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Release Notes NTMS Version 2.1b firmware


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Description of Enhancements

This major NTMS firmware release adds support for direct connections to Chart Biomedical® MVE liquid nitrogen freezers and a revision of the NTMS's ability to upgrade firmware. There are also maintenance changes designed to enhance the reliability of data collection from Networked Robotics' DCP, RTD, LVP, HPL1 and Thermo Scientific® Revco® devices.

The process of upgrading firmware versions 1.x to 2.x is more complicated than with version 1 upgrades. In version 2 the section of the code for upgrading the unit's functionality, called the bootloader, must itself be upgraded. To ensure that this upgrade is performed safely a defined sequence of three different.nrf file loads must occur.

IMPORTANT: You must read the "Upgrade Process" instructions carefully. Improper execution of the upgrade process can destroy the functionality of your unit. |

A new NTMS Configuration Wizard  – version 6, has been implemented for MVE monitored devices. Those using Configuration Wizard 5 will see a blank in the field for monitored device type if the device type is set to "MVE". 2.1b adds support for "fill" status of liquid nitrogen over 2.1a.

Contraindications

This version fixes known problems with release 2.1a. Version 2.1a should not be used for NTMS units supporting HPL1 humidity probes as a known bug prevents relative humidity data collection for these devices. NTMS firmware version 1.8 is recommended for these units.

Upgrade Process - IMPORTANT


IN ORDER TO UPGRADE AN NTMS FROM VERSION 1 to VERSION 2.1 FIRMWARE YOU MUST FOLLOW A CAREFUL UPGRADE PATH! Three sequential firmware upgrades are required in exact order to upgrade the unit.

Note: These instructions apply only when upgrading a unit from version 1.x to version 2.x. If you are upgrading from one version 2 firmware to another or one version 1 to another – simply download the .nrf file for that version.

You must use the NTMS NRUpgradeV2.exe  program included in the Upgrade kit for this process. The three sequential steps are:

- 1) Upgrade from Version 1 firmware to add the Version 0.1 Bootloader
Firmware shown before the upgrade: 1.x or 0.0 firmware
NRF file: BL1


- 2) Upgrade from the Version 0.1 Bootloader to the Version 0.2 Bootloader
Firmware shown before the upgrade: 0.1 firmware
NRF file: BL2
- 3) Upgrade to NTMS Version 2.1 firmware
Firmware shown before the upgrade: 0.2 firmware
NRF file: NTMS_V2_1a.nrf

Firmware Version 2.1 will show up in NTMS Configuration Wizard  scans after the above process is complete.

If one of the firmware downloads fails, repeat the same step over again. Do not proceed to the next or execute a previous downloading step. You may need to power cycle the unit to get it to show up in the discovery scan.

If upgrades fail several times, often it is because of IP address conflicts or power problems. You must rectify the problem before the unit will upgrade.

About Firmware Upgrades

Firmware upgrades change the functionality of Networked Robotics' NTMS network hardware. They are made by loading a Networked Robotics .nrf (Networked Robotics Firmware) file into the NTMS through the network using the Networked Robotics Hardware Upgrade Wizard . The Hardware Upgrade Wizard is available from the Download section of the Networked Robotics web site. Firmware upgrades can only be made via this Wizard from a PC on the same subnet as the NTMS. **IMPORTANT:** You must use the Version 2 Upgrade Wizard to upgrade NTMS units to version 2 and higher.

If the network goes down, or a power failure occurs during the process of firmware upgrade, simply look for a problem and correct it and try again. Possible errors include irregular power or network or duplicate IP addresses on your network. If the NTMS does not show up in the network discovery process restart the NTMS unit by unplugging the power cord and plugging it back in. Begin the process of firmware upgrade again.

Firmware Compatibility

NTMS firmware 2,1 can be used with all Networked Robotics NTMS hardware shipped after November 1, 2006.