PROTEUS®

FIRMWARE UPGRADE

Part No. OEL8000III-K & OEL8000III-X

GEN 3.5

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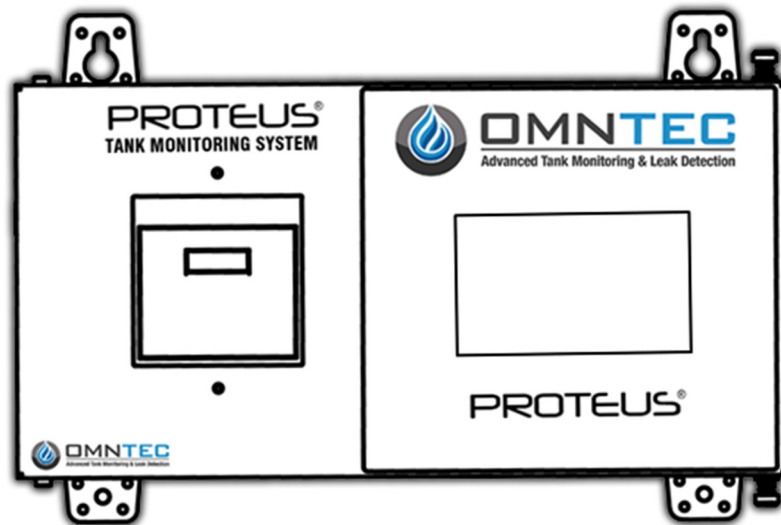
Release Revisions & Updates

Release G3.5 - 1.0:
- Updated MCU (hardware) and web page.

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File Name: 500183 rev2315.docx 1 of 6 Rev Date: 4-19-2023

Please review and understand all steps in this document prior to performing the firmware upgrade.

This document outlines the steps used to update a PROTEUS® ATG (Gen 3.5) systems firmware. You can accomplish this by one of two procedures; via web access using an established Internet connection, or by microSD card when an Internet connection at the site is not possible. Means of communication is by either serial or Ethernet, using a remote session such as HyperTerminal, PuTTY, or similar software.

Additional components you may require for this firmware upgrade process are:

- A laptop (Windows OS) with either an RS232 or USB port.
- Either HyperTerminal, PuTTY (free downloads from the Web), or similar remote session software.
- An RS232 serial cable or RS232-to-USB serial cable (if communicating via serial).
- An Ethernet cable (if communicating via Ethernet or upgrading directly from the web access).
- A microSD card (if upgrading from a microSD card; see Procedure 2).
- A microSD card reader built into the laptop or microSD-to-USB card reader (if upgrading from a microSD card; see Procedure 2).

1) **PROCEDURE 1: Running the firmware upgrade via Internet web access.**
   - Using an Ethernet cable, connect the PROTEUS® controller to a network that has access to the Internet using the Ethernet port. On the PROTEUS® K, the Ethernet port is found on the left-side of the ATG. On a PROTEUS® X, the Ethernet port is on the bottom of the ATG.
   - If you are unsure about connecting a device to a local network, either using a static IP or DHCP, **consult with the network administrator at the site**. Program this setting on the PROTEUS® by going into UTILITIES > SETUP MENU (default password is **000000**) > NETWORK PROPERTIES. If connecting via DHCP, confirm the IP address the network automatically assigns to the PROTEUS® by going into UTILITIES > HELP MENU > REMOTE SETTINGS (upper right).
   - If you can access the PROTEUS® over your network, you can use a remote session (PuTTY, HyperTerminal) to access the unit over the appropriate TCP port via Ethernet. If this is not possible, you can accomplish the firmware update using a serial connection.
   - Connect the PROTEUS® ATG to a local (Windows OS) laptop using a serial RS232 cable adapter. If your laptop does not have an RS232 port, you will require an RS232-to-USB serial cable.
   - Confirm connection settings via DEVICE MANAGER from within Windows. Also confirm port settings on the PROTEUS® by going to UTLITIES > SETUP MENU (default password is **000000**) > COMM PORTS. COMM TYPE for COMM PORT RS232 must be set to REMOTE.
   - Open either HyperTerminal, PuTTY, or other remote session software from your laptop. When necessary, configure the correct Echo settings to see the typing.

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File Name: 500183 rev2315.docx 2 of 6 Rev Date: 4-19-2023

NOTE: Some of the screen-captured images and data reflected in this document are examples. They may not reflect the actual data you will see. To this document, HyperTerminal is the remote session software illustrated.

- Once communication is established between the remote session (HyperTerminal or PuTTY) and the PROTEUS® controller, type the following command:
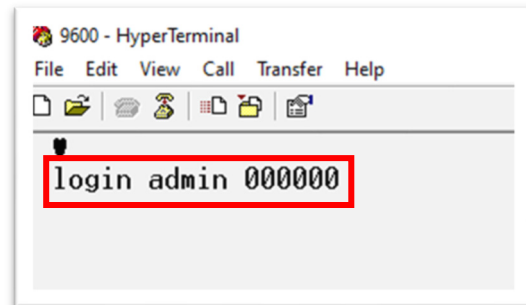**login admin 000000** (lower case; all zeros). Press **ENTER**.
See Figure 1.

Figure 1

- An ****IMPORTANT**** blurb will appear. Type the following command:
webupdate -c (all lower case).
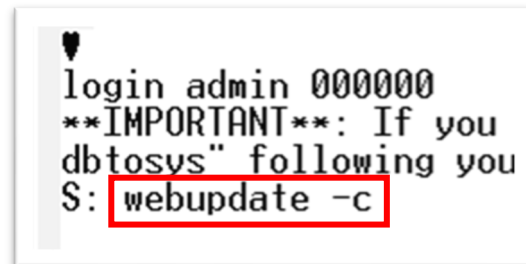Press **ENTER**.
See Figure 2.

Figure 2

- The firmware upgrade package will begin retrieving from the Web. Allow it to run completely. The PROTEUS® display will confirm it is updating and request you to "*please wait.*" Do **NOT** disrupt this process nor touch the display screen. If the system was in alarm before the firmware upgrade, it will reappear during the process.
Once the firmware update has been installed, an auto-reboot of the PROTEUS® will happen.
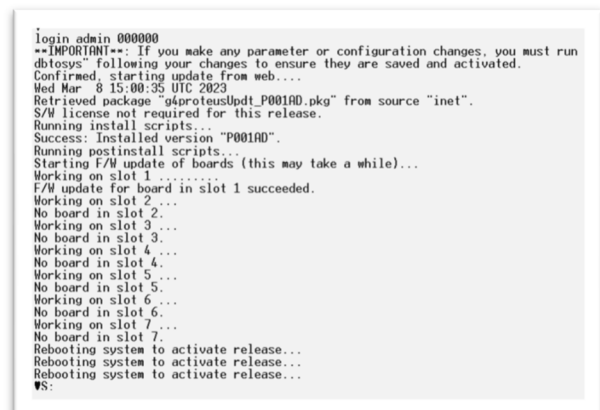See Figure 3.

Figure 3

- The PROTEUS® will eventually display an ALARM/SYS-BUS alarm indicating the ATG is rebooting. Shortly after, this will turn to NORMAL. The firmware upgrade process is now complete.
- You can confirm the firmware upgrade by viewing the MCU version under HELP MENU > VERSION NUMBERS, or by connecting to the web server home page of the PROTEUS®. It will appear towards the bottom of this home page.

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File Name: 500183 rev2315.docx 3 of 6 Rev Date: 4-19-2023

2) **PROCEDURE 2: Running the firmware upgrade by means of a microSD card (no Internet at the site).**

- This process still requires you to download the firmware update to a laptop with access to the Internet before going to the site the PROTEUS® is deployed at.
- Connect a microSD card to your laptop, either using a built-in microSD card reader (if available) or a microSD USB adapter, inserted into an available USB port.

- On your Internet-accessible laptop, in the URL field of your web browser, type **proteusupdates.omntec.com** and press **ENTER**.
  See Figure 4.

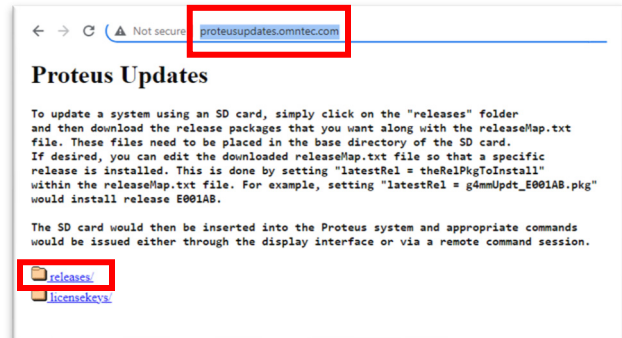 Follow the **PROTEUS UPDATES** instructions. Click on the directory labelled **releases/**.

Figure 4

- Click on **releaseMap.txt** if you want to view a text file of the different PROTEUS® firmware release packages to date.
  See Figure 5.

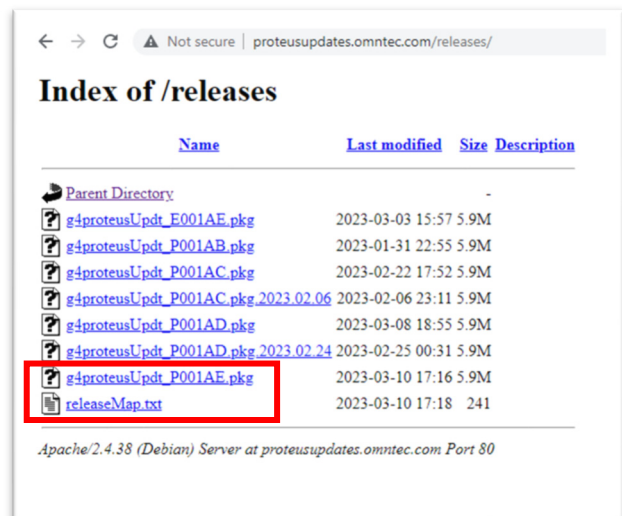 The bottommost listed package (.pkg) should be the current and latest firmware release.

Figure 5

- Right-click and save both the releaseMap.txt and the release .pkg link you want to the base directory on your microSD card. **It is necessary for both the releaseMap.txt file and the specific release .pkg file you require to reside in the same base directory of the microSD card.**

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File Name: 500183 rev2315.docx 4 of 6 Rev Date: 4-19-2023

- Remove the microSD card (with the two firmware files) from your laptop. Power down the PROTEUS® and remove the existing original microSD card from the **onboard microSD card reader**. This is located between the Ethernet port and the RS232 DB9 connector. You must first remove the metal plate secured by **three small screws**. See Figure 6.
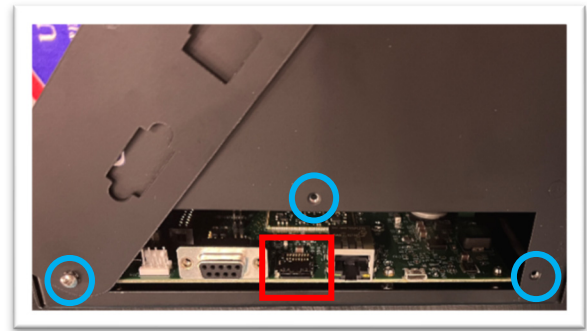

Figure 6

- On a K-model, this plate is on the left-hand side of the ATG. On an X-model, it is on the bottom. Push in on the existing onboard microSD card to release it from the reader. Do not misplace this existing microSD card. You will need to replace it after the firmware upgrade. Insert the microSD card (with the two firmware files) into the microSD card reader on the PROTEUS®.

- If the PROTEUS® is on a network, you can locally access the remote session (PuTTY, HyperTerminal) to access the unit over the appropriate TCP port via Ethernet. Otherwise, you can make the connection via serial.

- Power up the PROTEUS® ATG and connect it to your laptop using a serial RS232 cable adapter. If your laptop does not have an RS232 port, you will require an RS232-to-USB serial cable.

- Confirm connection settings via DEVICE MANAGER from within Windows. Also confirm port settings on the PROTEUS® by going to UTLITIES > SETUP MENU (default password is **000000**) > COMM PORTS. COMM TYPE for COMM PORT RS232 must be set to REMOTE.

- Open either HyperTerminal, PuTTY, or other remote session software from your laptop. When necessary, configure the correct Echo settings to see the typing.

- Once communication is established between the remote session (HyperTerminal or PuTTY) and the PROTEUS® controller, type the following command:
  login admin 000000 (lower case; all zeros).
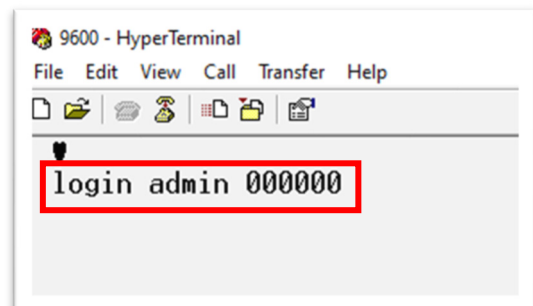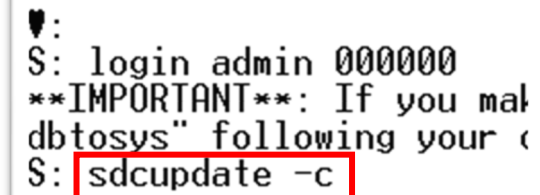 Press **ENTER**.
  See Figure 7.

Figure 7

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File Name: 500183 rev2315.docx 5 of 6 Rev Date: 4-19-2023

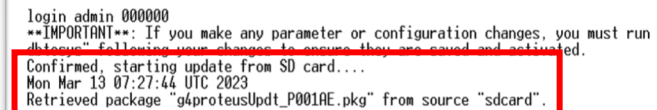- An ****IMPORTANT**** blurb will appear.
  Type the following command:
  sdcupdate -c (all lower case).
  Press **ENTER**.
  See Figure 8.

Figure 8

- The firmware upgrade package will
  begin retrieving from the microSD card.
  Allow it to run completely.
  See Figure 9.

Figure 9

- The PROTEUS® display will confirm it is updating and request you to "*please wait.*" Do **NOT** disrupt this process nor touch the display screen. If the system was in alarm before the firmware upgrade, it will reappear during the process. Once the firmware update has been installed, an auto-reboot of the PROTEUS® will happen.
- The PROTEUS® will eventually display an ALARM/SYS-BUS alarm indicating the ATG is rebooting. Shortly after, this will turn to NORMAL. The firmware upgrade process is now complete.
- You can confirm the firmware upgrade by viewing the MCU version under HELP MENU > VERSION NUMBERS, or by connecting the web server home page of the PROTEUS®. It will appear towards the bottom of this home page.
- Power down the PROTEUS® and remove the microSD card (with the firmware upgrade) from the onboard microSD card reader. Replace it with, and push in, the the original microSD card into the onboard microSD card reader. Secure the metal plate using the three small screws and power up the system.

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