

Application Note

Topic: Saving User Setup to FLASH
Product: MEB-TCP, MEB
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Abstract

The MEB-TCP (and MEB) may now be configured where the user's setup parameters are stored in FLASH memory to prevent a loss of functionality during a long period of power loss.

Introduction

The Niobrara MEB-TCP's (and MEB modules) setup parameters are stored in RAM that is protected by a capacitor. The module is specified to retain its setup for a period of at least two weeks when the module is not powered. After the capacitor has discharged, the module will revert to factory default settings on the next power-up thus prompting the need to re-configure the module. This operation is not satisfactory to many customers who routinely shut down systems for long periods of time. Niobrara has addressed this issue with new MEB-TCP firmware (and MEB firmware) and new MEBSW32 (and MEBSW) software that allows the user to change the factory default settings of the module to their own. The module may be left without power without loss of functionality.

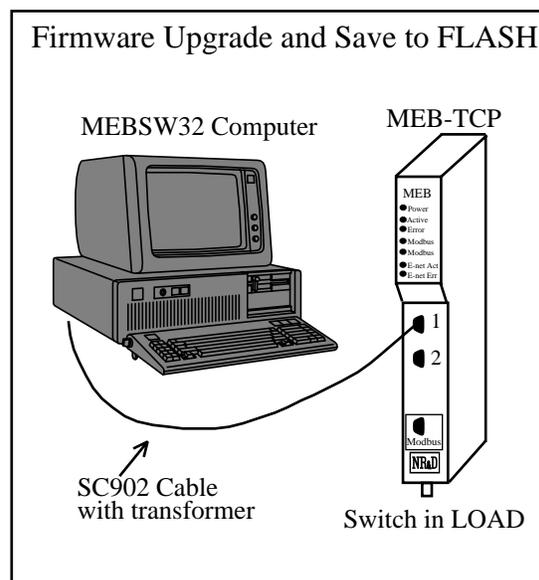
Setup

The MEB-TCP (and MEB) must have firmware rev 24Jun99 or later to have this save to flash feature. MEBSW32 (and MEBSW) must be of revision 24Jun99 or later to support this new feature. The newest versions of the firmware and software are available at www.niobrara.com.

Firmware Upgrade

1. Obtain a new copy of MEBSW32 (or MEBSW) and unzip it. Start the MEBSW32 (or MEBSW) application and adjust the PC's setup parameters to allow online access to the MEB-TCP (or MEB).

2. Select "oFfline, Fetch memory from module" to copy the entire setup from the module to the PC's memory.
3. Select "oFfline, Write from memory to disk" to keep a permanent copy of the MEB's setup. Enter a new filename to describe the setup.
4. Power down the module and remove it from the rack. Rotate the module and locate the LOAD/NORMAL switch near the edge connector. Move the switch to the LOAD position. Return the module to the rack and power it back up. The module should boot and the POWER, Modbus Err, and E-net Act lights should remain on steady.
5. Connect the computer to the module's port 1 with an appropriate RS-232<>RS-422 converter such as the Niobrara SC902 cable. (The SC902 cable must be powered by the external supply.)
6. Select "Utility, downLoad firmware to mod-



ule" and select MEBTCP (or MEB) as the file to load. Press ENTER to start the download process which will take several minutes to complete.

7. After successful completion of the download process the module may be powered down, the switch moved back to NORMAL, and returned to service.

Save Setup to FLASH

1. To save the setup to flash it is necessary to have a copy of the intended setup in the offline memory of MEBSW32 (or MEBSW). This may be accomplished by performing an "offline, fetch" from an active module, by performing an "offline, read configuration from disk" of a stored setup, or generating a new setup from the offline edit screens.
2. The setup is transferred from the PC's offline memory much the same way as new firmware is downloaded. Power down the module, remove it from the rack, move the switch to LOAD, restore the module to the rack and power it up. The Power, Modbus Err, and E-net Active lights should be on brightly.
3. Connect the computer's serial port to the module's port 1 as in step 5 above. Select "Offline, Copy offline to module flash" and press ENTER. The transfer will take a few moments.
4. Upon completion of the transfer, remove the power from the module, move the switch back to NORMAL, and return the module to service.

Summary

The new factory default settings may be verified by pressing and holding the CLEAR button near the top of the edge connector for more than 30 seconds. This will corrupt the RAM and force the MEB-TCP (or MEB) to load the new settings from FLASH. Writing the value 9F9F(hex) to register 8174 in the MEB will also cause it to reset to factory defaults and thus the settings from FLASH.

If the user ever wants to restore the module to the original factory default settings simply start MEBSW32 (or MEBSW) and do an "Offline, Copy offline to module flash".

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