

Accessing the Sysmac NJ across the Internet Quick Start Guide



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Overview:

Allowing remote access to an Omron Sysmac NJ is a fairly straightforward process. There are a few requirements that must be met to gain access:

- 1. Sysmac Studio version 1.08 or higher is required.
- 2. The IP address of the router that attaches the factory network to the Internet must be a static IP address, or if it is Dynamic, the IP address must be known to the remote programmer.
- 3. The built in Ethernet port on the Sysmac NJ must be used. A CJ1W-EIP21 module connected to a Sysmac NJ cannot be used for programming

Setup:

For the purposes of this document, the example IP Addresses will be used



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NJ Ethernet Port Setup:

The proper IP Address, Subnet Mask, and Default Gateway must be set in the Sysmac NJ using Sysmac Studio. The Default Gateway IP Address is the IP Address of the LAN side of the router. This configuration must be synchronized into the NJ controller.

🔧 Configurat	tions and Setup							
Built-in Et	Built-in EtherNet/IP Port S× +							
TCP /IP	TCP/IP Settings							
	▼ IP Address							
עסע	Fixed setting							
	IP address 192 . 168110							
	Subnet mask 255 . 255 . 2550							
	Default gateway 192 . 1681 . 100							
FTP	Obtain from BOOTP server. Fix at the IP address obtained from BOOTP server.							

Router Setup

In the Router, Port Forwarding (sometimes called Rules) must be used, and the 4 ports shown must be forwarded to the Sysmac NJ. The following is shown as an example, although different routers will have different setup screens.

Port Range F	orwarding					
Port Range						
Application	Start	to	End	Protocol	IP Address	Enable
Studio	2223	to	2224	UDP 🗸	192.168.1 .10	✓
Studio	9610	to	9610	TCP 🗸	192.168.1 .10	\checkmark
Studio	80	to	80	TCP 🗸	192.168.1 .10	\checkmark
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Testing the connection:

In Sysmac Studio, specify the WAN IP Address of the router as the target IP Address.

	Communications Setup						
	Connection type						
	Select a method to connect with the Controller to use every time you go online.						
	 Direct connection via USB Direct connection via Ethernet Remote connection via USB Ethernet connection via a hub Select one method from these options at every online connection. Direct connection via USB 						
	Direct connection via Ethernet Remote connection via USB Ethernet connection via a hub						
l	Remote IP Address						
	Select a method to connect with the Controller to use every time you go online.						
	USB Communications Test Ethernet Communications Test						

There will be a dialog box such as the one shown below to indicate a difference between the NJs true IP Address, and the IP Address that Sysmac Studio is using for connection. Click yes to connect.

Sysmac Studio					
The IP address specified in the communications setup and Controller's IP address are different. IP address specified in the communications setup: 1.2.3.4 Controller's IP address: 192.168.1.10 In the connection by port forwarding, the IP address specified in the communications setup and Controller's IP address are different. Are you sure to connect in this status? (Y/N)					
<u>Y</u> es <u>N</u> o					

You should now be online with the Sysmac NJ. If the connection fails, verify all the steps in the procedure.

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