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## Release Notes NTMS Version 1.5 firmware

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### ***About Firmware Upgrades***

Firmware upgrades are made to the NTMS 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 from a PC on the same subnet as the NTMS.

If the network goes down, or a power failure occurs during the process of firmware upgrade, restart the NTMS unit and begin the process of firmware upgrade again.

### ***Compatibility***

NTMS firmware 1.5 can only be used with NTMS hardware shipped after November 1, 2006.

### ***Enhancements***

#### 1) Resistance to common hacker attacks

Customers with NTMS hardware installations on the public Internet sometimes find that the NTMS stops collecting temperatures and needs to be reset by power cycle to regain functionality. This was found to be due to common network probes by Internet computers seeking to exploit some types of web services. In version 1.5, this problem is fixed for most types of exploits.

#### 2) Support for additional device types.

Version 1.5 provides for network connections to other device types.

New device types require configuration via the NTMS Configuration Wizard 1.2 that can be downloaded from the Networked Robotics web site. Tempurity System Software support is not yet available for these monitored device types. Connections must be made via direct Telnet interface.

A. The NTMS can now be used to turn 120V house voltage on and off. The Networked Robotics Power interface is required to accomplish this. Power can be turned on or off by Telnet to the appropriate NTMS IP and Port address. To elicit Power on send "P" to the port and lowercase "p" to turn power off.

B. Support for the Networked Robotics HPL1 humidity probe is available in this version. The HPL1 measures both temperature and relative humidity. At the present time the HPL1 can be used with the Tempurity System only as a temperature sensor. Measurements of humidity must be made through direct interface via Telnet. To elicit a humidity measurement send "H" to the port.

C. Support for Flow Sciences Airflow sensors. To elicit an Airflow measurement send "A" to the port.

3) Support for additional device types.

Fixed TCP options negotiation problem, where NTMS would agree to "timestamps" even though it didn't support them. This would prevent some linux distributions from being able to telnet directly to the NTMS.