Hughes 9450 Upgrader User Guide (PC)   Rev 2.6 (5-Jul-17)
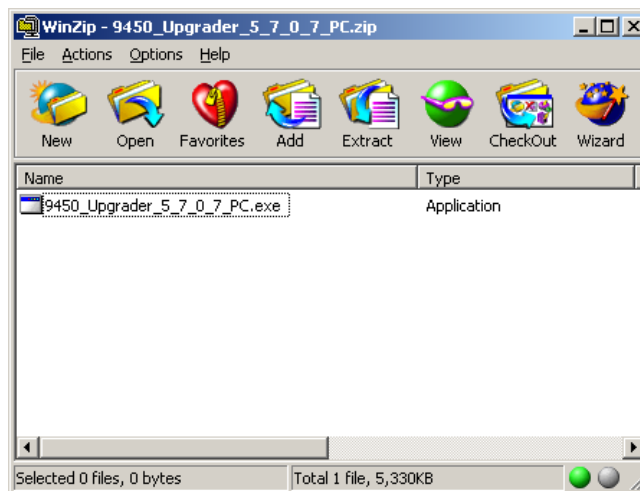
This document explains how to use the Hughes Upgrader program for the 9450 User Terminal using a PC.
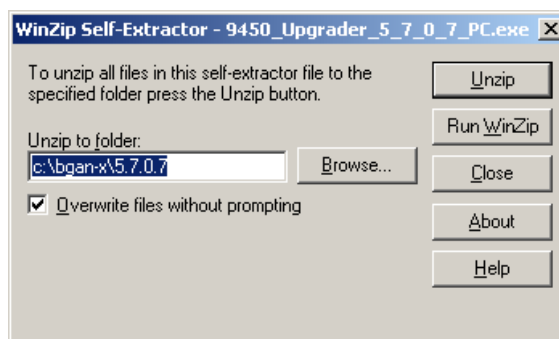
1 Getting and Extracting the Upgrader

The Hughes Upgrader is a zip file 9450_Class_11_Upgrader_5_7_3_1_PC.zip (containing a self-extracting exe file) that contains the binary software required for software upgrade of the Hughes 9450 User Terminal (UT). Only the software appropriate at time of release is provided with the upgrader (i.e., it may not include all the upgrade options detailed below).

If you downloaded the zip file version, the self-extracting exe file is within it; unzip that file first (you can extract and then run the exe from the Desktop, or you can just run it directly from the zip file). Note: examples below are from 5.7.0.7, but your release will act similarly.

Once you have the self-extracting exe file, you need to run it in order to unzip/extract the upgrader and all supporting files:

2   Running the Upgrader

Before Running the Upgrader:

- o Connect to the 9450 UT via Ethernet directly to the PC. **Note: Do not connect the PC to the UT through a router**.
- o The UT antenna may or may not be connected during the upgrade (optional).
- o The SIM may or may not be inserted during the upgrade (optional).
- o Your PC's network (Ethernet) interface to the UT should be set to "Obtain an IP Address Automatically" (i.e., DHCP should be used by the UT to assign your PC an IP address); if your UT is configured with its on-board DHCP server disabled, you will need to setup an appropriate static address for your PC instead.
- o Be aware that depending on your PC's operating system, you may need to run the Upgrader with Administrator rights. You may also need to check/change your PC's firewall settings in order to allow the Upgrader to operate correctly. Also be aware that various third-party programs may interfere with the Upgrader's functions because they act as a firewall.

Upgrader Start-up Procedure:

If you have been having problems with the UT that imply some kind of instability (UT appears to go through reset loops, you can't seem to connect to the UT's WebUI and you're certain there are no other complications (see previous section), etc), then you can force the UT into Boot ROM mode by pressing the small recessed button located under the WiFi antenna connector (see photo below), preferably using a small non-conductive pin, or a paper clip. Note that you will need to keep holding the button with the pin while powering up the UT.

BootROM mode button

- Power up the UT. If you are trying to force the UT into Boot ROM mode, continue pressing the Boot ROM mode button for at least 5 seconds after you turn the UT on, then release.
- Wait at least 45 seconds after powering on the UT before starting the Upgrader to allow the unit to fully power up.
- Double-click on the unzipped BganX_Upgrader.exe file to start the Upgrader (this file is in the destination folder you specified when you unzipped the upgrader, e.g., c:\bgan-x\5.7.2.0).
- The Satellite IP Modem Upgrader window will appear, showing the currently installed software versions on the UT, along with the upgrades available with this Upgrader package.

Note: if the *Modem SW version* field reports *BOOTROM MODE*, the upgrade is still possible, but this condition indicates either the user has forced the UT into Boot ROM mode, or the Application Software was incorrectly installed or corrupted; only the *Software* section's information will be available in the Upgrader window:
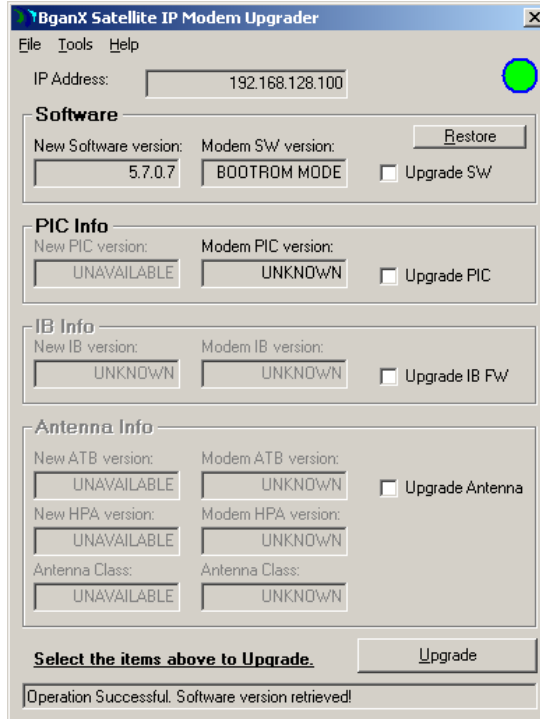

Figure 1: Sample Upgrader Screen while in Boot ROM Mode

If the *Modem SW version* field does not report *BOOTROM MODE*, the upgrader is running the current version of software shown in the box, as shown in Figure 2 below (this example shows that 5.7.0.6 is currently running on the UT). In addition to the software, there are other components whose versions will be reported in the window.

Figure 2: Sample Upgrader Screen while in Normal Mode

- The Upgrader gives you the option to upgrade the Application Software, the PIC (Peripheral Interface Controller) Software, and the Antenna Software. If any of these sections on the Upgrader screen are dim, that means an upgrade to that component is not available/possible at this time (*Note: the IB Info/Software doesn't apply to the 9450, so it will always be grayed out*).
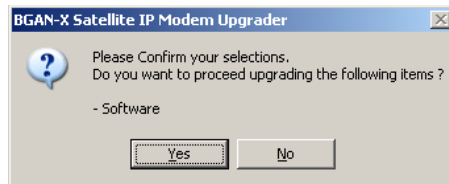
Upgrader Window Fields:

- ❖ IP Address field shows the local IP address of the UT. This is the address the upgrader uses when communicating with the UT. A green circle indicates good Ethernet connectivity, and a red circle indicates no connectivity. *If you are using a custom UT IP address, this value can be changed in the Tools menu explained below.*
- ❖ Restore button will restore the UT to the prior installed software release, if available.
- ❖ Upgrade button is used to perform the upgrade in conjunction with the Upgrade selections (Software, PIC, and Antenna; note that the IB Info section is not applicable to the 9450 UT, and will always be grayed out).

  The status bar at the bottom of Upgrader window provides progress information during the upgrade process.

3   Performing Upgrade(s):

NOTE: *Do not disrupt any upgrade while it is in progress and ensure the power supply is stable.*

- To perform an upgrade, select from the available upgrade selections and click the Upgrade button.
  - o Upgrades may be selected and performed individually or altogether. The Upgrader will upgrade each selected component in sequence.
  - o Unavailable selections are grayed out, dependent on the released software upgrade(s) provided with the Upgrader package.

- Once you click Upgrade, a Pop-up window appears, asking to confirm your choices (the selected items to upgrade are listed):

  - o Click Yes (No cancels the selection)

- Note that if this is the first time you have run the Upgrader (or if you have changed the PC's firewall settings), the following may appear:

  Select Unblock to continue.

- The section being upgraded will be then highlighted in green and the upgrade process will begin.
  - o The Status bar will show a series of progress messages as the upgrade proceeds.
  - o Please wait for the upgrade(s) to complete. Note that any one Upgrade operation (Software, PIC, etc) can take up to 10 minutes to complete. *Do not interrupt any upgrade since this may leave the UT in an unknown state.*
  - o Refer to the following figures for sample screens of an upgrade in progress, depending on whether the UT was in Boot ROM mode or not.
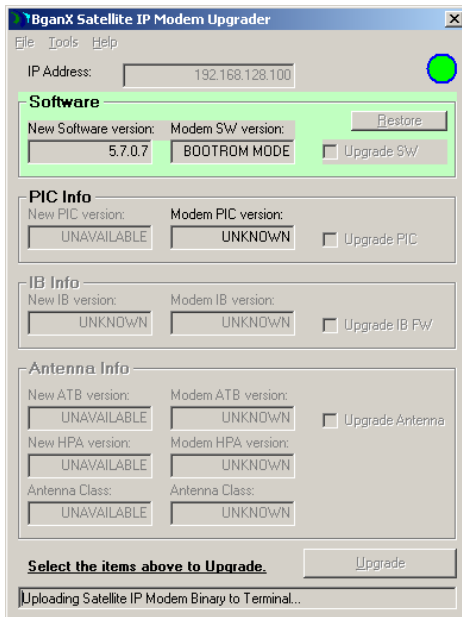
Figure 3: Boot ROM Mode Upgrade in Progress

Figure 4: Normal Mode Upgrade in Progress

- When the upgrade completes, the green highlight disappears. A few moments later, the *New Software version* field should show the updated version. The Status bar should show Operation Successful. Release Info retrieved.
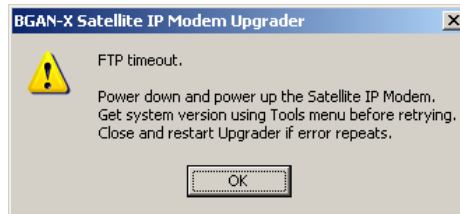
Figure 5: Successful Upgrade Example

- At this point, the upgrade has completed.
  - o If multiple upgrade selections have been made, the Upgrader will continue with the next upgrade in the sequence.
- Check the Upgrader window and verify that the updated version matches the new version supplied with the Upgrader.

Upgrader Menu Descriptions:

- ❖ File drop-down menu:
  - o Upgrade Selections – same as Upgrade button
  - o Restore Software – same as Restore button
  - o Upgrade Antenna (Standalone) – same as Upgrade Antenna checkbox
  - o Upgrade IB (Standalone) – same as Upgrade IB FW checkbox (but not applicable to the 9450)
  - o Upgrade PIC (Standalone) – same as Upgrade PIC checkbox
  - o Exit – exits the Upgrader
- ❖ Tools drop-down menu:
  - o Configure Modem Interface – allows you to enter the IP address of the UT. Default is 192.168.128.100
  - o Get Software Version – refreshes the Upgrader window and displays software versions currently installed and available for upgrade from the Upgrader
  - o Reset Modem – reboots the UT
- ❖ Help drop-down menu:
  - o About Upgrader – displays Upgrader version

4   Troubleshooting:

If the following dialog box appears, disable any firewall on your computer and re-attempt the upgrade.

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