Powering Business Worldwide

Installation instructions

PDU Network Module

eNMC2

English

1 Installing the Network Management Module

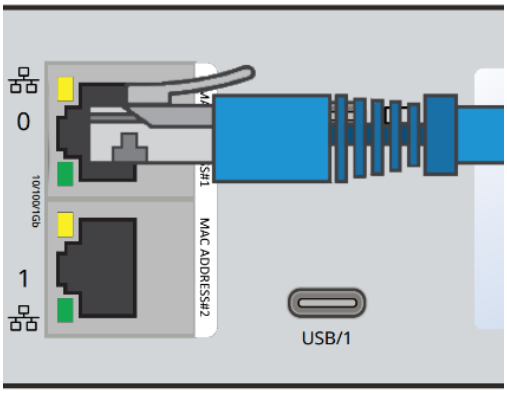
1.1 Accessing the Network Module

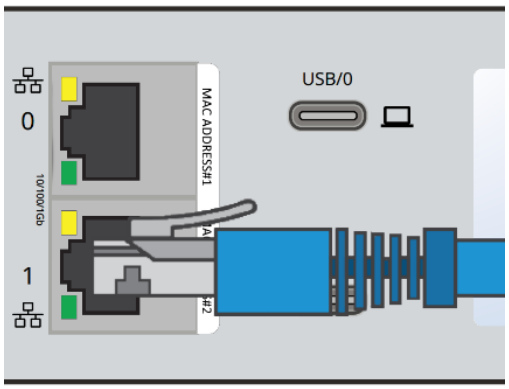
1.1.1 Accessing the web interface through Network

A- Connecting the network cable

⚠ Security settings in the Network Module may be in their default states. For maximum security, configure through a USB connection before connecting the network cable.

Connect a standard *gigabit compatible shielded ethernet cable (F/UTP or F/FTP)* between the network connector on the Network Module and a network jack.





B- Accessing the web interface

⚠ It is highly recommended that browser access to the Network Module is isolated from outside access using a firewall or isolated network.

STEP 1 – On a network computer, launch a supported web browser. The browser window appears.

STEP 2 – In the Address/Location field, enter https://***[IP address]*** with the static IP address of the Network Module.

STEP 3 – The login screen appears.

STEP 4 – Enter the user name in the User Name field. The default user name is **admin**.

STEP 5 – Enter the password in the Password field. The default password is **admin**.

STEP 6 – The password must be changed at first login.

STEP 7 – Click **Login**. The Network Module web interface appears.

At first login:

STEP 8 - Accept License Agreement. The Network Module web interface appears.

1.1.2 Finding and setting the IP address

A- Your network is equipped with a BOOTP/DHCP server (default)

1 Read from the device LCD

If your device has an LCD, from the LCD's menu, navigate to Identification>>>"COM card IPv4".

- Note the IP address of the card.
- Go to the section: Accessing the web interface through Network.

2 With web browser through the configuration port

For example, if your device does not have an LCD, the IP address can be discovered by accessing the web interface through RNDIS and browsing to Settings>Network.

To access the web interface through RNDIS, see the Accessing the web interface through RNDIS section.

- Navigate to Contextual help>>>Settings>>>Network & Protocol>>>IPV4.
- Read the IPv4 settings.

B- Your network is not equipped with a BOOTP/DHCP server

1 Define from the configuration port

The IP address can be defined by accessing the web interface through RNDIS.

To access web interface through RNDIS, see the Accessing the web interface through RNDIS section.

Define the IP settings:

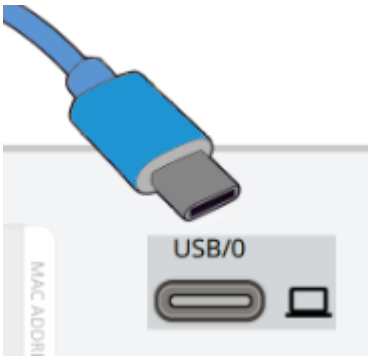
- Navigate to Contextual help>>>Settings>>>Network & Protocol>>>IPV4.
- Select Manual (Static IP).
- Input the following information: Address, Subnet Mask, Default Gateway
- Save the changes.

1.1.3 Accessing the web interface through RNDIS

This connection is used to access and configure the Network Module network settings locally through a RNDIS (Ethernet over USB interface).

A- Connecting the configuration cable

1. Connect aUSB-C cable to the USB-C connector on the host computer.
2. Connect the cable to the Settings connector on the Network Module.



B- Web interface access through RNDIS

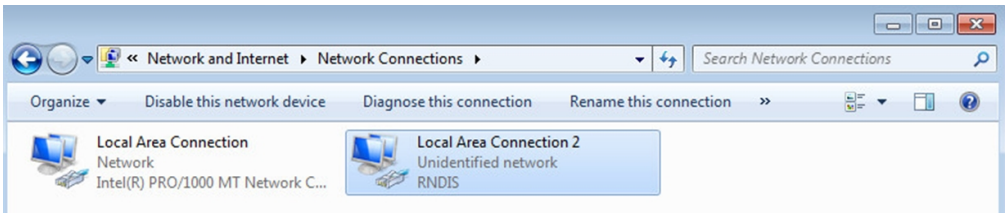
1 Configuring the RNDIS

Automatic configuration

RNDIS driver is used to emulate a network connection from USB.
After the card is connected to the PC, **Windows**® OS will automatically search for the RNDIS driver.
On some computers, the OS can find the RNDIS driver then configuration is completed, and you can go to Accessing the web interface.
On some others it may fail then proceed to manual configuration.

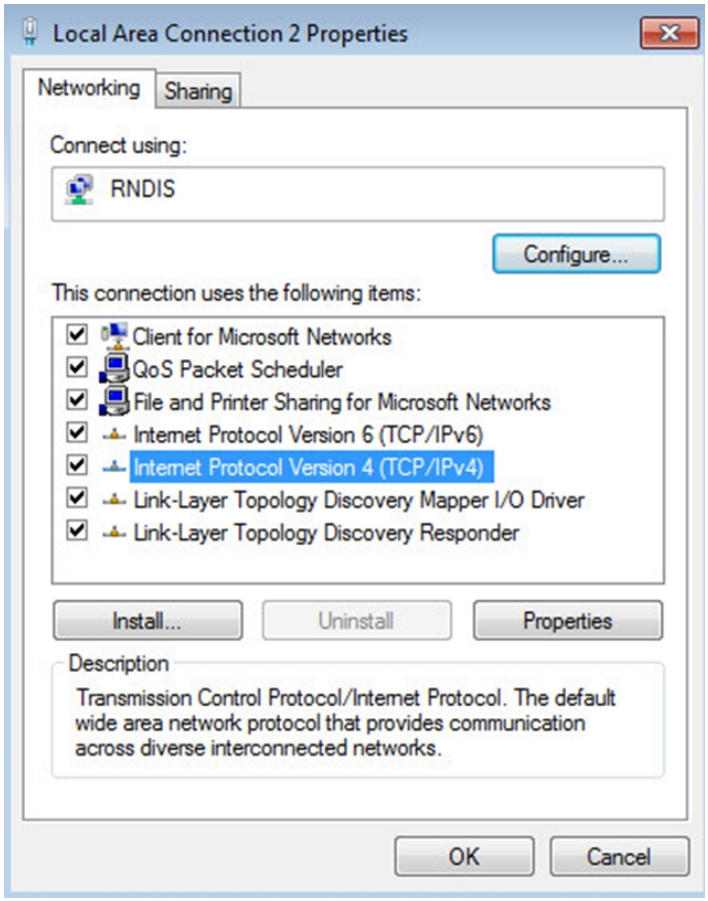
Manual configuration

STEP 1 – In case **Windows**® OS fails to find driver automatically, go to the Windows control panel>Network and sharing center>Local area connection



STEP 2 – Right click on the RNDIS local area connection and select Properties.

STEP 3 – Select Internet Protocol Version 4 (TCP/IPv4)" and press the Properties button



STEP 4 – Then enter the configuration as below and validate (IP = 169.254.0.150 and mask = 255.255.0.0), click OK, then click on Close.

2 Accessing the web interface

STEP 1 – Be sure that the Device is powered on.

STEP 2 – On the host computer, download the rndis.7z file from the website www.eaton.com/downloads and extract it. For more information, navigate to Servicing the Network Management Module>>>Accessing to the latest Network Module firmware/driver section.

STEP 3 – Launch setProxy.bat to add 169.254.* in proxy's exceptions list, if needed. For manual configuration, navigate to Installing the Network Management Module>>>Accessing the Network Module>>>Modifying the Proxy exception list section in the full documentation.

STEP 4 – Launch a supported browser, the browser window appears.

STEP 5 – In the Address/Location field, enter: **https://169.254.0.1**, the static IP address of the Network Module for RNDIS. The log in screen appears.

STEP 6 – Enter the user name in the User Name field. The default user name is **admin**.

STEP 7 – Enter the password in the Password field. The default password is **admin**.

STEP 8 – Click **Login**. The Network Module local web interface appears.

1.1.4 Accessing the card through serial terminal emulation

This connection is used to access and configure the Network Module network settings locally through Serial (Serial over USB interface).

A- Connecting the configuration cable

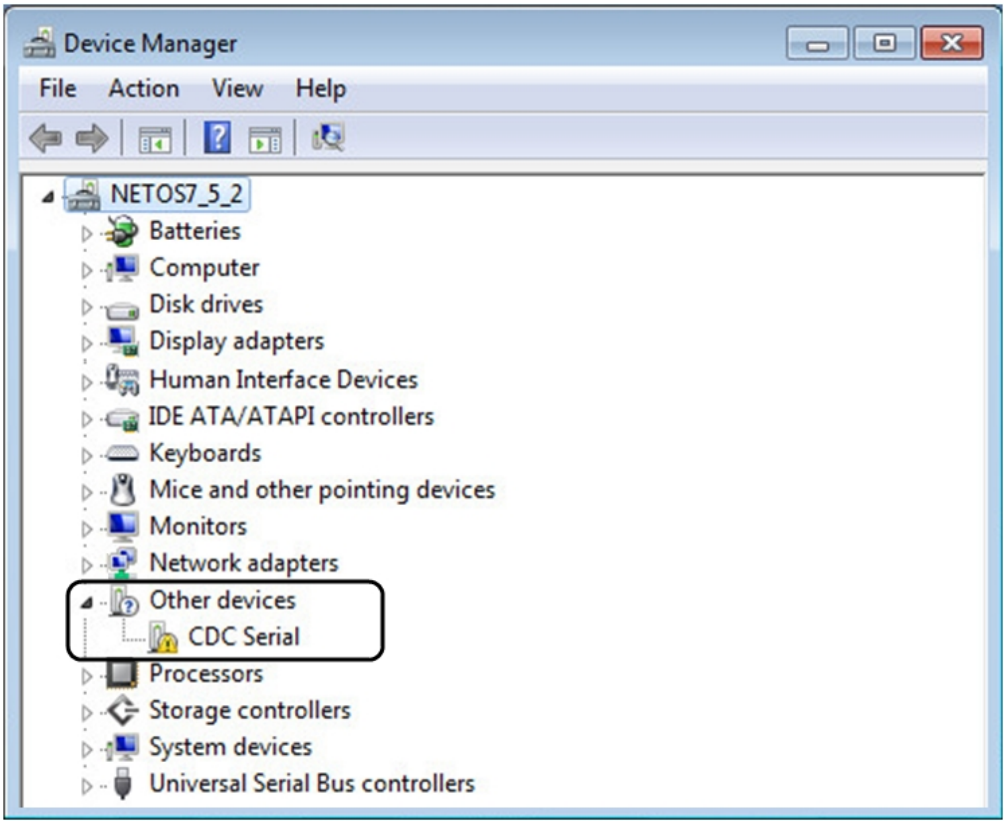
B- Manual configuration of the serial connection

ⓘ Serial driver is used to emulate a serial connection from USB.
After the card is connected to the PC, manual configuration of the driver is needed for **Windows**® OS to discover the serial connection.

STEP 1 – On the host computer, download the rndis.7z file from the website www.eaton.com/downloads and extract it.

STEP 2 – Plug the USB cable and go to **Windows**® Device Manager.

STEP 3 – Check the CDC Serial in the list, if it is with a yellow exclamation mark implying that driver has not been installed follow the steps 4-5-6-7 otherwise configuration is OK.



STEP 4 – Right click on it and select Update Driver Software. When prompted to choose how to search for device driver software, choose Browse my computer

for driver software. Select Let me pick from a list of device drivers on my computer.

STEP 5 – Select the folder where you have previously downloaded the driver file Click on Next.

STEP 6 – A warning window will come up because the driver is not signed. Select Install this driver software anyway

STEP 7 – The installation is successful when the COM port number is displayed for the Gadget Serial device in the **Windows**® Device Manager.

C- Accessing the card through Serial

It is intended mainly for automated configuration of the network and time settings of the network card. It can also be used for troubleshooting and remote reboot/reset of the network interface in case the web user interface is not accessible.

CLI can be accessed through:

- SSH
- Serial terminal emulation.

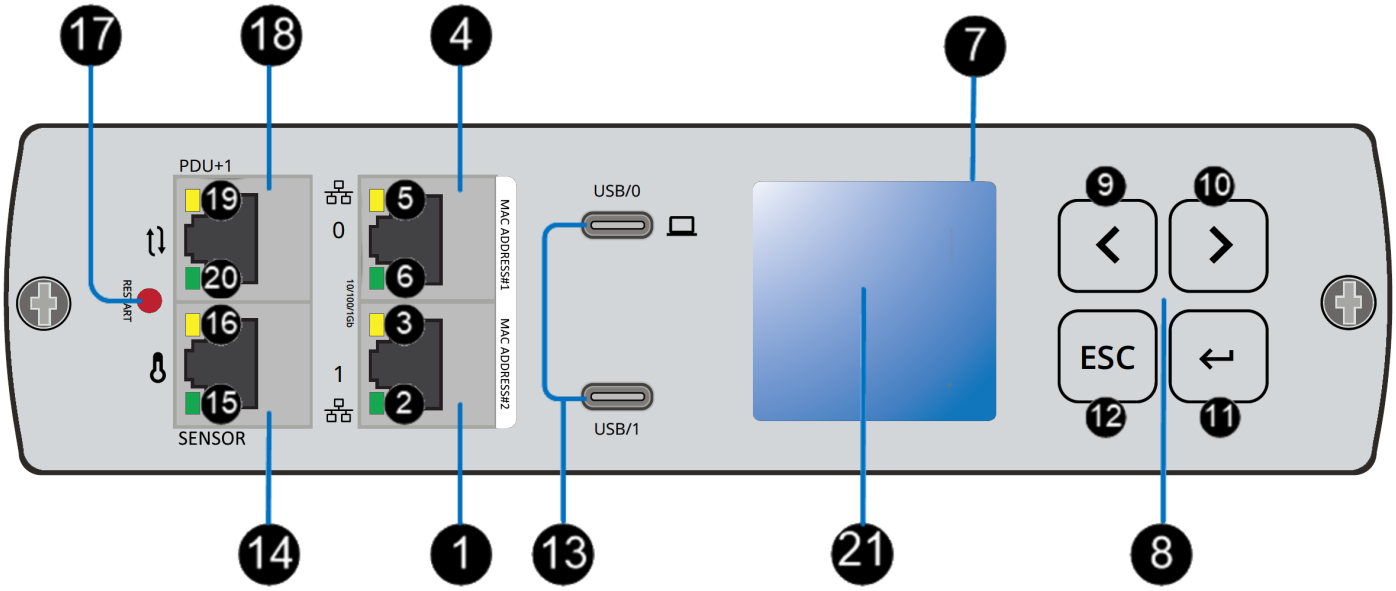
⚠ Changing network parameters may cause the card to become unavailable remotely. If this happens it can only be reconfigured locally through USB.

ⓘ You can see this list of available commands by typing in the CLI: ***?***
You can see the help by typing in the CLI: ***help***

For more details, refer to Information>>>CLI section in the Network Module User Guide on the Eaton website www.eaton.com/downloads.

2 Information

2.1 Front panel connectors and LED indicators



Nbr	Name	Description
1	Network connector	Ethernet port 1
2	Network speed LED	Flashing green sequences: • 1 flash — Port operating at 10Mbps • 2 flashes — Port operating at 100Mbps • 3 flashes — Port operating at 1Gbps
3	Network link/activity LED	• Off — PDU Network Module is not connected to the network. • Solid yellow — PDU Network Module is connected to the network, but no activity detected. • Flashing yellow — PDU Network Module is connected to the network and sending or receiving data.
4	Network connector	Ethernet port 0
5	Network speed LED	Flashing green sequences: • 1 flash — Port operating at 10Mbps • 2 flashes — Port operating at 100Mbps • 3 flashes — Port operating at 1Gbps
6	Network link/activity LED	• Off — PDU Network Module is not connected to the network. • Solid yellow — PDU Network Module is connected to the network, but no activity detected. • Flashing yellow — PDU Network Module is connected to the network and sending or receiving data.
7	LCD display	The LCD display provides information about load status, events, measurements, identification, and settings. The LCD interface also provides some basic configuration.
8	Navigation buttons	Navigate through the display with buttons.
9	Down	Press to scroll down on screen or menu.
10	Up	Press to scroll up on screen or menu.
11	Enter	Press it to select settings, enter a menu, or leave screen saver mode.
12	Escape	Press it to escape selection, leave a menu, or return to start-up screen.

13	USB-C connectors	USB/0 : Configuration port. Access to Network Module's web interface through RNDIS (Emulated Network port). Access to the Network Module console through Serial (Emulated Serial port). USB/0 and USB/1 : Network Module accessories ports. ⚠ ***Do not use for general power supply or USB charger.***
14	EMP port	To connect EMP sensor to the PDU Network module.
15	Power LED	• Off — PDU Network Module is not powering the EMP. • Solid green — PDU Network Module is powering the EMP.
16	Activity LED	• Off — PDU Network Module is not connected to the EMP. • Flashing yellow — PDU Network Module is connected to the EMP receiving data.
17	Restart button	Ball point pen or equivalent will be needed to restart: • Short press (<6s) — Safe software restart (firmware safely shutdown before restart). • Long press (>9s) — Forced hardware restart. ⓘ Restarting the Network module does not affect the power to the PDU outlets.
18	Power redundancy (PDU +1)	
19	Power redundancy status	• Off — no active redundancy • Solid yellow — the PDU Network Module is powered by another PDU Network Module through the redundancy port.
20	Power redundancy readiness	• Off — PDU Network Module is not connected to another PDU. • Solid green — The PDU Network Module is connected to another PDU Network Module power redundancy port.

2.2 Specifications/Technical characteristics

Module performance	
Date/Time backup	The RTC (CR1220 battery) is able to keep the date and the time when Network Module is OFF.
Functions	
Languages	English, French, German, Italian, Japanese, Russian, Simplified Chinese, Spanish, Traditional Chinese
Alarms/Log	Email, SNMP trap, web interface / Log on events
Network	Gigabit ETHERNET, 10/100/1000Mb/s, auto neg., HTTP 1.1, SNMP V1, SNMP V3, NTP, SMTP, DHCP
Security	Restricted to TLS 1.2
Supported MIBs	*PDU MIB* | *Sensor MIB*
Browsers	Google Chrome, Firefox, Safari
Settings (default values)	
IP network	DHCP enabled | NTP server: pool.ntp.org
Port	443 (https), 22 (ssh), 161 (snmp), 162 (snmp trap), 25 (smtp), 8883 (mqtts), 123 (ntp), 5353 (mdns-sd), 80 (http), 514 (syslog),636 (LDAP), 1812 (RADIUS)
Web interface access control	User name: admin | Password: admin
Settings/Device data connector	USB RNDIS Apipa compatible | IP address: 169.254.0.1 | Subnet mask: 255.255.0.0