October-2008
Rochelle Garrison	Added Ready to use and Technical Support sections	revision 3.0	4-November-2008
Mm	Updated text	revision 4.0	24-September-2009
Rochelle Garrison	Edited visuals with Cypress branding	revision 5.0	24-September-2009

Contents

Revision Control	2
Contents.....	2
1 General.....	3
2 Requirements.....	3
2.1 Required Tools and Equipment.....	3
2.2 Required Software	3
3 Upgrade Procedure	3
3.1 Using the HyperTerminal® Program	4
3.1.1 HyperTerminal Configuration	4
3.1.2 Executing the Firmware Download Program on the Gateway	4
3.1.3 Download the new firmware image to the internal Flash Memory	5
3.1.4 Execute the new program.....	8
3.2 Ready to Use	8
4 Technical Support/Warranty:	8

1 General

An important requirement for most Flash-memory-based systems is the ability to update firmware when installed in the end product. This ability is related to as in-application programming (IAP). It reports how to upgrade the Gateway firmware using the UART.

2 Requirements

2.1 Required Tools and Equipment

- One Gateway
- One plug-in power supply(Output 9.0V DC) for the Gateway
- One null modem serial cable(DB-9, RS-232)
- Windows PC running 98, 2000, or XP
- The binary image file for upgrading

2.2 Required Software

Terminal emulation program (HyperTerminal, COM7.5, etc) supporting Ymodem

Baud rate: 115200

Parity: None

Data bits: 8

Stop bits: 1

Flow Control: None

File Transfer Protocol: Ymodem

3 Upgrade Procedure

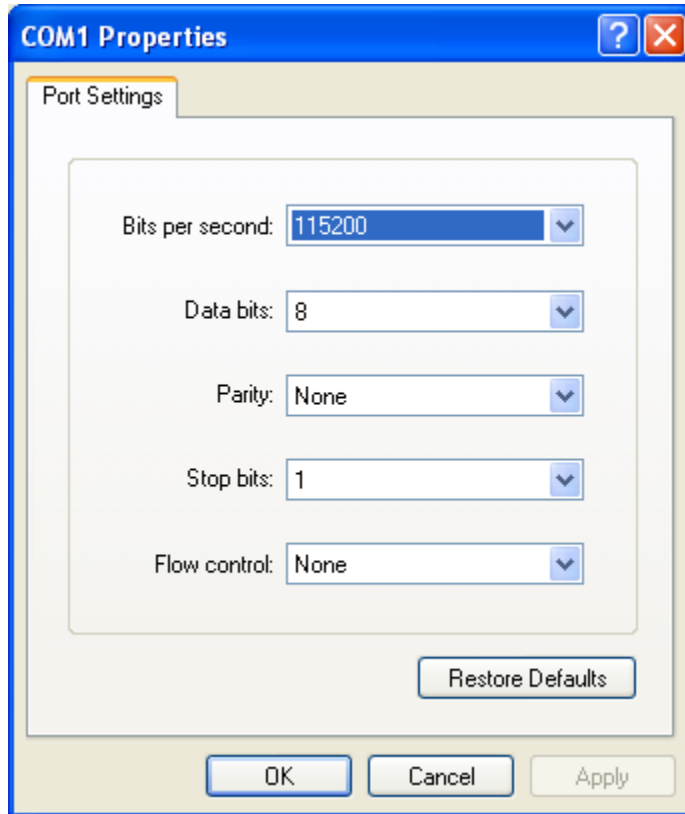
Connect the Gateway to a main PC through the serial port (DB-9) and null modem cable. Connect the power jack to the Gateway.

Set up a terminal emulation program such as HyperTerminal™ (115200bps, no parity, 8 data bits, 1 stop bit).

3.1 Using the HyperTerminal® Program

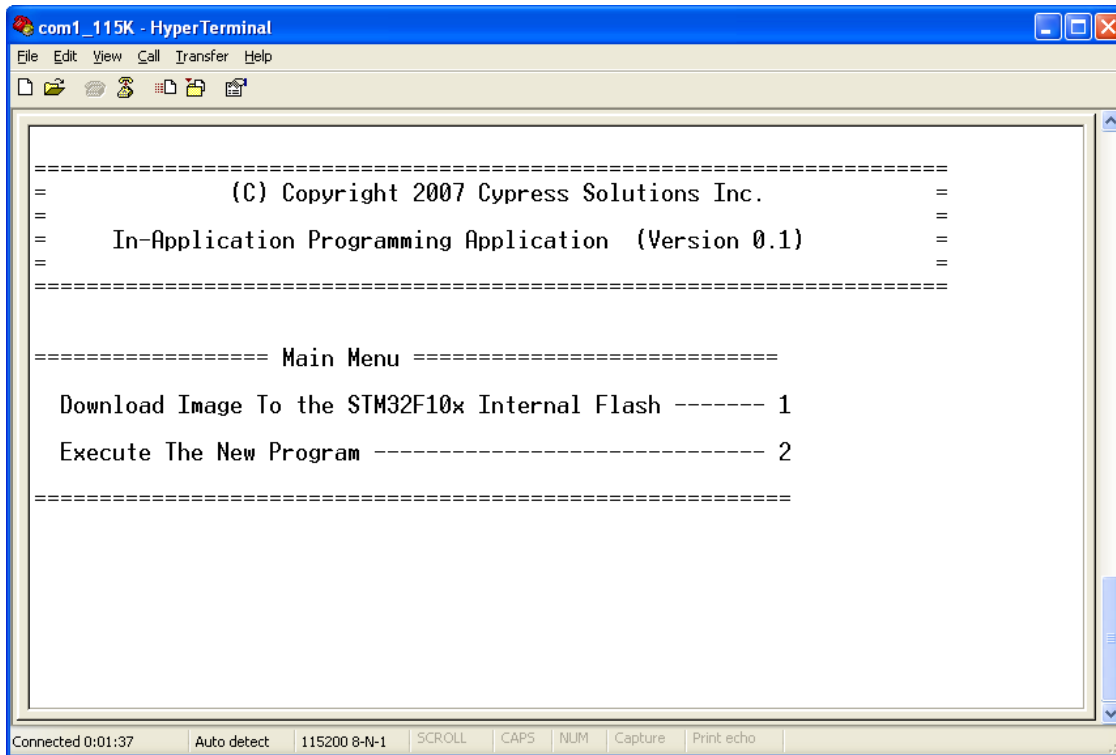
3.1.1 HyperTerminal Configuration

- The baud rate value of 115200 bps is used



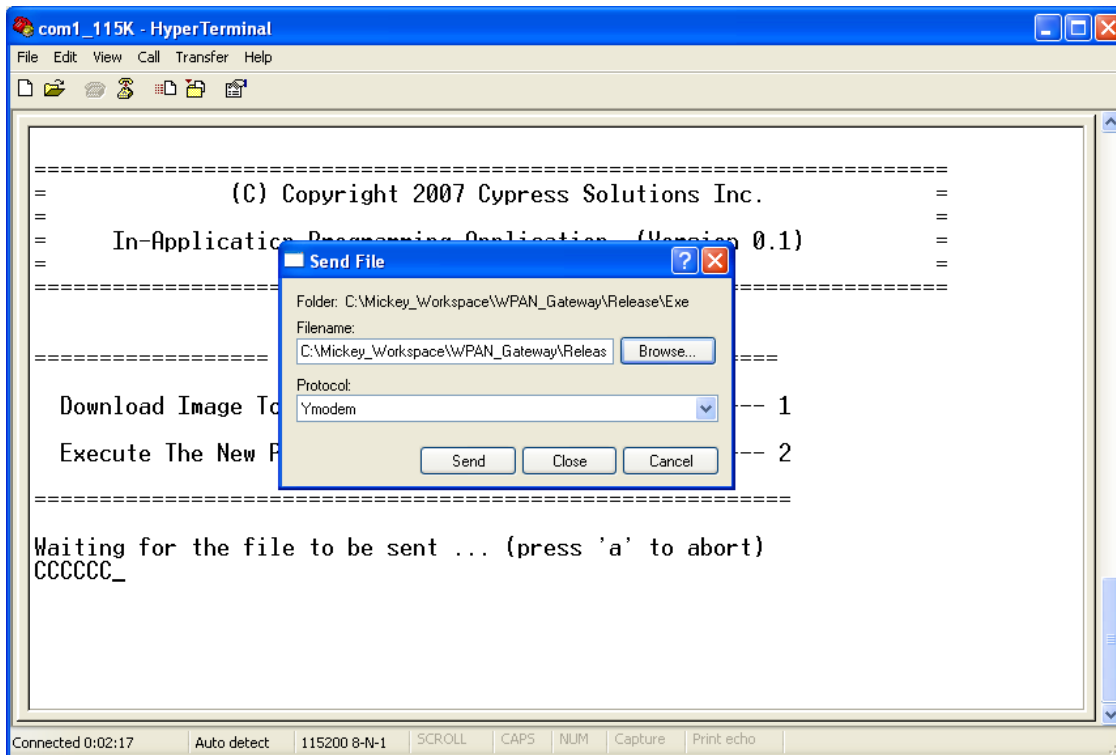
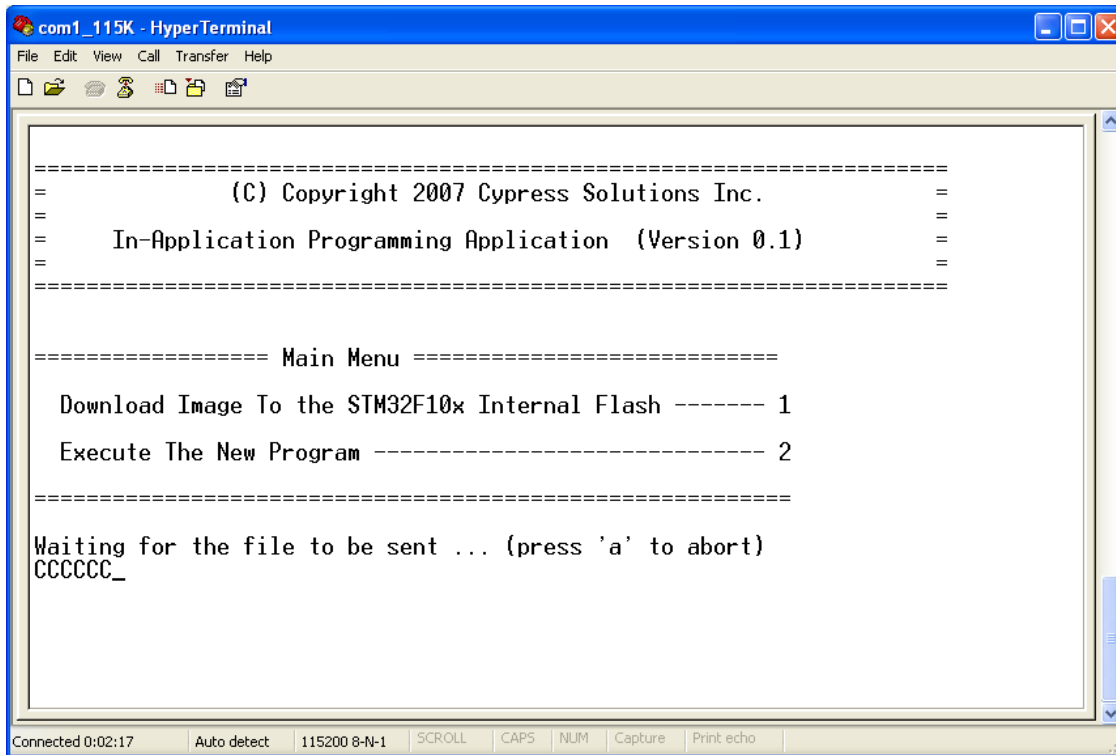
3.1.2 Executing the Firmware Download Program on the Gateway

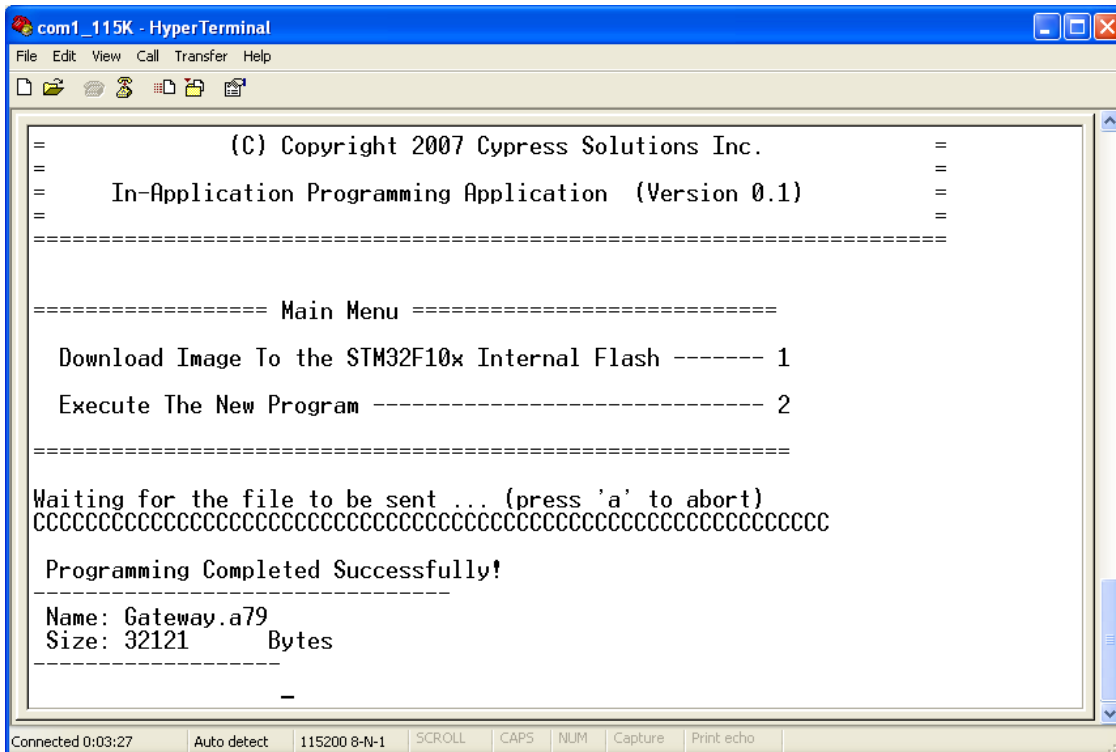
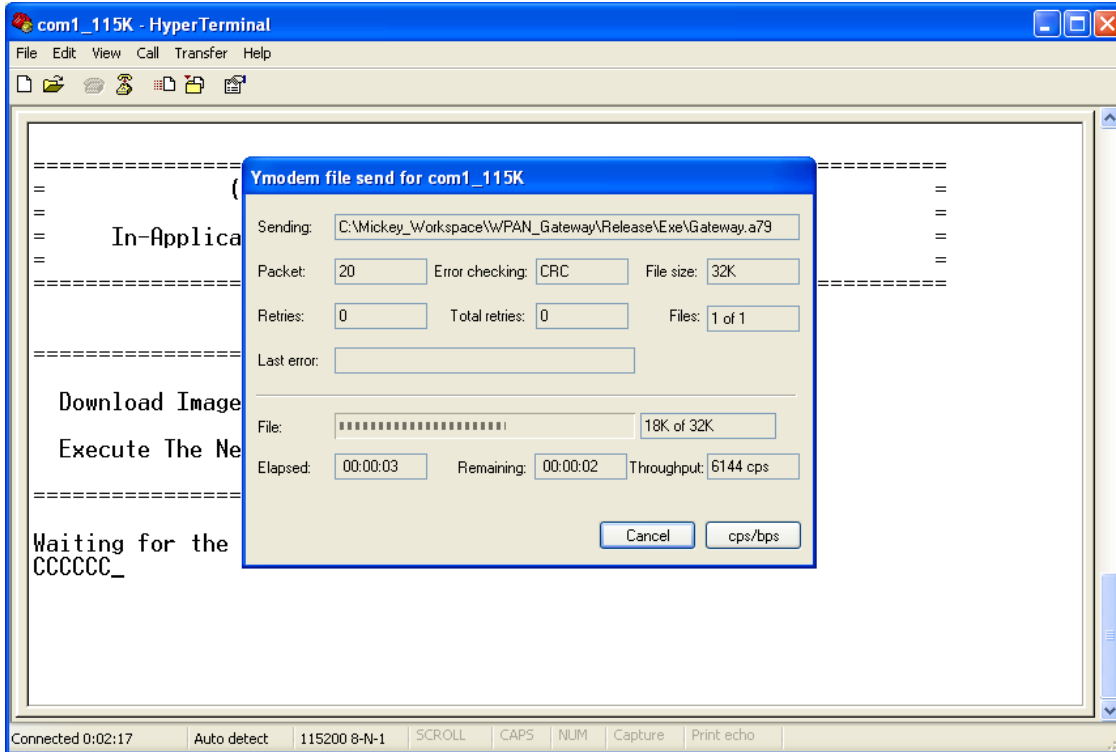
- Power off the Gateway
- Locate the hole for the push-button located above the DB-9 connector on the standard Gateway or on the backside of the windshield gateway, next to the adhesive tape.
- Power on the Gateway while inserting a paper clip or similar tool through the hole and pressing the push-button
- The firmware download program will display the following menu in the HyperTerminal window



3.1.3 Download the new firmware image to the internal Flash Memory

- Press 1 on the computer keyboard to select the “Download Image To the STM32F10x Internal Flash” menu
- Select the “Send File” in the “Transfer” menu on the HyperTerminal program
- Select the “Ymodem” protocol from the protocol list
- In the “Filename” field, choose the binary file you want to download
- Click on the “Send” button





3.1.4 Execute the new program

Press 2 on the keyboard to select the “Execute The New Program” menu and execute the code.

```

com1_115K - HyperTerminal
File Edit View Call Transfer Help
=====
In-Application Programming Application (Version 0.1)
=====
----- Main Menu -----
Download Image To the STM32F10x Internal Flash ----- 1
Execute The New Program ----- 2
-----
Waiting for the file to be sent ... (press 'a' to abort)
CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC
Programming Completed Successfully!
-----
Name: Gateway.a79
Size: 32121 Bytes
-----
Bye...
-----
Connected 0:03:54 Auto detect 115200 8-N-1 SCROLL CAPS NUM Capture Print echo

```

3.2 Ready to Use

After following the upgrade instructions noted above, the Gateway is now ready to use.

4 Technical Support/Warranty:

**Cypress Solutions Service
Support Group**

1.877.985.2878 or 604.294.4465
9.00am to 5.00pm PST
support@cypress.bc.ca