

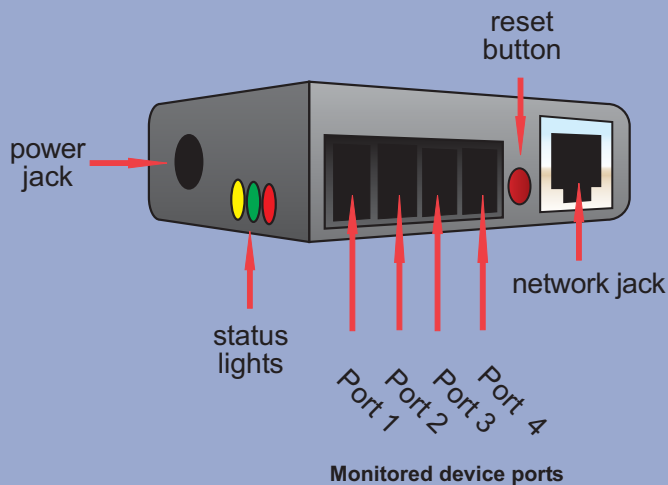
## A Quick Connect Guide

DOCUMENT # Tempurity 1-05-0021.5  
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# Overview of Connection to Tempurity

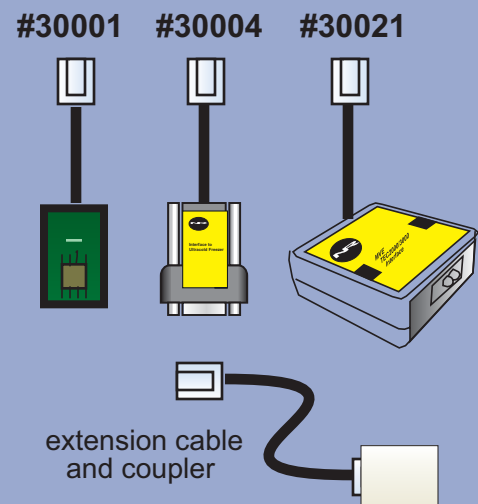
1. Configure the Networked Robotics NTMS hardware for use on your network.
2. Physically connect the instrument or sensors that will be monitored according to the instructions for each product. Test the ability to acquire data through the network manually by using the common Windows utility "Telnet".
3. Download the Tempurity Server software to a supported Windows computer. Specify data collection from the same network addresses that were defined in step (1) and set the criteria for the generation of alarms.
4. Download the Tempurity Monitor software and define "alarm notification groups".

## NTMS4



for a list of Networked Robotics interface and sensor products see [www.networkedrobotics.com/checkout.htm](http://www.networkedrobotics.com/checkout.htm)

## Example Products



All necessary software can be aquired from:

[www.networkedrobotics.com/download](http://www.networkedrobotics.com/download)  
for:

NTMS Configuration Wizard  
Tempurity Monitor Application

[www.networkedrobotics.com/serverdownload](http://www.networkedrobotics.com/serverdownload)  
for:

Tempurity Server Configuration Utility

### Package Contents

- NTMS4
- NTMS4 Power adapter
- CAT5 Cable

### Commonly Included

- Interface or sensor products
- CAT5 extension coupler
- Tempurity System magnet

# 1

## Set the NTMS hardware to work on your network

In order to use the NTMS for data collection you must first configure it for your use on your network.

You will assign a static IP address and configure each monitored device port for the type of instrument or sensor to which it is connected.

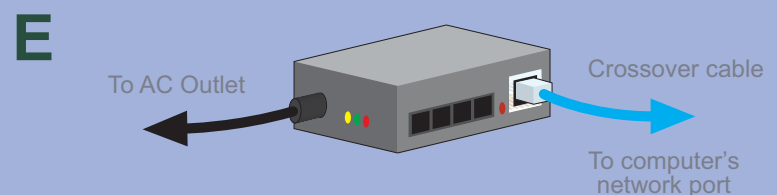
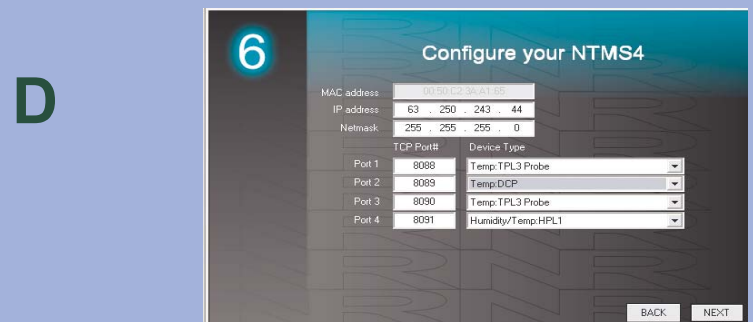
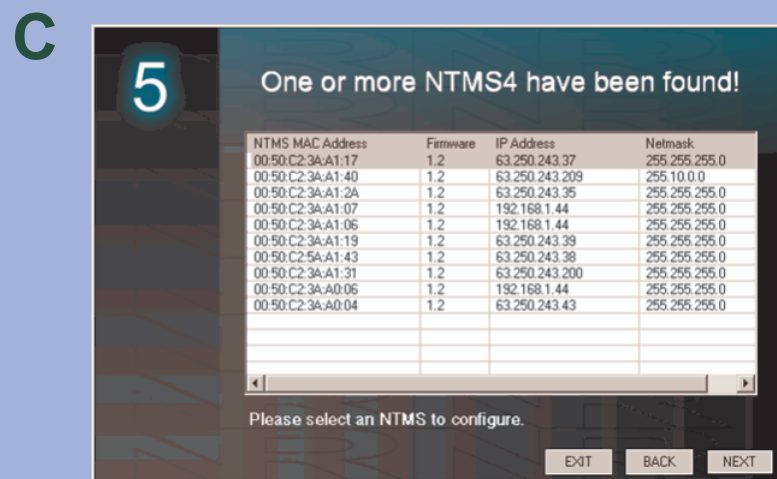
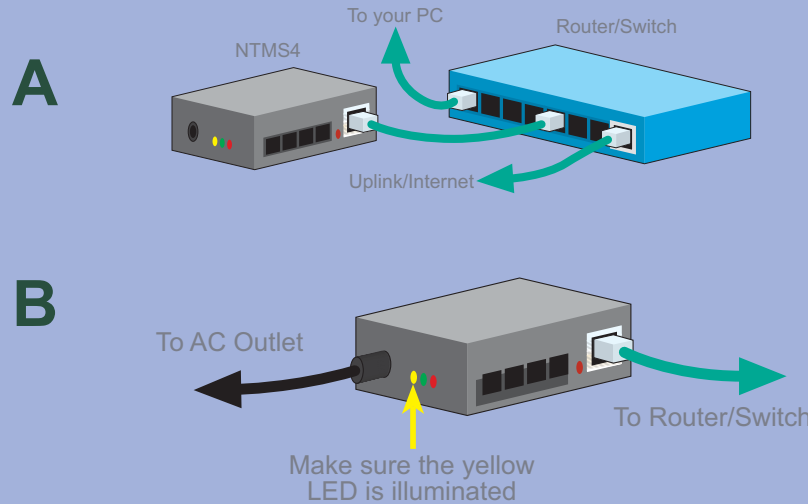
**A** Plug one end of the network cable included in the package into the silver connector on the NTMS and the other into an active network port. This could be a wall plate, an ethernet switch, or a wireless bridge or access point.

**B** Plug the included power adapter into the AC wall outlet and the NTMS4 power connection on the side of the unit. The LEDs will illuminate. If the yellow LED does not illuminate, check your network connection.

**C** From any PC download and run the NTMS Configuration Wizard. The Wizard will find any Networked Robotics hardware on your local network. Highlight the appropriate NTMS based on its unique ID (labeled on the side of each NTMS) and double-click. Set the unit for an appropriate static IP address and subnet mask for your facility. You may need your IT or network support group to provide this address.

**D** Set the monitored device type for each of the data collection ports of the NTMS. See the manual for each product if needed and the next page for examples.

**E** If the NTMS is not discovered by the Configuration Wizard, check your connections and try again. If it is still not discovered, it may be that the NTMS is not on your local network. We suggest that you use a CAT5 crossover cable to connect the NTMS directly to a PC and try again.



# 2

## Connect the NTMS to the devices to be monitored and test network data collection

See the specific hardware manual for each Networked Robotics interface or sensor product for detailed installation instructions. Two examples are shown below and in the figures to the right.

You can extend any connection between an NTMS and the monitored device over long distances by using standard Cat5 cable and the RJ-45 coupler included in the package.

### A Example: High-end Instrument Connections - NR Interface to Thermo Scientific Ultracold Freezers.

Connect the NTMS to the ultracold using CAT5 network cable and the 9-pin adapter. Make sure that the monitored device data collection port of the NTMS is configured for the “Thermo Revco and compatible freezer type”.

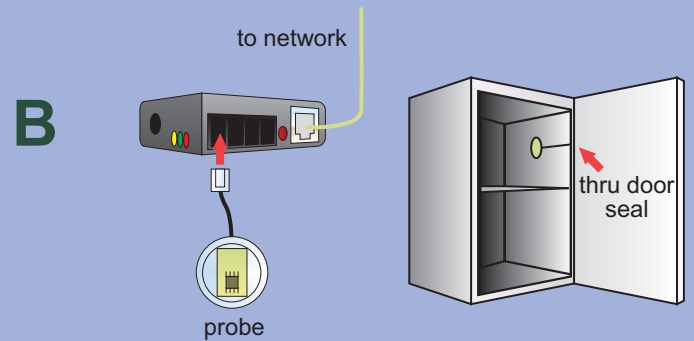
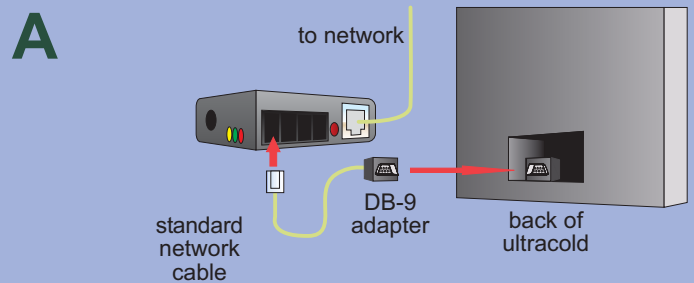
### B Example Digital Sensor - The Networked Robotics TPL3 Digital Temperature Probe:

Connect the probe to one of the 4 monitored device ports on the NTMS. Make sure that this port has been configured for type “TPL3”. Slip the probe between the door frame and the gasket of the door. Remove the adhesive backing. Affix the probe to the inside of the freezer as shown.

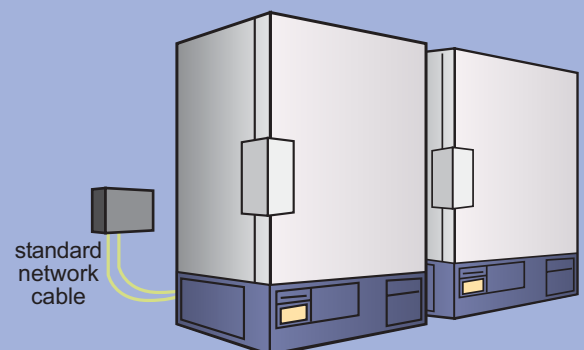
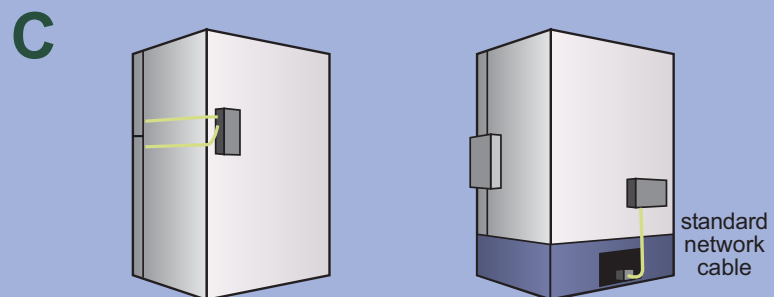
### C Test and Finalize:

Test network data collection manually using the “Telnet” command in Windows as described in each product manual before proceeding. From the command prompt type e.g. “Telnet 192.168.1.215 8088” and type the command character such as uppercase “T”. Make sure that a value is received before proceeding.

Affix the NTMS permanently using the dual-lock backing. Two possible methods of mounting are shown.



### Mounting Suggestions



# 3

## Download the Tempurity Server and specify the network addresses for data collection



**A** On the Windows computer on which data will be collected, download and install the Tempurity Server software. Run the Tempurity Configuration program from the Windows Programs list. You need an account on your computer with administrator privilege.

**B** Click on the “Insert” button. In the Monitored Device window, you can add the identification, network connection and alarm definition parameters for each monitored device. Once all the settings are entered, click OK.

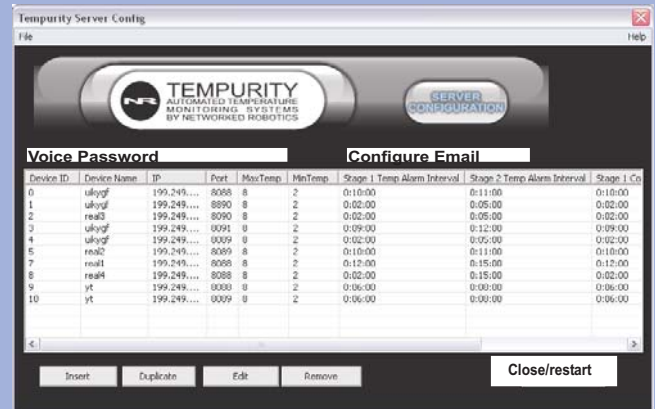
Tempurity can collect any parameter including Temperature, Humidity, Co2, Pressure, Voltage, Light etc. Refer to your Networked Robotics hardware manual for the appropriate configuration settings. In general “Temperature” is collected via the command character “T”, humidity with “H”, etc.

**C** You must enter email account and SMTP mail server information in order for email and text alarm notifications to be sent. Enter e-mail parameters and a voice alarm code as required. Test email capability from the server using the “test” button. Networked Robotics must authorize voice alarm notifications. To use these you must send Networked Robotics your external IP address to support@networkedrobotics.com. NR will provide a voice code to enter into the “voice alarm” field.

Many corporate e-mail servers are configured to block unwanted e-mail. We often recommend connecting to external Gmail or Yahoo mail accounts when first setting up Tempurity. “smtp.gmail.com” and “mail.smtp.yahoo.com” are the mail server addresses for Gmail and Yahoo.

**D** Click on the “Close/Restart” button. In the taskbar you will see an icon for the Tempurity Server. A red circle indicates that the Tempurity Server is stopped. A green circle indicates that it is running and is able to collect data.

**A**



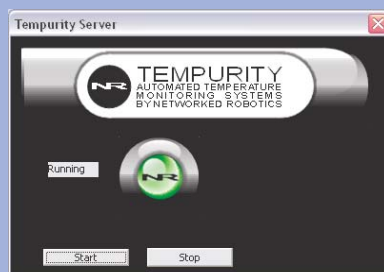
**B**



**C**



**D**



# 4

## Run the Tempurity Monitor



**A** You can run the Tempurity Monitor on any computer. Download the Tempurity Monitor software from the Networked Robotics web site.

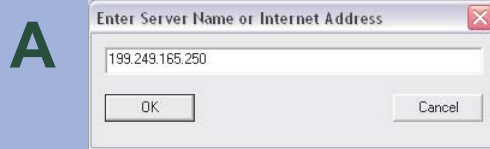
The installation procedure will ask you to enter the IP address or domain name of the Tempurity Server computer. If that is this computer that you are on now then enter “localhost”

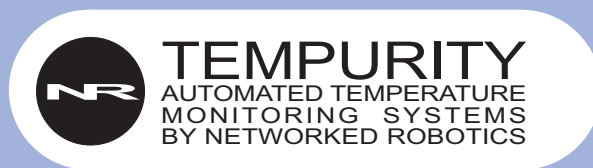
**B** A screen similar to the one shown will be displayed. You can switch back and forth from one Tempurity Server to another. If you would like to see an example of another Tempurity Server, chose “demo.networkedrobotics.com” as the Tempurity Server name, and then change back to your server address at your convenience.

**C** Define how people will be notified when alarms occur by clicking on “E-mail and text messaging” from the main Monitor window. Create an “alarm notification group”. Enter a list of the appropriate email addresses or phone numbers for text messaging or voice calls in the “Notification address” field. For text messaging you will need to know the cell phone service provider of each recipient. Ensure that test alarm notifications are received as expected.

The Monitor must be running at all times in order for alarm notifications to be sent.

Consider opening firewall ports 3010 and 80 on your Tempurity Server machine. If these ports are open then any Windows computer will be able to run the Monitor by simply entering the server computer’s IP address. Tempurity Monitors are similar to browsers and Tempurity Servers are similar to web pages. You can point a Tempurity Monitor to any Tempurity Server. Consider creating redundant Tempurity Servers for high reliability.





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