

## Firmware Updates

This procedure generally defines the procedure for updating the Unit's application or option firmware (like Ethernet option firmware) and library files like Logos and Fonts.

Some firmware versions have proprietary download functionality. For these scenarios, contact your network administrator for instructions.

### File Identification

The necessary update files must be obtained from Unimark technical support or engineering. These files may come attached to an associated Service Bulletin. In these instances, instructions in the Service Bulletin take precedence over this document.

1. Locate the files to be downloaded into the Unit. They will be stored in a ZIP file in the form of:
  - APPvvvvv.TBB for application firmware, where vvvvv is the version (10713 for version 1.07.13, for example)
  - NETvvvvv.TBB for Ethernet firmware, where vvvvv is the version (10208 for version 1.02.08, for example)
  - BOTvvvvv.TBB for Boot Block firmware, where vvvvv is the version (10102 for version 1.01.02, for example)
  - MBTvvvvv.TBB for Main Boot Block firmware, where vvvvv is the version (10005 for version 1.00.05, for example)
  - XBTvvvvv.TBB for Transport Boot Block firmware, where vvvvv is the version (10007 for version 1.00.07, for example)
  - FNTvvvvv.TBB for font library, where vvvvv is the version (10001 for version 1.00.01 for example)
  - TTFvvvvv.TBB for True Type font library, where vvvvv is the version (90103 for version 9.01.03, for example)
  - LOGvvvvv.TBB for logo library, where vvvvv is the version (10701 for version 1.07.01, for example)

**Note:** The number of files used will vary depending on the specific customer version or update requirements. Other names may be used, especially if multiple files are needed (such as multiple font libraries).
2. Copy and uncompress files to a directory on your local hard drive (C:\Unimark\XP or C:\Unimark\ET6000 for example). XP and ET6000 are product model name references. Update files for one product are not compatible with other products, even though the download process is similar.

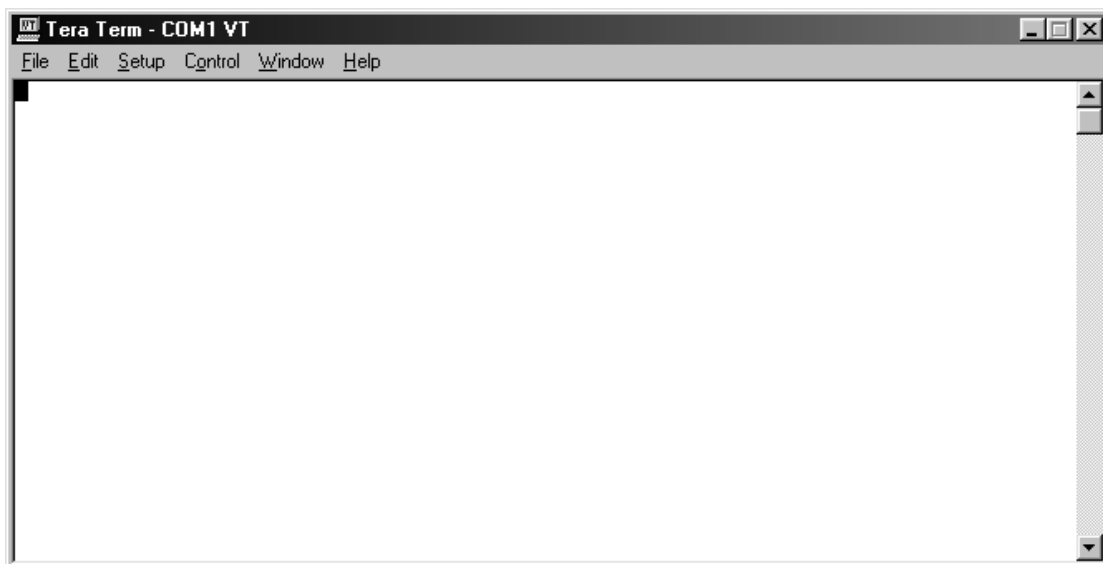
### Terminal Emulator

Unimark uses a terminal emulator program to download update files to the Unit via either the RS-232 serial port or the Ethernet TCP/IP option if installed. Unimark recommends using Tera Term© for this process.

Tera Term is a freeware terminal emulator program and is a very versatile tool for transferring data via the RS-232 serial port or IP address. You may obtain this from their website: <http://hp.vector.co.jp/authors/VA002416/tterm23.zip>

This program requires MS Windows 95 or higher to operate properly.

1. Download Tera Term from their website and install onto your PC.
2. Start Tera Term. It will display a connection dialog box as shown.



3. Select the “Setup” pull down menu, and then the “Serial port” option. The Serial port setup box will appear. Select the appropriate COMM port on your PC.
4. Set BAUD rate for 115200. Then set data bit size, stop bit size, and parity to match the unit. Click on the OK button.

**Tera Term: Serial port setup**

Port: COM1

Baud rate: 115200

Data: 8 bit

Parity: none

Stop: 1 bit

Flow control: hardware

Transmit delay

0 msec/char 0 msec/line

Buttons: OK, Cancel, Help

### Setting Unit Communication Parameters (RS-232)

The Unit can receive data at lower baud rates but this will extend the update time considerably. Therefore it is assumed that the update will be performed at the maximum baud rate of 115200. The Unit communication protocol must be set for STX/ETX. This download will not work using ACK/NAK protocol.

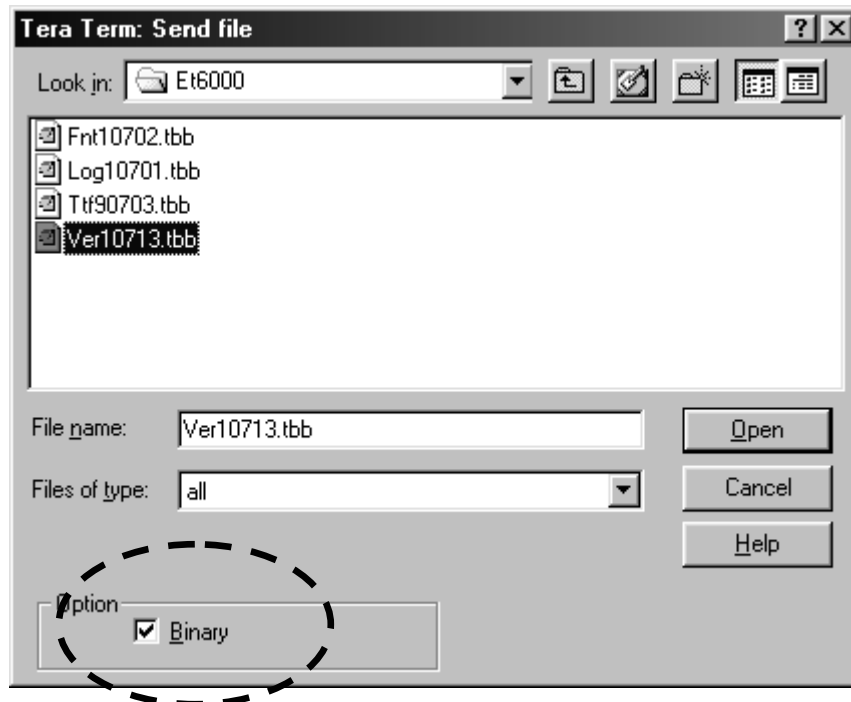
1. Take the unit OFFLINE by pressing the ONLINE key. Press the ENTER key.
2. Press the DOWN/UP arrow and find SERVICE menu. Press the ENTER key.
3. Enter service password (UP/DOWN changes the value in each block, LEFT/RIGHT moves the cursor to each block).
4. Press the ENTER key to accept password.
5. Press the DOWN/UP arrow and find COMM PORT SETUP menu. Press the ENTER key.
6. Press the DOWN/UP arrow and find BAUD RATE menu. Press the ENTER key.
7. Press the DOWN/UP arrow and find 115200 option. Press the ENTER key.
8. Press the DOWN/UP arrow and find DATA BITS, STOP BITS, and PARITY menus.
9. Press the ENTER key for each and record these settings (required for Tera Term setup in the previous section).
10. Press the Exit key and back out of the COMM PORT SETUP menu.
11. Press the DOWN/UP arrow and find HOST SETUP menu. Press the ENTER key.
12. Press the DOWN/UP arrow and find COMM PROTOCOL menu. Press the ENTER key.
13. Press the DOWN/UP arrow and find STX/ETX option. Press the ENTER key.
14. Press the ONLINE key. It should not be necessary to select “Y” and ENTER to save this setting permanently. Just press the ENTER key which will temporarily save the setting while updating firmware. Once power is recycled, the baud rate and communication protocol should return to the original setting (**see note below for exception**).

**Note:** If there are multiple application and boot block updates (which require the Unit to reboot each time), then you will want to save the comm. parameter changes permanently at the step above. Once all updates have been completed, you will have to manually reset the parameters back to their original settings.

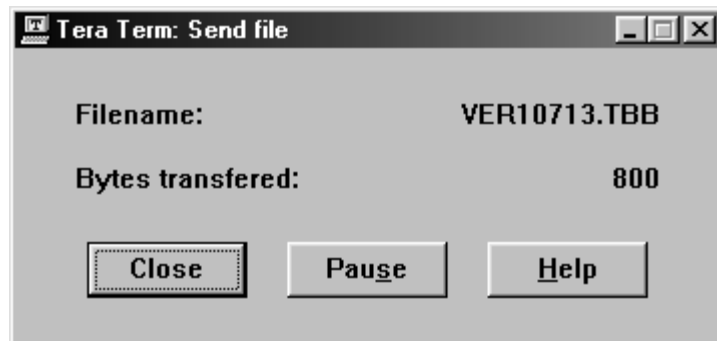
## Sending the Update Files

If boot block files are provided, ensure that these are loaded first before any application firmware files.

1. Select the “File” pull down menu, and then the “Send file” option. The Send File transfer box will appear. Select (click on/highlight) the file to transfer to the unit from the list. **MAKE SURE THE BINARY OPTION** at the bottom of the box is checked as shown below.



2. Click on the OPEN button to start the data transmission. A transmission status box will appear.



3. While the file is being downloaded, the unit should display a message “xxxKB Remaining”. This is an indicator of how much data the unit still expects to receive from the host system.
4. Once the file is downloaded, a message “programming” will appear on the unit’s display.
5. Once the unit finishes programming, it will go back to the Online state and send a message back to the terminal program in the form of “PDOKvvvvvvv”, where vvvvvvv is the version just programmed into the unit.

**Note:** Repeat this section for each file required for the complete download procedure. In most cases, only the application firmware update will be required, but each case depends on the specific customer circumstance.

Contact Unimark technical support if you have any problems with this procedure.

Unimark Service; US #: (800) 451-2926 UK #: +44 1628-829-990