



# Redundant ControlNet to PROFIBUS PA Linking Device

Catalog Number 1788-CN2PAR

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## About the Linking Device

The 1788-CN2PAR provides a fast and integrated solution for adding PROFIBUS-PA field devices to any Logix platform. These linking devices provide a direct link between PROFIBUS-PA and EtherNet/IP, with no intermediate PROFIBUS-DP layer required.

## Additional Resources

These documents contain additional information concerning related products from Rockwell Automation.

Resource	Description
EtherNet/IP and ControlNet to PROFIBUS PA Linking Device User Manual, publication <a href="#">1788-UM058</a>	Provides details on how to install and operate the 1788-EN2PAR EtherNet/IP to PROFIBUS PA and 1788-CN2PAR ControlNet to PROFIBUS PA linking Devices.
Industrial Automation Wiring and Grounding Guidelines, publication <a href="#">1770-4.1</a>	Provides general guidelines for installing a Rockwell Automation industrial system.

You can view or download publications at <http://www.rockwellautomation.com/literature/>.

To order paper copies of technical documentation, contact your local Allen-Bradley® distributor or Rockwell Automation® sales representative.

## Installation Requirements

The following software and hardware tools are required to successfully install and configure the 1788-CN2PAR linking device.

### Software Requirements

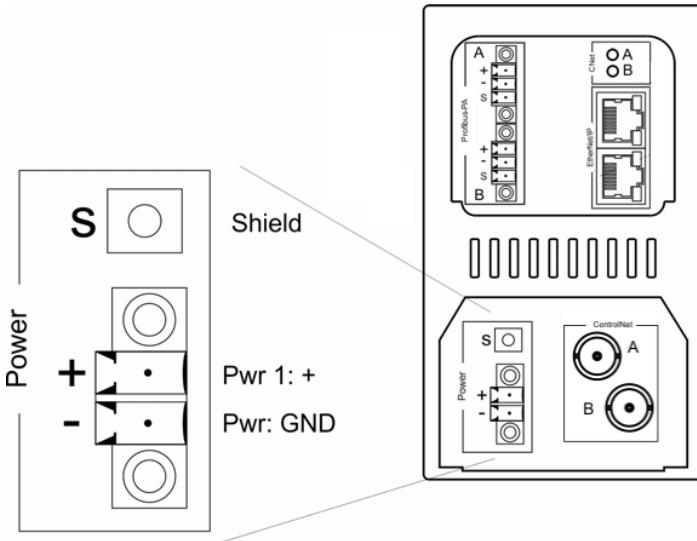
The following software is needed to operate the 1788-CN2PAR linking device:

- The RSLogix™ 5000 Add-on Profile AOP is required to configure and perform diagnostics on the 1788-CN2PAR linking device.
- The Device Type Manager (catalog number 1788-CN2PAR DTM) is required for Asset Management connectivity with field devices.

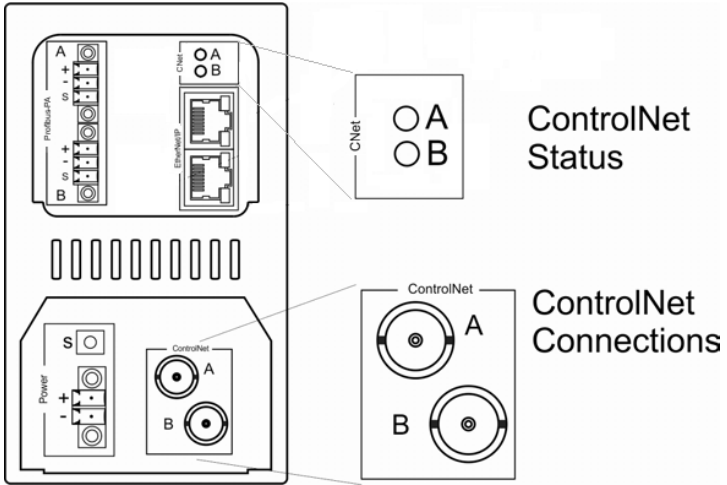
### Hardware Requirements

The following hardware is required to install and configure the 1788-CN2PAR linking device:

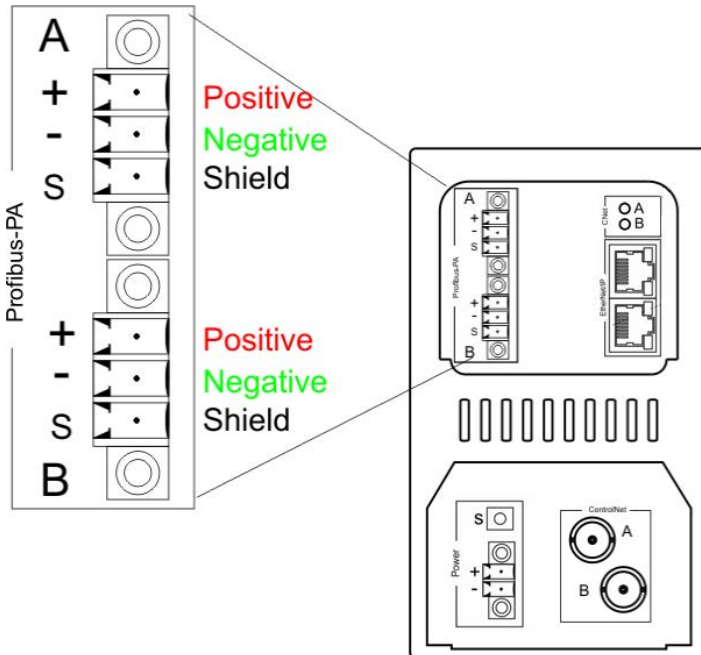
- A 24...32V DC power supply.



- A ControlNet connection via BNC connectors.



- A PROFIBUS PA network using the IEC61158-2 cable color coding.



## Configuration

Complete the following instructions to configure the 1788-CN2PAR linking device.

### Configure the ControlNet Node Address

Use the switches found under the front cover on the module to set the ControlNet node address for the 1788-CN2PAR linking device.

### Configure an Ethernet Address

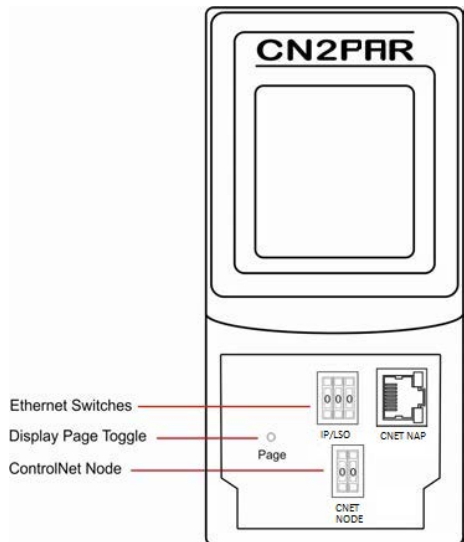
The module has BOOTP enabled when shipped. You can set an address via a BOOTP server or set the hardware switches to a specific IP address. See [Use BOOTP to Set the IP Address](#) on page 4, or [Use Switches to Set the IP Address](#) on page 4 for details. The switches can be found under the front cover of the module.

#### *Use BOOTP to Set the IP Address*

1. Set the Ethernet switches to 888 (factory default).
2. Apply power to the linking device.
3. Set the IP address by using any BOOTP server.
4. Once the new IP address has been set, power down the linking device.
5. Return the switches to 000.
6. Apply power to the linking device.

#### *Use Switches to Set the IP Address*

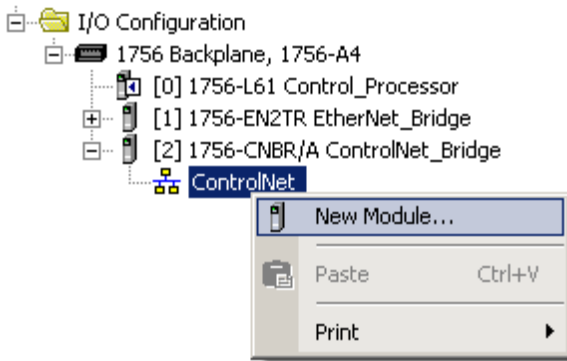
To set the IP address of the linking device to the 192.168.1.xxx sub net, set the switches to the required last three digits.



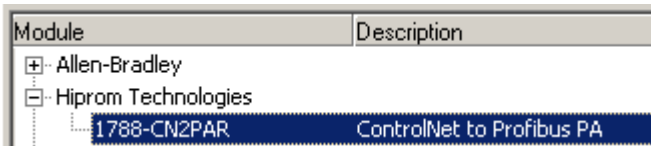
## Add a 1788-CN2PAR Module in RSLogix 5000 Software

The module must be added to the RSLogix 5000 IO tree by selecting the 1788-CN2PAR module (under an Allen-Bradley Ethernet bridge, such as CN2T).

1. Right-click the Ethernet bridge and choose New Module.



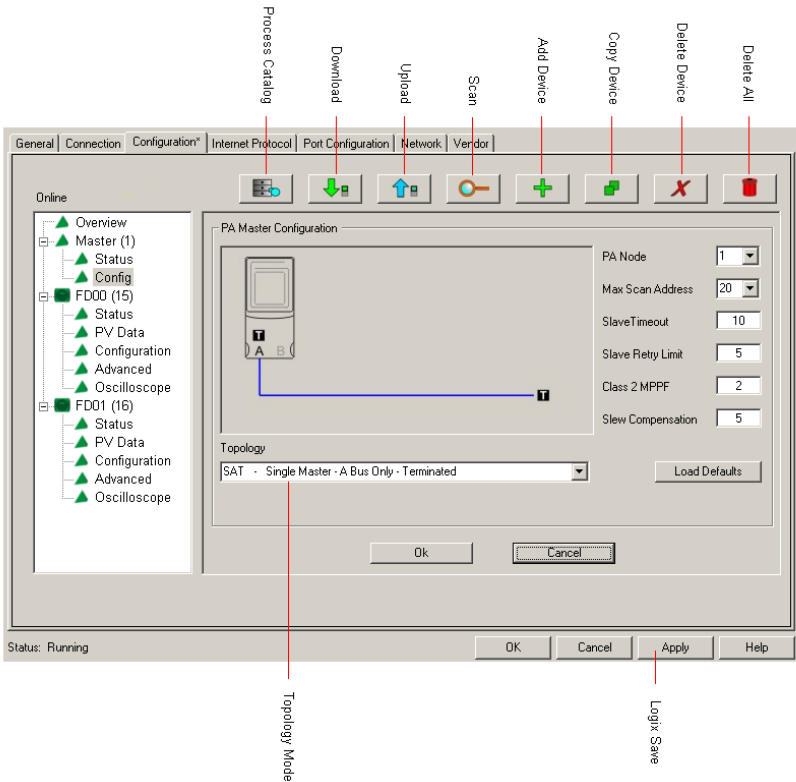
2. Expand the Hiprom Technologies option and select 1788-CN2PAR.



The Module Properties dialog box appears.

3. Type the module's Name, Description, IP Address, and RPI.
4. Click OK.
5. Open RSNetWorx software for ControlNet and add the module to the schedule.

- Open the 1788-CN2PAR linking device's Module Properties dialog box and click the Configuration tab.



- Configure the linking device by setting the required Topology mode and Max Scan Address.
- Download the configuration to your controller.
- Go online with the controller to see all attached field devices, which will appear in the Configuration tree on the left side below the Master.

Field devices can now be configured.

## Operation

The following features can be used to view the data and status of the field devices connected to the 1788-CN2PAR linking device.

## RSLogix 5000 Software

The data and status for each field device can be found in FieldDevice tags of the profile as shown below.

[-] PAR01:IA.FieldDevice00	{...}	{..	
[+] PAR01:IA.FieldDevice00.PANode	15		Decimal
[-] PAR01:IA.FieldDevice00.OnlineRunning	1		Decimal
[-] PAR01:IA.FieldDevice00.ConfigFault	0		Decimal
[-] PAR01:IA.FieldDevice00.ExtDiagAvail	0		Decimal
[-] PAR01:IA.FieldDevice00.ParameterFault	0		Decimal
[-] PAR01:IA.FieldDevice00.ParamaterReq	0		Decimal
[-] PAR01:IA.FieldDevice00.FreezeMode	0		Decimal
[-] PAR01:IA.FieldDevice00.SyncMode	0		Decimal
[-] PAR01:IA.FieldDevice00.WatchDog	0		Decimal
[+] PAR01:IA.FieldDevice00.PAIdent	16#04c2		Hex
[-] PAR01:IA.FieldDevice00.Data	{...}	{..	
[-] PAR01:IA.FieldDevice00.Data.PVReal1	-0.7292669		Float
[-] PAR01:IA.FieldDevice00.Data.PVReal2	774.1655		Float
[-] PAR01:IA.FieldDevice00.Data.PVReal3	0.0		Float
[-] PAR01:IA.FieldDevice00.Data.PVReal4	0.0		Float

## Display

The LCD will display the status of Master as well as each field device. More detail can be seen by pressing the Page button under the front cover.



Display	% of packets received
>>>	95+
>>	80+
>	70+
x	60+
xx	50+
xxx	Below 50
???	Unknown

## Rockwell Automation Support

Rockwell Automation provides technical information on the Web to assist you in using its products.

At <http://www.rockwellautomation.com/support>, you can find technical manuals, technical and application notes, sample code and links to software service packs, and a MySupport feature that you can customize to make the best use of these tools. You can also visit our Knowledgebase at <http://www.rockwellautomation.com/knowledgebase> for FAQs, technical information, support chat and forums, software updates, and to sign up for product notification updates.

For an additional level of technical phone support for installation, configuration and troubleshooting, we offer TechConnect<sup>SM</sup> support programs. For more information, contact your local distributor or Rockwell Automation representative, or visit <http://www.rockwellautomation.com/support/>.

## Installation Assistance

If you experience a problem within the first 24 hours of installation, please review the information that's contained in this manual. You can also contact a special Customer Support number for initial help in getting your product up and running.

United States or Canada	1.440.646.3434
Outside United States or Canada	Use the <a href="#">Worldwide Locator</a> at <a href="http://www.rockwellautomation.com/support/americas/phone_en.html">http://www.rockwellautomation.com/support/americas/phone_en.html</a> , or contact your local Rockwell Automation representative.

## New Product Satisfaction Return

Rockwell Automation tests all of its products to ensure that they are fully operational when shipped from the manufacturing facility. However, if your product is not functioning and needs to be returned, follow these procedures.

United States	Contact your distributor. You must provide a Customer Support case number (call the phone number above to obtain one) to your distributor to complete the return process.
Outside United States	Please contact your local Rockwell Automation representative for the return procedure.

## Documentation Feedback

Your comments will help us serve your documentation needs better. If you have any suggestions on how to improve this document, complete this form, publication [RA-DU002](#), available at <http://www.rockwellautomation.com/literature/>.

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