

Alpha Technologies Method of Procedures: Inverter 2000 Firmware Upgrade Procedure

Summary

This Method of Procedure (MOP) explains how to upgrade the firmware on an Inverter 2000, via Hyper Terminal or Tera Term. This procedure will take up to 15 minutes.

Warnings and Cautions

This procedure will require the Inverter 2000 to be shut down. If this is to be done on an existing working unit, the loads will have to be powered down during this upgrade process.

Tools Required

1. Laptop with Hyperterminal or Tera Term
2. USB Shielded High Speed Cable 2.0 Revision.

Procedure:

Prerequisite: Download software (see 2.1), ensure you have the admin rights and password for the computer you are using.

1. Connect the PC USB port to the Inverter USB port using a USB cable.



USB SHIELDED HIGH SPEED CABLE 2.0 REVISION

2. USB driver Installation

2.1 Download driver CDM2.00.zip and 05185-08.S to a USB drive. Files are available at www.alpha.ca/firmware-software

2.2 Power ON the Inverter 2000. The following picture shows the switch in the OFF position

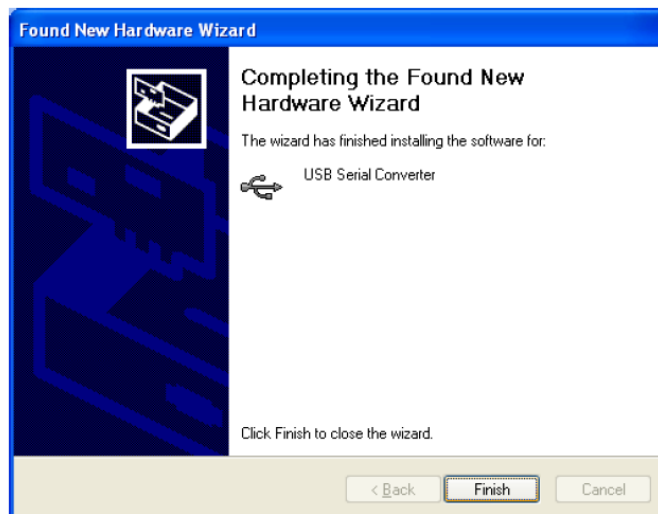


2.3 The laptop should see the new hardware and install a driver. If the driver can't be found, it will prompt for the correct driver. If that happens, insert the USB drive with the driver and Inverter 2000 firmware into the computer and unzip the CDM2.00.zip file to your USB drive.

2.4 The hardware installation wizard (on the computer you are using) might ask for the username and password (if your IT dept restricts installation of files). Enter the administrator username and password.

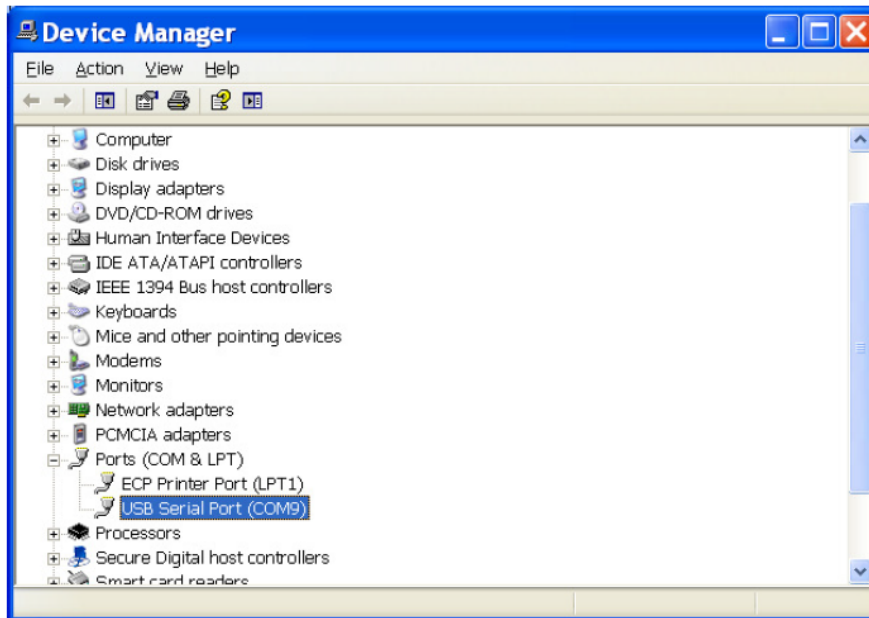


- 2.5 In the Installation Wizard, select the folder containing the USB driver and install it. Select USB driver location (where you copied the file in step 2.1), then press “Next”. When the installation ends, the window will show as the following picture.



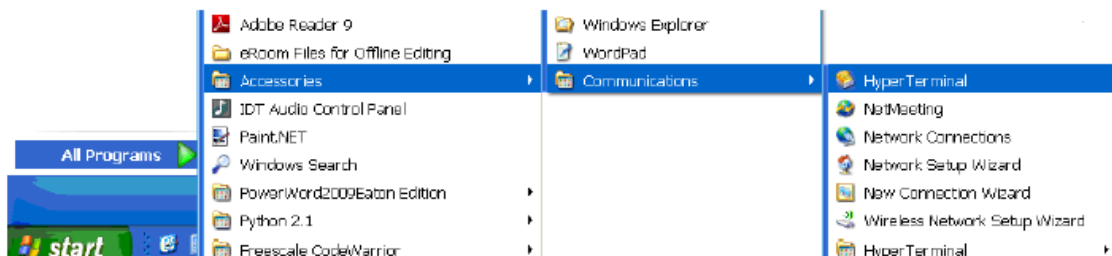
- 2.6 Identify the “COM port” where the Inverter unit is connected to on the computer.

Open the “Device Manager” then click on “Ports (COM & LPT)” to confirm the COM port being used.

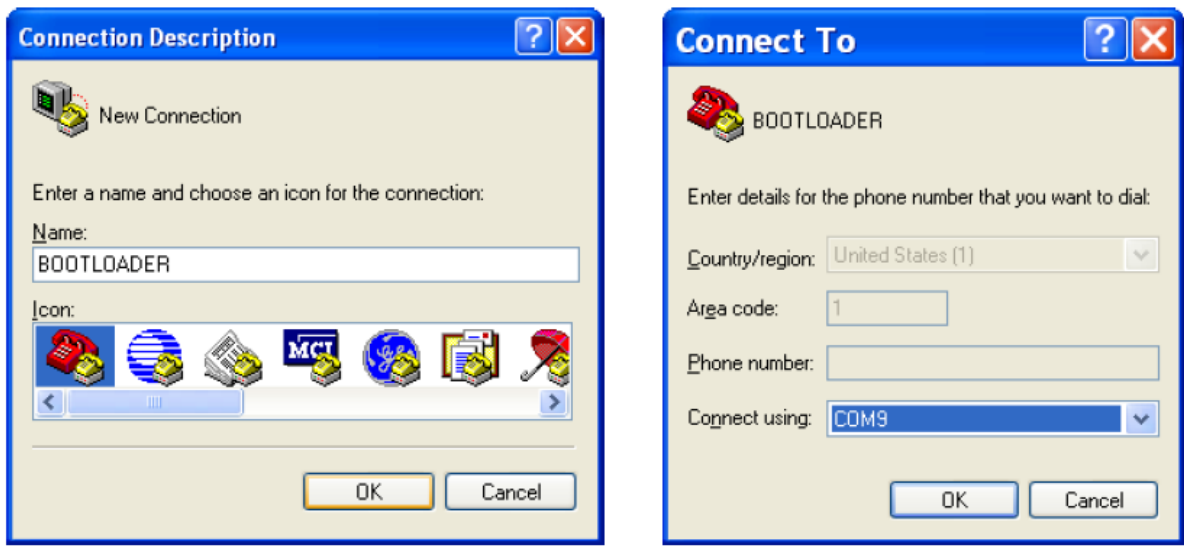


3. If Hyper Terminal is being used follow steps 3.1 to 3.5, If Tera Term is used, then follow steps 4.1 to 4.2.

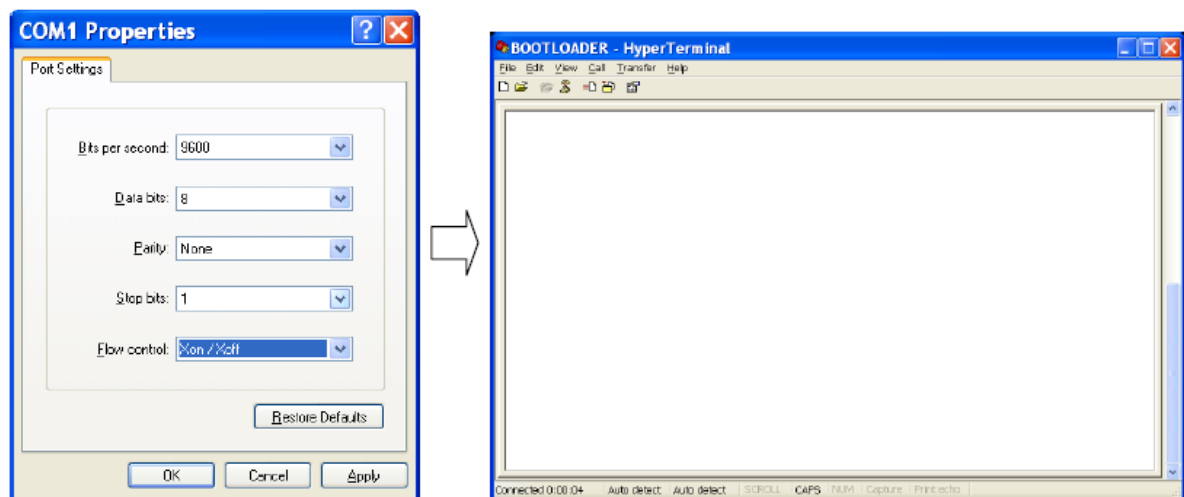
3.1 Run Hyper Terminal.
Select Start->Accessories->Communication->Hyper Terminal



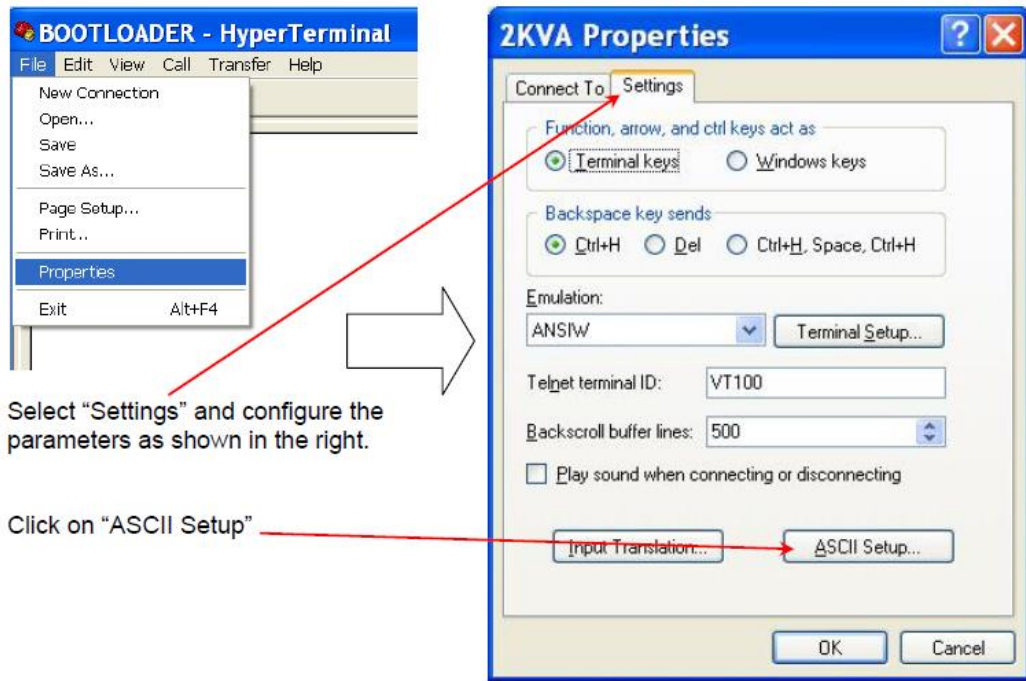
- 3.2 Enter a name for new connection, for example “BOOTLOADER” then click “OK”.
Make sure to set the right COM port which was identified in step 2.6



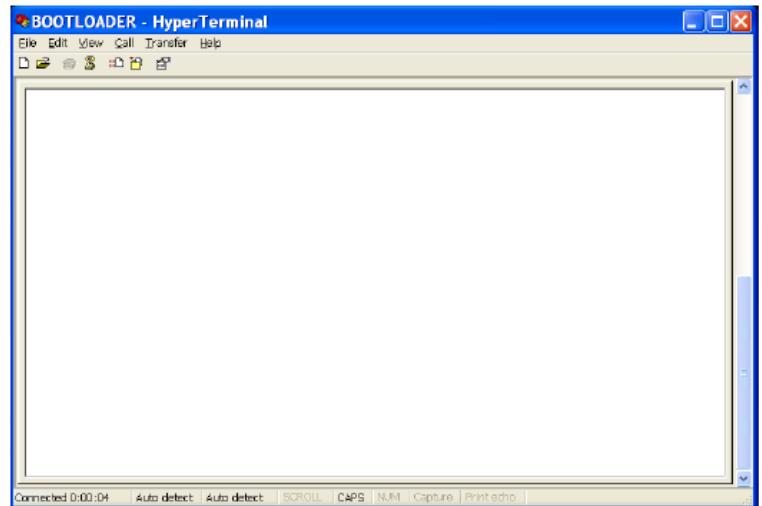
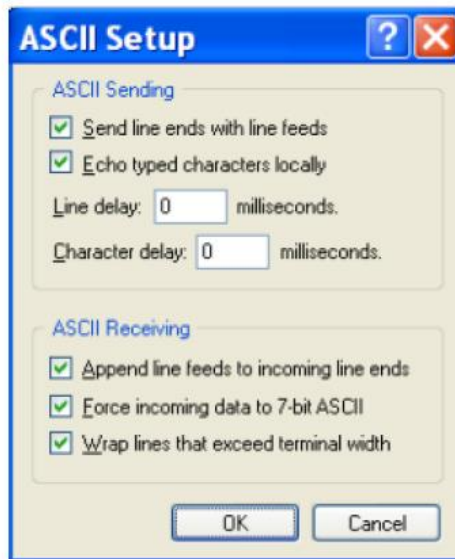
- 3.3 Configure the COM Port parameters as shown below, then click “OK”.



- 3.4 Configure the hyper terminal properties.
Select File-> Properties.

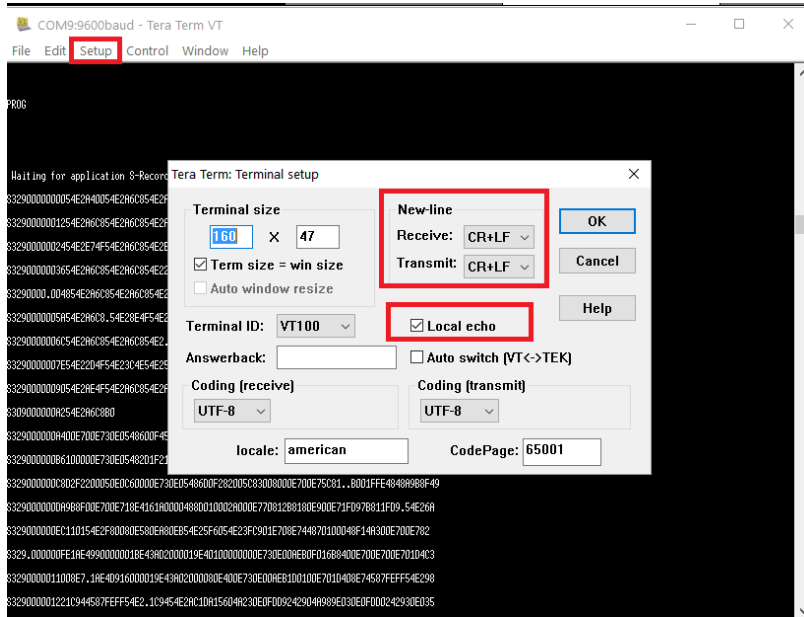


- 3.5 Configure ASCII Setup as shown below and click the "OK" buttons to finish the serial port configuration.
- 3.6 Please proceed to Step 5

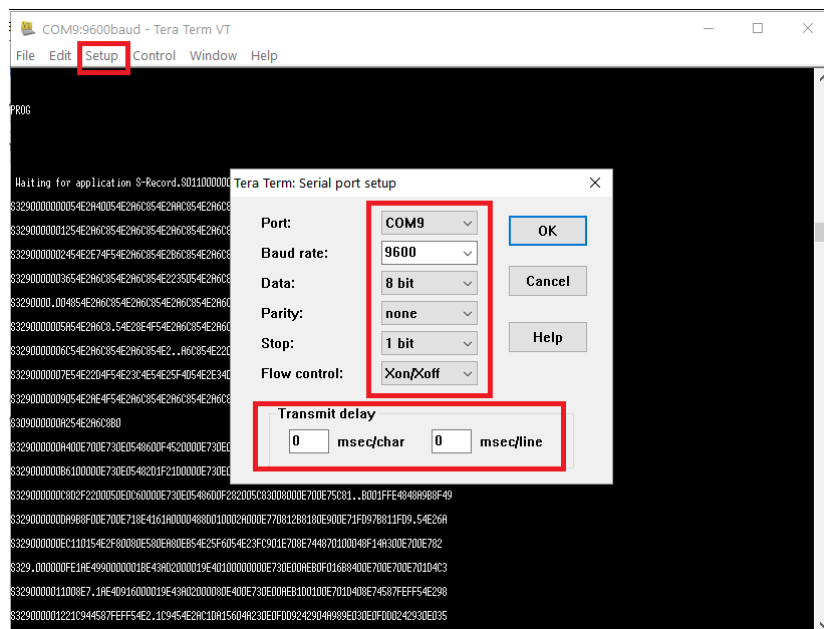


4. Tera Term Configuration

- 4.1 Run the Tera Term program. Under "Setup >Terminal" configure the "New-Line" and "Local Echo" settings as shown in the in the screenshot below.



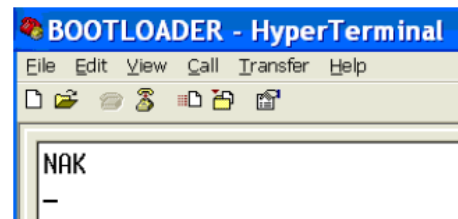
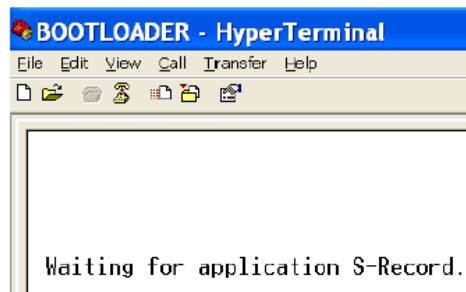
4.2 Under “Setup > Serial Port” change the settings to the values displayed in the screenshot below. The COM Port might be different, depending on which one you are using. Use the same COM Port as shown in the Device Manager of Windows.



5. Inverter 2000 Firmware Upgrade

5.1 Turn “OFF” the Inverter Module using the push button.

5.2 In Hyper Terminal or Tera Term, type “PROG” then press the “Enter” key on the keyboard. Make sure you use all upper case letters for “PROG” or it will not work. The screen should show the following message:
“Waiting for application S-Record”



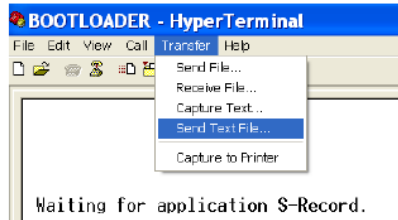
Possible Causes:
1. "PROG" must be type in Upper
2. "PROG" might have been type wrongly.
3. The inverter push button switch might be in the "ON" position

5.3 To send the firmware file to the Inverter 2000.

In Hyper Terminal: Select “Transfer > Send Text File” and select the firmware file (see screenshots below).

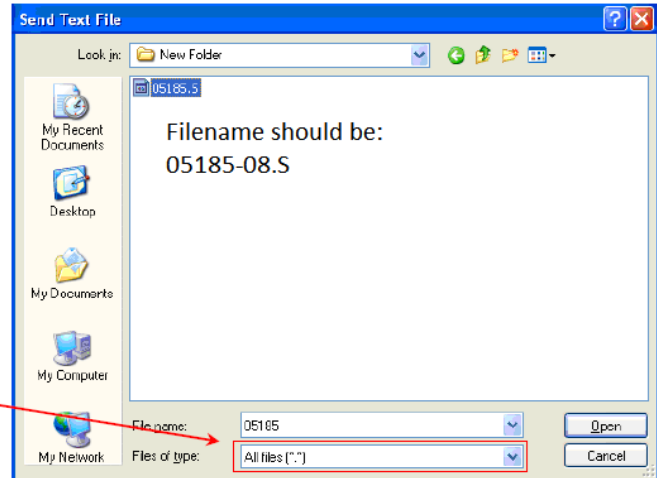
In Tera Term: Select “File > Sent File” and select the firmware file (see screenshots below).

Hyper Terminal



Select the Inverter2000 Firmware file

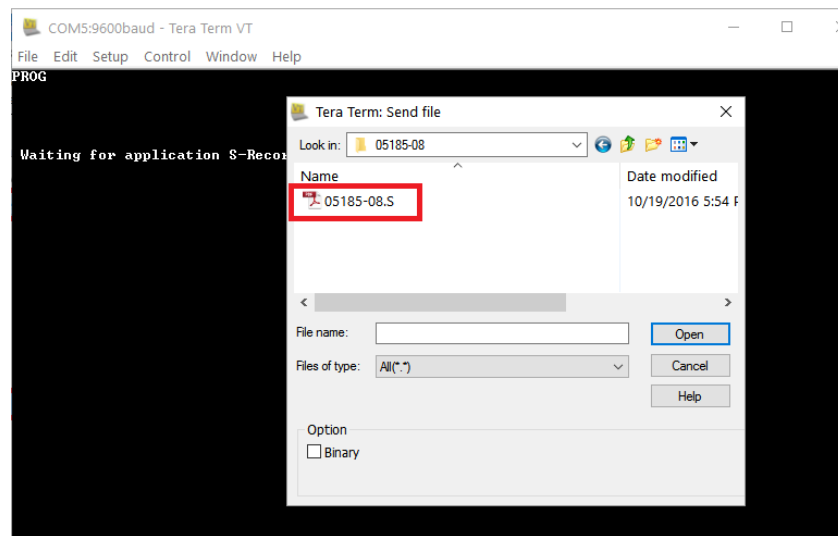
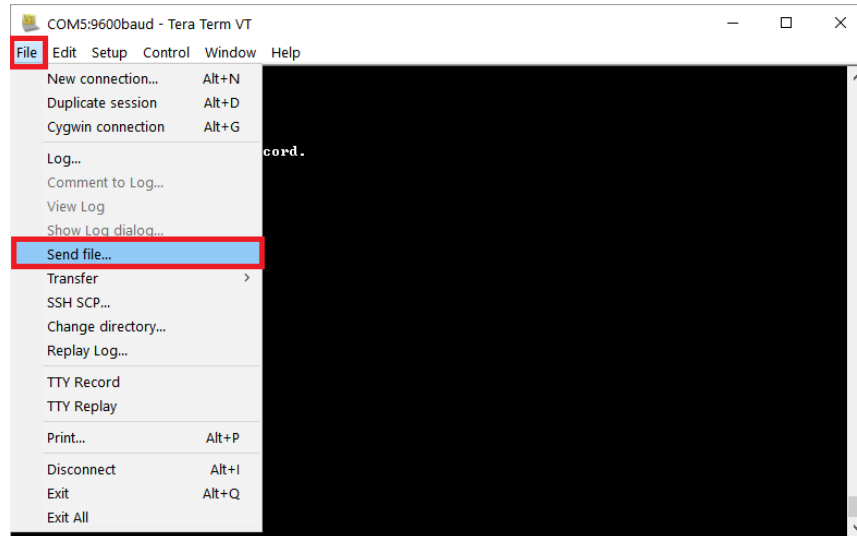
Note: "All files" must be selected for Files of type.



Click "Open", and the file transfer will start.



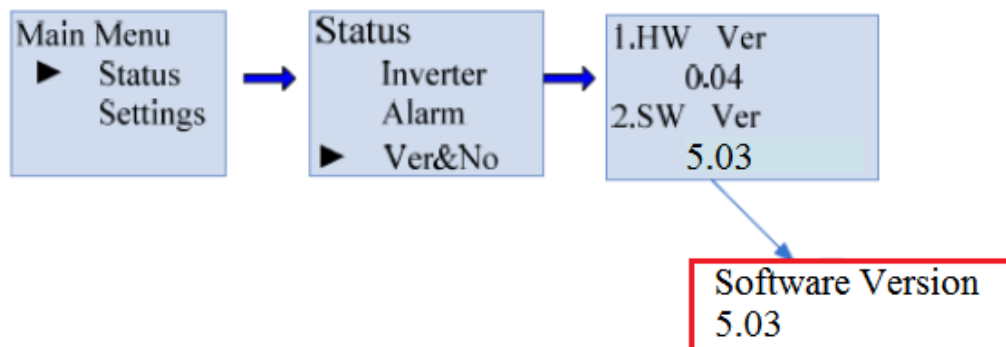
Tera Term




```

$3290200297E830181017F01...7D017A01780176017401720170016E016C016A016801660164016201600125
$329020029905E015C015A01580157015501.5301510150014E014C014A014901470146014401420141017C
$329020029A23F013E013C013B0139013801360135013301.320130012F012E012C012B0129012801270166
$31F020029B4260125012301220121011F011E011D011C011A0119011801.17016B
$30702002FFD1EPPAD
$705000000A456
....
Loaded 0x01BA7A bytes.
Application started from address 0x0004
    
```

6. Completely power down the Inverter 2000 module, i.e. turn off DC Input and AC Input.
7. After 20 seconds, turn on the DC and AC Inputs and then Turn on the Inverter 2000 module using the ON/OFF switch at the front of the Inverter 2000 module.
8. Confirm the software version as shown below, the Software Version should now show 5.03.



9. The Inverter 2000 Firmware upgrade is now completed.

For assistance, contact Alpha Technical Support:

Toll Free North America: 1-888-462-7487

International: +1-604-436-5547

Monday - Friday, 7:00 AM - 5:00 PM PST for regular inquires

24/7 for emergency support

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