Integration Note

Manufacturer:	Moxa
Model Number(s):	**NPort 5410**
Core Module Version:	4.0 Build 1463 and Newer
Document Revision Date:	1/9/2013

Overview and Supported Features

The Moxa NPort 5410 is a Rack mountable serial device server. From one Ethernet connection the server provides 4 serial ports that can be used with the **g!** system.

This Device supports the following features:

RS-232 Ports: The NPort 5410 includes (4) RS-232 DB9 ports that can be used with **g!** system via its Ethernet connection.

Rack Mount or free standing: The unit comes with both DIN Rail mount ears and rubber feet for mounting options.

Installation Overview

1. During the rough-in phase, pull Cat5 from the NPort location back to the System Enclosure.
2. Also during rough-in, pull Cat5 from each serial controlled device back to the location of the NPort. Terminate and test all Cat5 connections.
3. Configure the NPort using its front panel display, see **NPort Configuration** below.
4. Connect the serial devices to be controlled to the NPort.
5. Connect the NPort to the **g!** system electrically, see **Connection Diagram** below.
6. Configure the **g!** system to use the NPort serial ports, see **g! Configuration** below.

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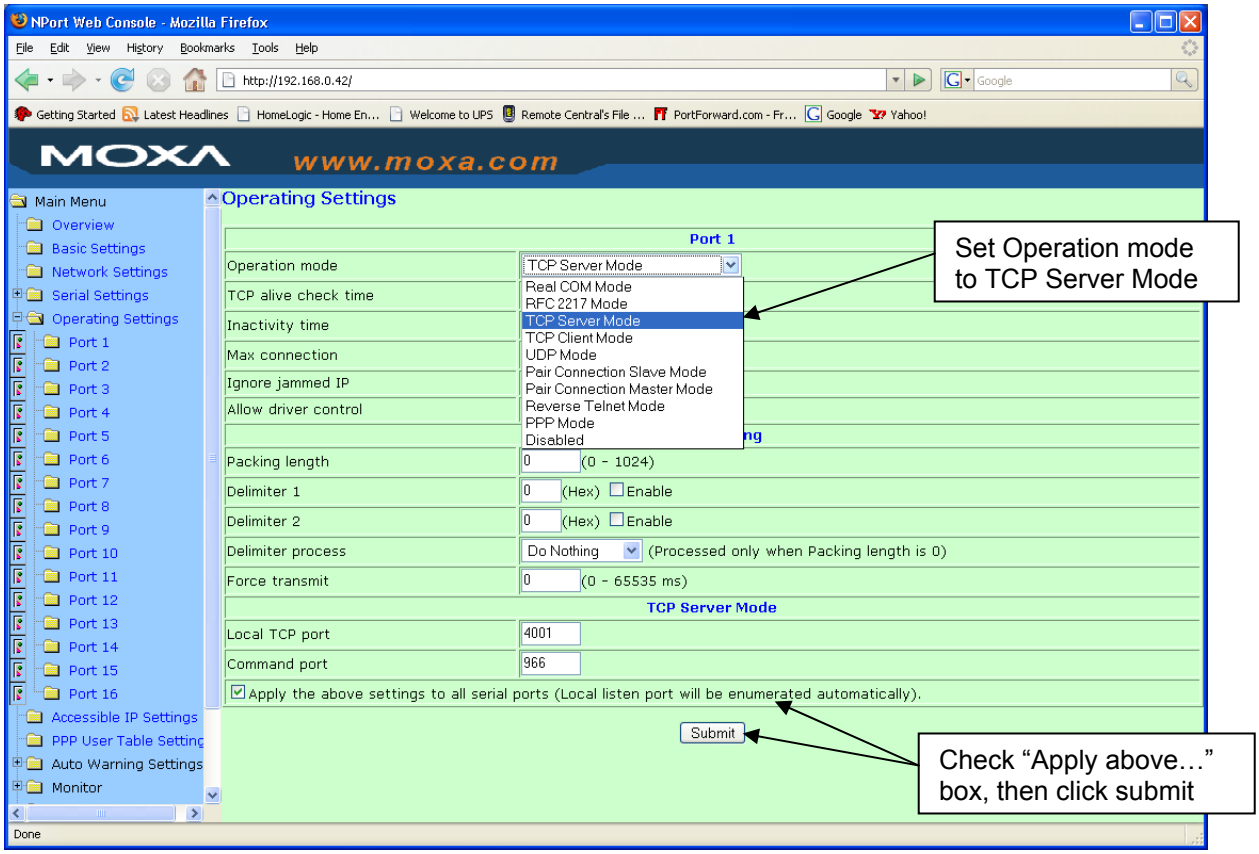
NPORT CONFIGURATION:

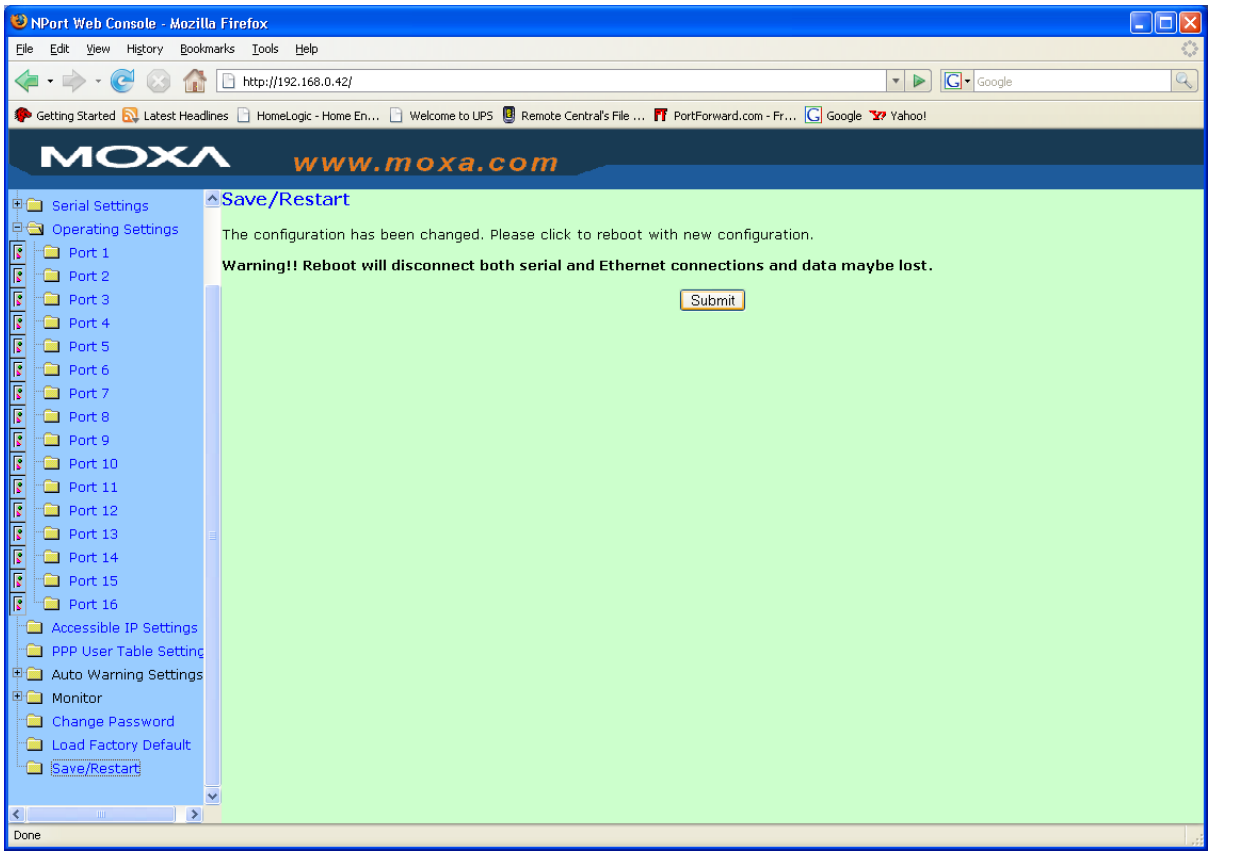
The NPort out of the box is configured with a default IP of 192.168.127.254. This IP will need to be changed to work on the g! system network. This can be done using the front panel display and buttons as follows:

1. Power up the NPort. Once it has booted it will show its serial number and current IP address in the front panel display.
2. Press **Menu** once to access the main menu.
3. Press the **Down Arrow** once to show **Network Setting** then press **sel** to access the network menu.
4. Press the **Down Arrow** four times to show **IP address** then press **sel**.
5. Use the **Up and Down Arrows** to change the digits, the **sel** button to advance the curser, and set the IP to the desired address. In a g! system network we recommend setting the first NPort to 192.168.0.42, the second to 192.168.0.43 and so on.

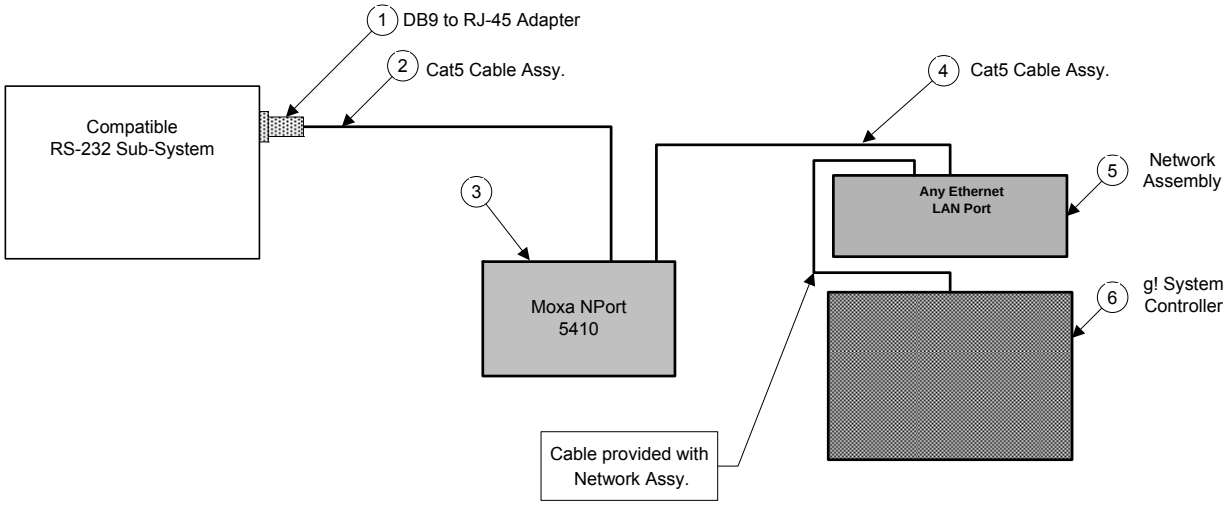
   Note: Make sure that these addresses are not already in use prior to setting the NPort address.

6. Press **Menu** twice until the **save change** is displayed then press the **Up Arrow** to select **Yes**.
7. Press the **sel** button to reboot the system with the new IP address.
8. Open a browser and type in the IP of the NPort to get to its web configuration page.
9. From the main menu expand **Operating Settings** then click on **Port 1.**
10. In the **Operation mode** drop down box select **TCP Server Mode**, check the **"apply the above settings to all serial ports"** then click **submit** button. See the first screenshot below.
11. From the menu on the left at the bottom click **Save/Restart** then click the **submit** button to save the changes and reboot the NPort. See second screenshot below.
12. Once the NPort reboots it should be ready to use with **g!**.


NPort Web Console - Mozilla Firefox
http://192.168.0.42/
MOXA www.moxa.com
Main Menu
Overview
Basic Settings
Network Settings
Serial Settings
Operating Settings
Port 1
Port 2
Port 3
Port 4
Port 5
Port 6
Port 7
Port 8
Port 9
Port 10
Port 11
Port 12
Port 13
Port 14
Port 15
Port 16
Accessible IP Settings
PPP User Table Setting
Auto Warning Settings
Monitor
Operating Settings
Port 1
Operation mode
TCP alive check time
Inactivity time
Max connection
Ignore jammed IP
Allow driver control
Packing length
Delimiter 1
Delimiter 2
Delimiter process
Force transmit
TCP Server Mode
Local TCP port
Command port
Apply the above settings to all serial ports (Local listen port will be enumerated automatically).
Submit
Real COM Mode
RFC 2217 Mode
TCP Server Mode
TCP Client Mode
UDP Mode
Pair Connection Slave Mode
Pair Connection Master Mode
Reverse Telnet Mode
PPP Mode
Disabled
(0 - 1024)
(Hex) Enable
(Processed only when Packing length is 0)
(0 - 65535 ms)
4001
966
Done
Set Operation mode to TCP Server Mode
Check “Apply above…” box, then click submit


NPort Web Console - Mozilla Firefox
http://192.168.0.42/
MOXA www.moxa.com
Serial Settings
Operating Settings
Port 1
Port 2
Port 3
Port 4
Port 5
Port 6
Port 7
Port 8
Port 9
Port 10
Port 11
Port 12
Port 13
Port 14
Port 15
Port 16
Accessible IP Settings
PPP User Table Setting
Auto Warning Settings
Monitor
Change Password
Load Factory Default
Save/Restart
Save/Restart
The configuration has been changed. Please click to reboot with new configuration.
Warning!! Reboot will disconnect both serial and Ethernet connections and data maybe lost.
Submit
Done

CONNECTION DIAGRAM:



BILL OF MATERIALS FOR RS-232 CONNECTIONS

#	Device	Manufacturer	Part Number	Protocol	Connector Type	Notes
1	DB9M to RJ45 Adapter	Installer	N/A	RS-232	DB-9 X RJ-45 Female	
2	Cat5 Cable Assy.	Installer	N/A	RS-232	RJ-45 Male X RJ-45 Male	Must terminate all 8 conductors
3	NPort 5410	Moxa	5410	RS-232 x IP	RJ-45 Female	
4	Cat5 Cable Assy.	Installer	N/A	IP	RJ-45 Male X RJ-45 Male	
5	Network Assembly	ELAN	NWA18	IP	RJ-45 Female X RJ-45 Female	Use any available LAN port
6	g! System Controller	ELAN	Various (e.g. HC-12)	IP	RJ-45 Female	

IMPORTANT! The Moxa NPort 5410 uses *STANDARD* DB9 Pin-outs.
The special Moxa RJ45/DB9 adapters used by the 5610 are *NOT* required.
Use ELAN HA-CB-308 and HA-CB-328 (NULL) adapters.

g! Configuration Details

The following sections provide details on configuring the NPort. The first step is to define the NPort as a device in the configurator to allow HomeLogic to access its serial ports. The second step is to define the serial ports to be used by devices in the **g!** system.

In the tables, the following items appear:

- o "<Select>" Select the desired item from the list (or drop-down) in the Configurator.
- o "<User Defined>", etc. Type in the desired name for the item.

1. Configuring NPort as a device

This table provides settings used in the Configurator to setup the NPort as a device that HomeLogic can communicate with. This step is done on the **Input/Output tab** in the configurator.

Devices	Variable Name	Setting	Comments
Communication Devices	**Name**	<User Defined> (Default: **New Device**)	Rename as desired
	Type	**Ethernet**	
	Communication Type	**MOXA NPORT 5410 4 PORT**	
	Location	<User Defined> (Not Required)	
	IP Address	<User Defined> (Default: **192.168.0.42**) (See Note 1)	
	Port	<User Defined> (Default: **80**)	

Notes:
1. By default, set the NPort to 192.168.0.42. If you have more than one NPort, set the second to 192.168.0.43 and so on.

2. Configuring a subsytem to use a NPort serial port

This table provides settings used in the Configurator to setup a subsystem to communicate using one of the NPort serial ports. This step is done on the tab of the configurator that the subsystem is configured on. For example, if using a security system with an NPort serial port then configure the following on the security tab. Finish the configuration by referring to the appropriate subsystem integration note.

Devices	Variable Name	Setting	Comments
Communication Devices	**Name**	<User Defined> (Default: **New Device**)	Rename as desired
	Type	**MOXA 5610/5410 PORT**	
	MOXA 5610 Port	**<select>**	select the port # that the subsytem is connected to.
	Communication Type	**<select>**	refer to integration note for the subsystem to be connected
	Location	<User Defined> (Not Required)	