

HOW TO CONFIGURE A **MOXA** DEVICE



How to Configure a MOXA Device

A RescueLogic® Technical Bulletin



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“Safety Made Simple”

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How to Configure a MOXA Device



A MOXA Device — an NPort serial device server — makes it easy to connect your alarm panels to an Ethernet network so you can monitor them with RescueLogic® software.

Things You'll Need

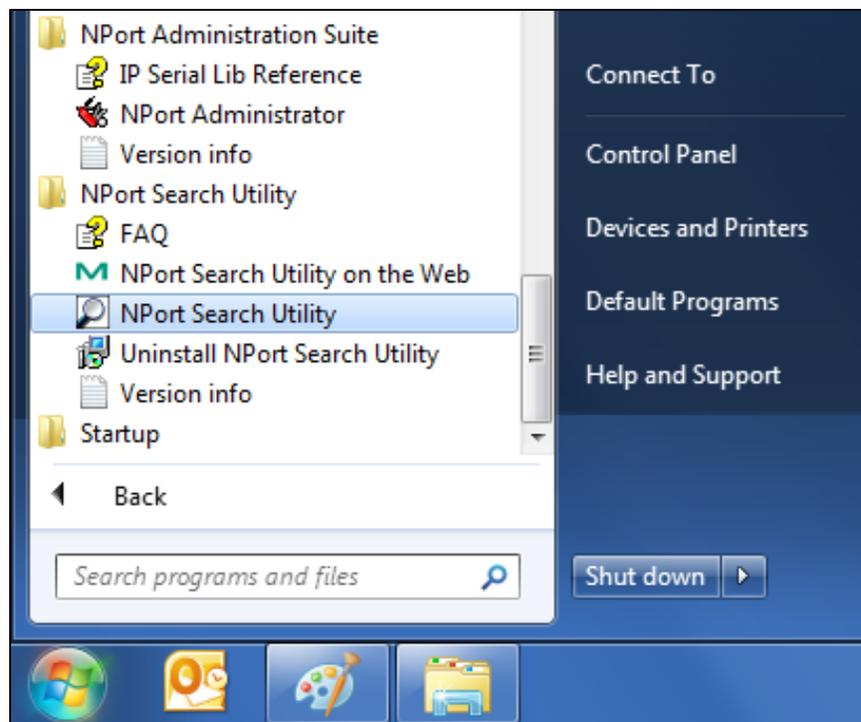
You will need:

- A MOXA NPort 5110A serial device server.
- MOXA utility software. You'll get a software CD with each device. You can also download the software from the MOXA website at www.moxa.com.
- Network information. You'll need to get a static IP address from the network administrator wherever a serial server is to be installed. For each serial server, the network administrator should also provide values for the Subnet Mask, Default Gateway, and possibly DNS Servers. (See page 9 for more details.)
- The network administrator should also know that the serial servers will connect using, by default, TCP Port 4001. It can be changed. TCP Port 23 is a common alternate. (See page 7 for the screen with the TCP Port setting.)
- Serial Port information. The alarm panel manufacturer's documentation should show you the RS232 serial port settings. These include: baud rate; data bits, stop bits, and parity. See page 8 for the screen with serial settings to match up with the settings of your alarm panel. You will also need the wiring information for the RS232 (or EIA232) connection. Many alarm panels suggest a serial printer would be an optional accessory wired to this port.

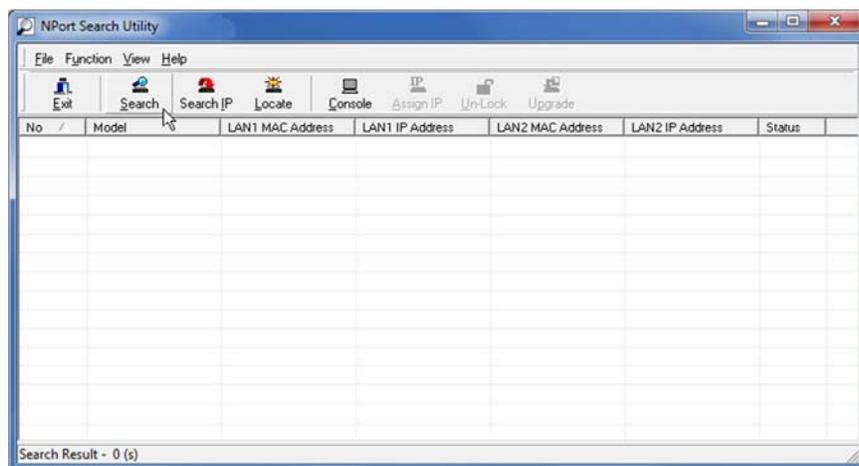
Helpful Hint: This guide is illustrated with actual RescueLogic screen images, which were captured on a computer that runs Windows 7. If your computer uses a different Windows operating system, your RescueLogic windows might look different, but you will follow the same step-by-step procedures.

Instructions

To begin, insert the CD or download the install program from the web. Then run the NPort Search Utility from your Windows menu.

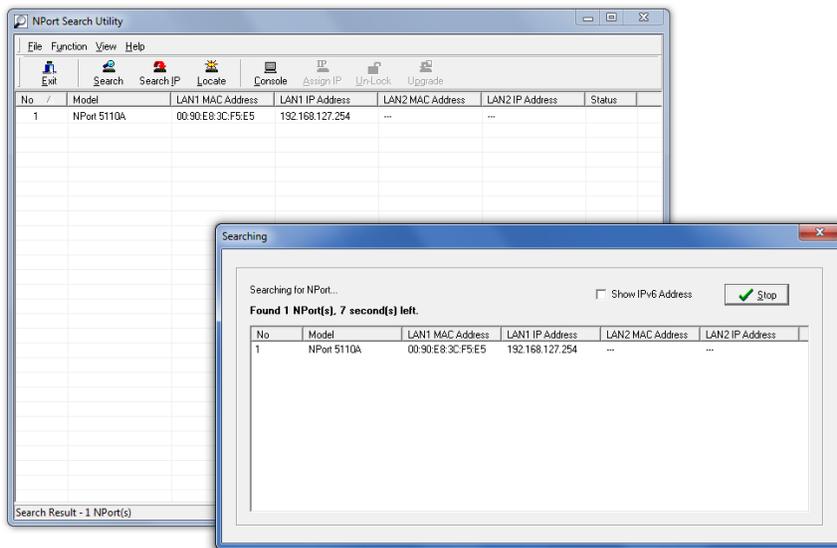


The Search Utility will open. Click the "Search" button to continue.

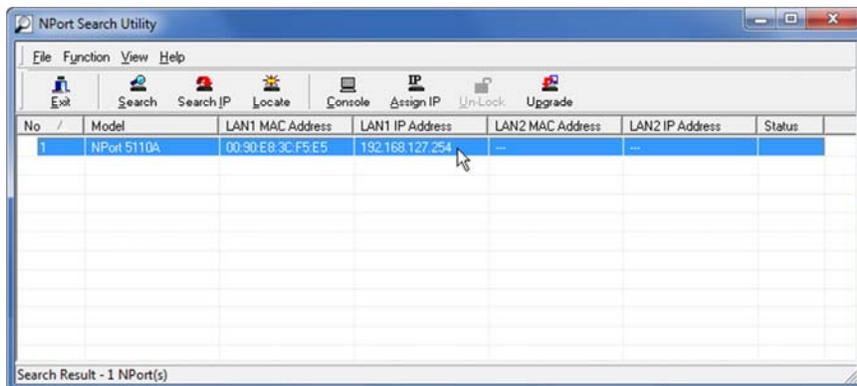


Helpful Hint: The default IP address of a MOXA NPort is 192.168.127.254. If you set your LAN card configuration settings with an IP address in the same subnet (such as 192.168.127.100), you do not necessarily need the Search Utility software. Just skip to the web configuration shown on page 6, and type 192.168.127.254 in the Address bar of your browser.

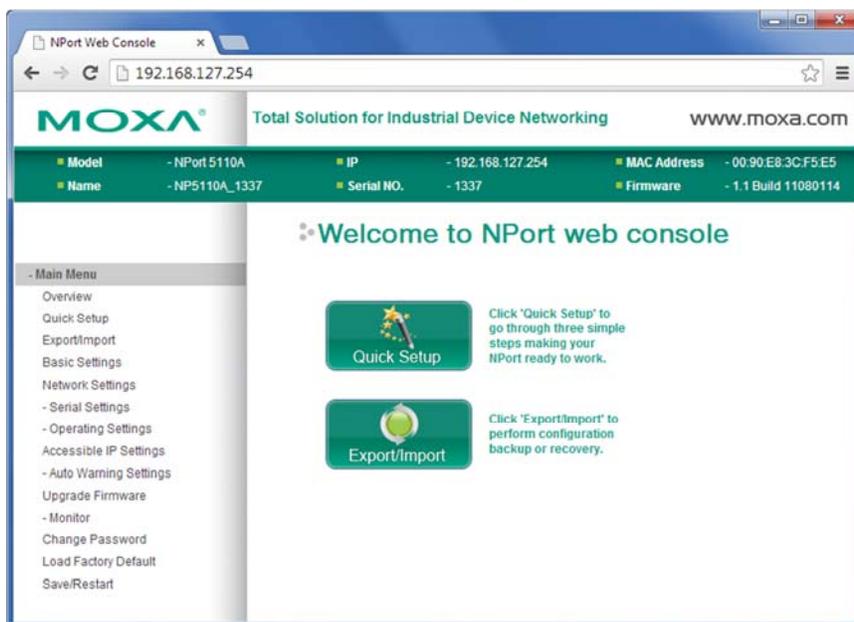
A new popup window titled “Searching” will appear for several seconds, list any MOXA NPorts, then disappear.



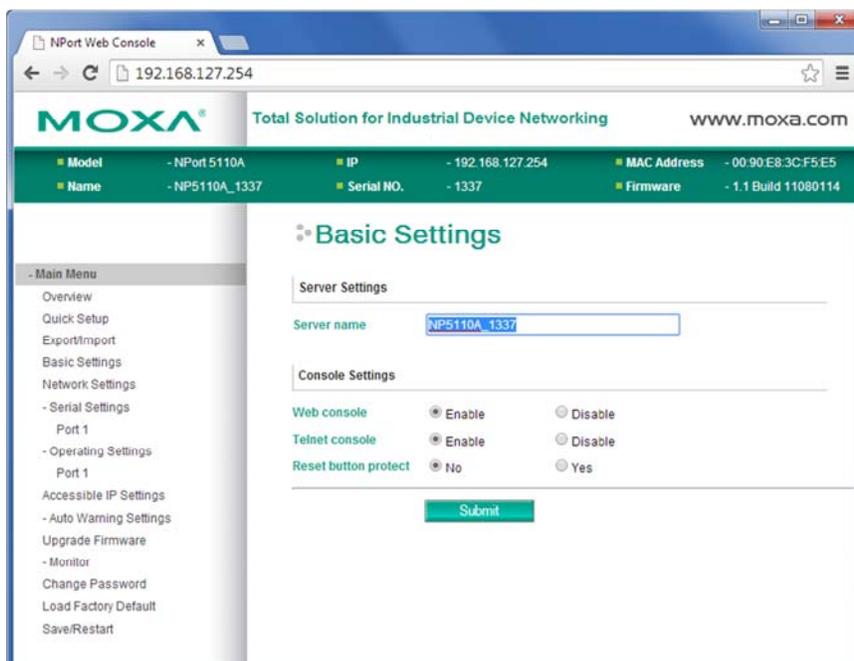
After the search window disappears, the list on the list window should show the NPort server with the default IP Address 192.168.127.254. Double-click the list item to open a browser window and configure.



The NPort configuration screen will appear in a web browser. The IP Address of the server will show in your browser's address bar. The left column has a menu for changing settings. You will need to use three of them: Operating Settings, Serial Settings, and Network Settings.



If you like, you can also change the name of the server from the Basic Settings menu.



When you are done with any changes on a page, click the Submit button on the bottom of the page.



Configure Operating Settings

From the Main Menu in the left-hand column, click “Port 1” under the Operating Settings label.

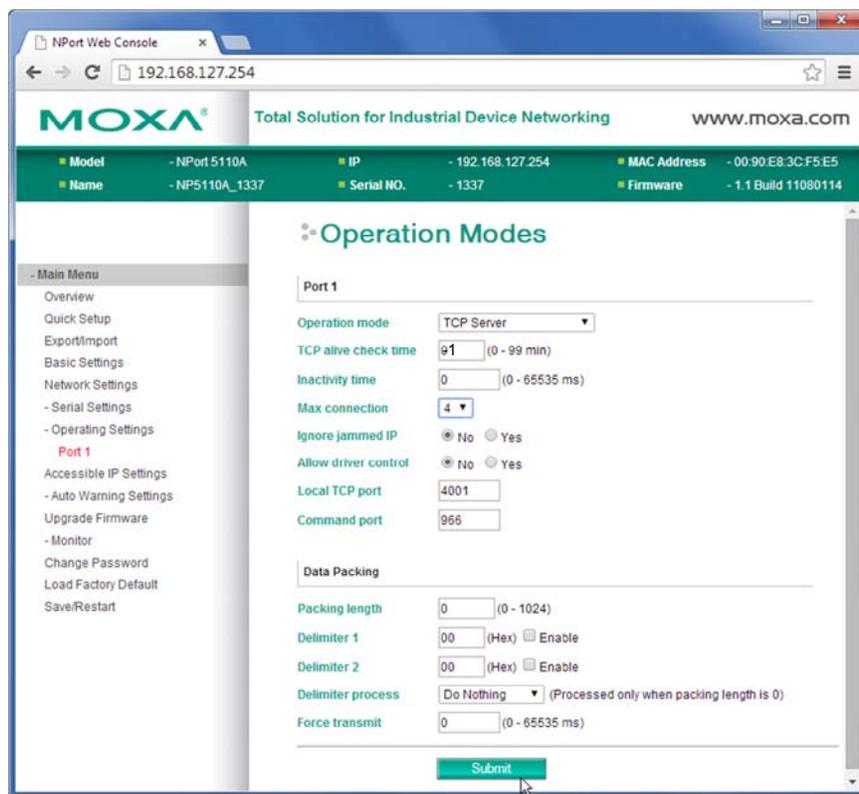
Change the default “RealCOM” operation mode to “TCP Server.” This setting allows the IP Address socket to be supervised by RescueLogic, rather than simulate a COM Port.

Change TCP alive check time from “7” to “1.” This allows RescueLogic to reconnect when System Monitor is restarted. The default 7 minutes would make the server wait that long before a reconnect. Do not set to “0”

Change Max connection from “1” to “4” to allow connections from remote computers for testing.

Note the default “4001” setting for “Local TCP Port.” The IP Address and this port number are the values that you will enter in RescueLogic for the socket connection.

Click “Submit.”



Now click “Save/Restart.”

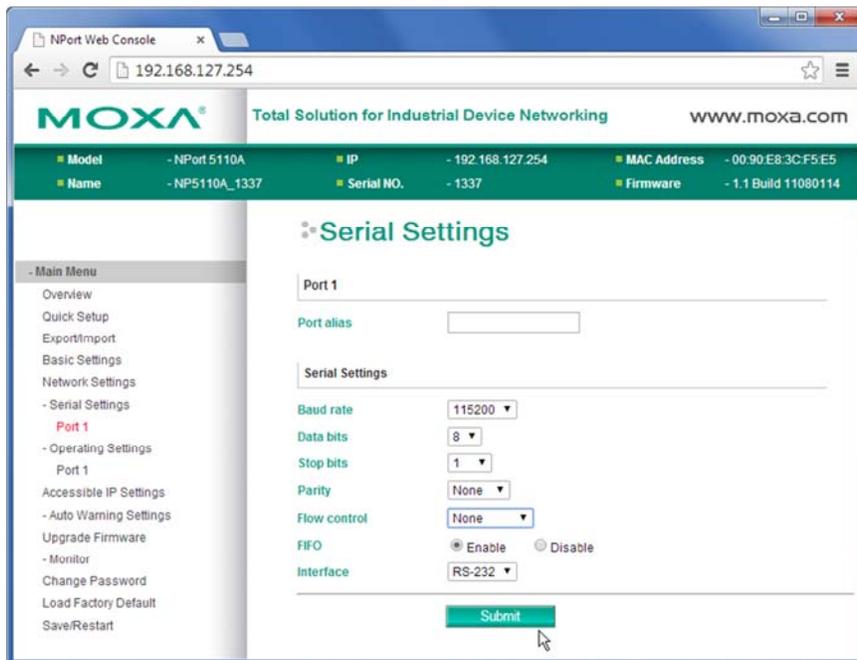


Configure Serial Settings

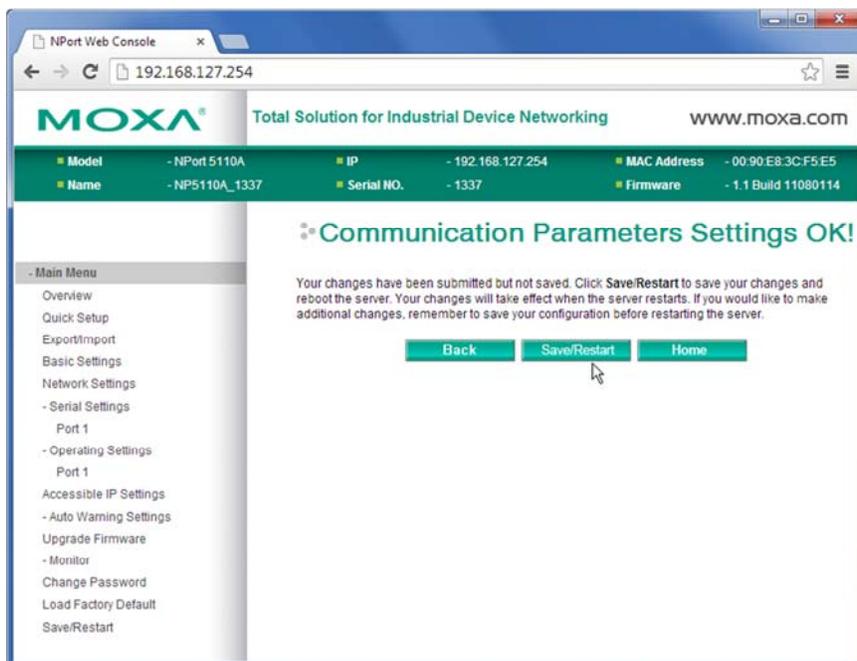
The serial settings of the NPort must match the alarm panel or printer interface module that you will connect to.

Click “Port 1” on the left menu column, under Serial Settings. Set the baud rate, data bits, stop bits, and parity to match the values specified in the alarm system manufacturer’s instructions.

Click “Submit.”



On the page that appears, click “Save/Restart.”



Configure Network Settings

Click “Network Settings,” under the “Main Menu” in the left-hand column. The network administrator should have provided a static IP Address for use with each serial server. Fill in the blanks to match your system’s information: change the IP Address, Gateway, Netmask and DNS Servers. Leave IP configuration set with the default value “Static.”

The SNMP settings are not used, so you can leave the factory defaults

The screenshot shows the MOXA NPort Web Console interface. At the top, there's a navigation bar with the MOXA logo and the text "Total Solution for Industrial Device Networking" and "www.moxa.com". Below this is a status bar showing system information: Model (NPort 5110A), IP (192.168.127.254), MAC Address (00:90:E8:3C:F5:E5), Name (NP5110A_1337), Serial NO. (1337), and Firmware (1.1 Build 11080114). The main content area is titled "Network Settings" and contains several sections: "Network Settings" with input fields for IP address, Netmask, Gateway, and a dropdown for IP configuration (set to "Static"); "DNS server 1" and "DNS server 2" fields; "SNMP Settings" with radio buttons for "Enable" (selected) and "Disable", and input fields for "Community name", "Contact", and "Location". A left-hand menu lists various configuration options like "Overview", "Quick Setup", "Export/Import", "Basic Settings", "Network Settings", "Serial Settings", "Operating Settings", "Accessible IP Settings", "Auto Warning Settings", "Upgrade Firmware", "Monitor", "Change Password", "Load Factory Default", and "Save/Restart".

Scroll to the bottom and click “Submit.”

This screenshot shows a close-up of the bottom portion of the configuration page. It features an "Auto report period" field set to "10" with the unit "seconds" next to it. Below this is a prominent green "Submit" button with a mouse cursor clicking on it.

Another page appears to confirm that you are ready to make the changes permanent. Click “Save/Restart.”

The screenshot shows a confirmation page titled "Network Settings OK!". The page has the same MOXA header and status bar as the previous screenshots. The main content area contains a message: "Your changes have been submitted but not saved. Click Save/Restart to save your changes and reboot the server. Your changes will take effect when the server restarts. If you would like to make additional changes, remember to save your configuration before restarting the server." At the bottom of the message area, there are three buttons: "Back", "Save/Restart" (which is highlighted with a mouse cursor), and "Home". The left-hand menu is also visible on the left side of the page.

The IP Address is now changed, and your browser must be changed to match.

When you click on a link, you might see a page with a message that the page failed to load.

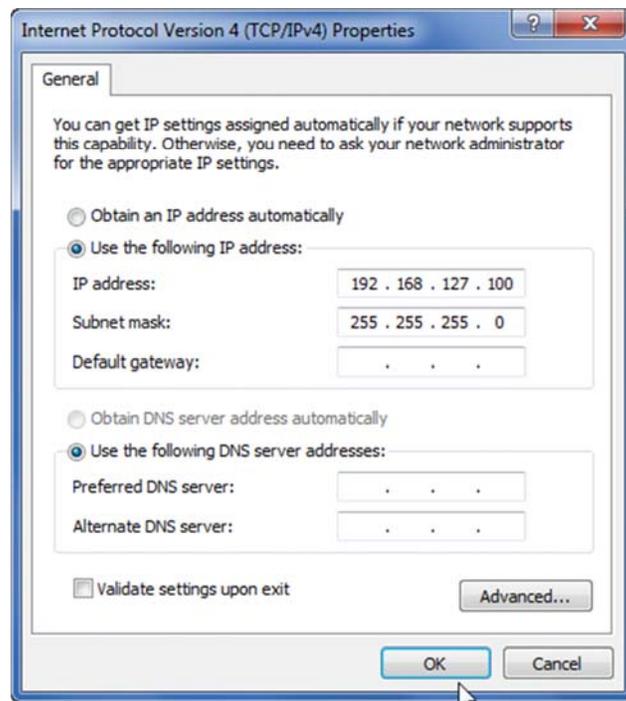


Type the changed address in your browser's Address bar and Refresh to see the MOXA configuration page again.



Your serial server is now ready to communicate with RescueLogic. See the *RescueLogic Users Guide* chapter on Communication Paths for the next steps.

Helpful Hint: If your browser does not find the server with the default or the newly assigned IP Address, check the IP settings of your computer's network adapter. The left three quad elements of the IP Address represent the network, and the right quad element is unique for each endpoint device. Remember to write down your computer's original settings first. Contact your network administrator if these settings are not familiar to you.



About the Author

Dan Horon is the President of Cadgraphics Incorporated, makers of RescueLogic software for fire alarm and security systems. Dan was the chair of the NFPA Task Group on Circuits and Pathways when the chapter was added to NFPA 72. He still serves on the NFPA Protected Premises Technical Committee, as well as the Technical Correlating Committee Task Group on Networks. You can email him at dan@rescuelogic.com.

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Patent Information

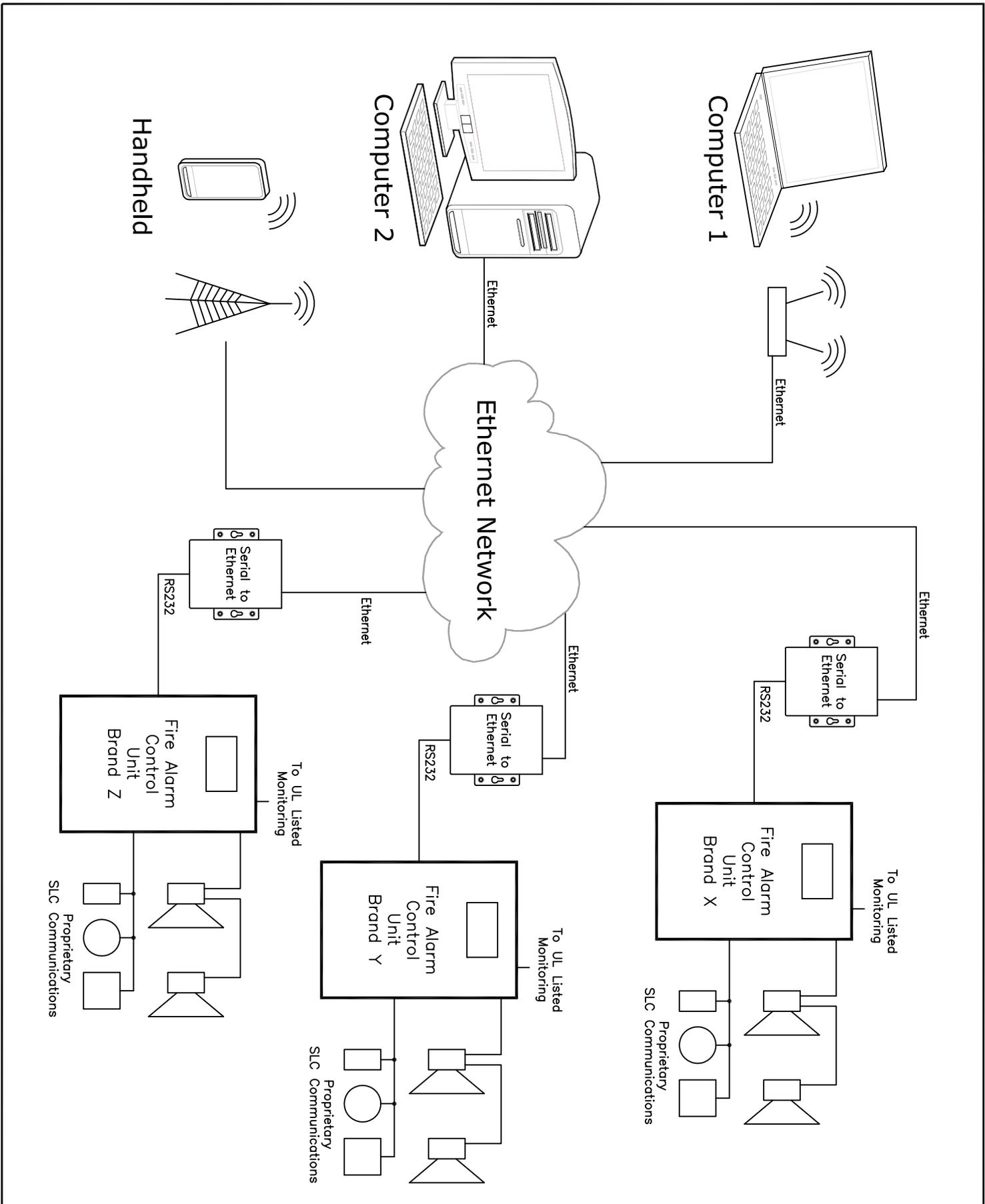
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SYSTEM:	0-0
DRAWN BY	DJH
SCALE	N.T.S.
DATE	04/07/14
SHEET	1 of 1

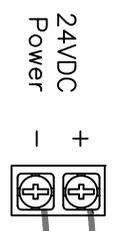
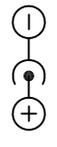
RescueLogic® Monitoring Network
 (3) Fire Alarm Control Units
 Ethernet Serial Servers

NO.	REVISION	BY	DATE

CADGRAPHICS[®]
 5537 Woodlawn Boulevard
 Minneapolis, MN 55417
www.RescueLogic.com

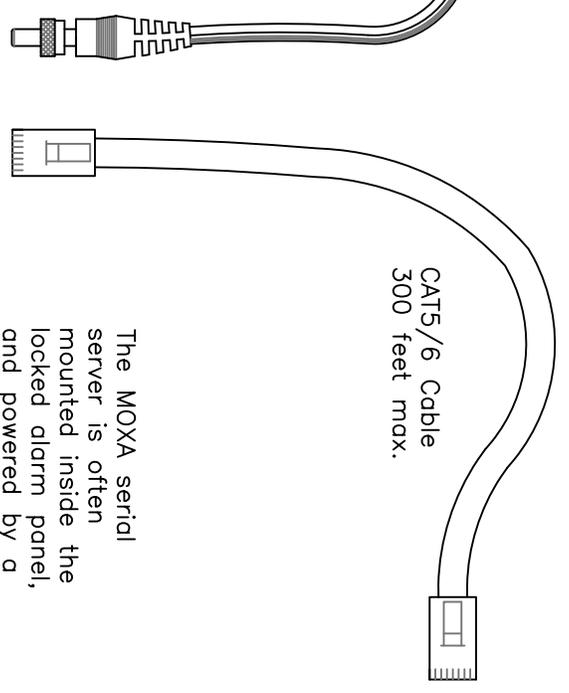
Power range is 9–48VDC.
47.3 mA current @24V
Both + and – connections
on the NPort are isolated
from chassis ground.

Measure polarity of the power
cable before applying power to
the NPort. The center connector
is positive (+).



CAT5/6 Cable
300 feet max.

To network switch

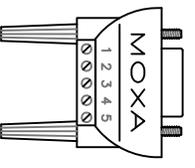


The MOXA serial
server is often
mounted inside the
locked alarm panel,
and powered by a
battery-backed
power source.

The 'A' in the part number
indicates the screw-covered
barrel connector for power.
Order MOXA power supply:
PWR-12150-USJP-SA-T

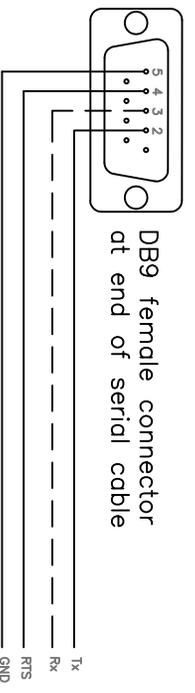
The '-T' in the
part number
indicates a wide
range of allowable
temperature.
-40 to 75°C
(-40 to 167°F)

Mount the server with
1/2-inch strips of 3M™
Dual Lock™ Reclosable
Fastener P/N SJ3540



DB9 Term.	1	2	3	4	5	6	7	8	9
	2	1	3	4	5	N/C	N/C	N/C	N/C

Optional terminals for RS232
MOXA P/N MINI DB9F-TO-TB
DB9 Female to Terminal Block



Auxiliary RS232 data
port in alarm panel,
often designated as
the printer port.

Normally, communication is one-way. Do not connect the Rx wire at
the alarm panel unless it is required to receive signals.

The RS232 wiring diagram is shown as an example only. The exact
labels on a fire panel may be different, sometimes reversed.

SYSTEM:	03-147
DRAWN BY	DJH
SCALE	N.T.S.
DATE	03/20/14
SHEET	1 of 1

Fire Alarm Monitoring Network MOXA Serial Server Installation

NO.	REVISION	BY	DATE
1	Add MINI DB9F-TO-TB terminal block & misc.	DJH	3/27/14

CADGRAPHICS

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