

Stellaris Quick Start Guide

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Applies to products: RNX UPDU, RNX SPDU, Bachmann BN Essential

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1 Glossary

AUX	AUXiliary
CLI	Command Line Interface
COM	COMmunication
HTTP	HyperText Transfer Protocol
HTTPS	HyperText Transfer Protocol Secure
IP	Internet Protocol
MIB	Management Information Base (SNMP)
PC	Personal Computer
PDU	Power Distribution Unit
RS232	Recommended Standard 232
SNMP	Simple Network Management Protocol
SSH	Secure SHell
USB	Universal Serial Bus

2 Introduction

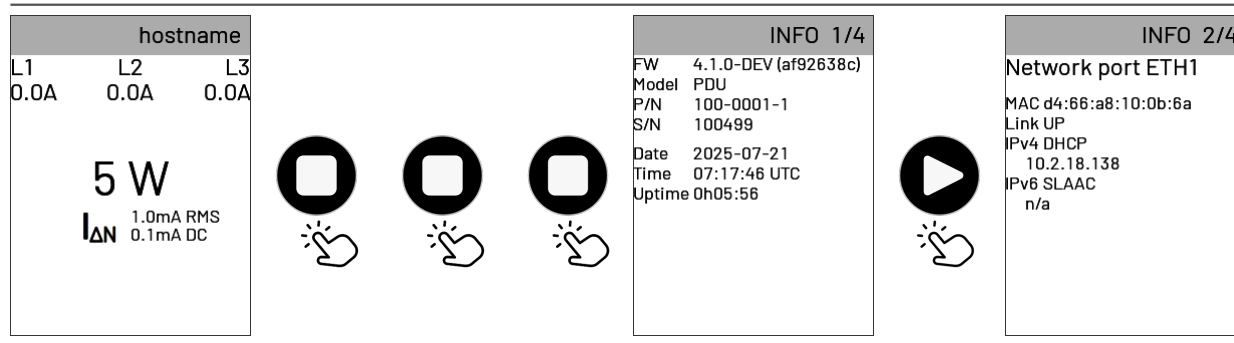
Thank you for purchasing a Power Distribution Unit from RNX. With its high precision measurements it is one of the most advanced PDUs available on the market today.

This document gives an overview of its software features and in some cases will redirect you to more specific manuals for more detailed information.

3 Finding the IP address of the PDU

3.1 Local user interface

The current IP address can be obtained from the local user-interface by using the following sequence on the controller.



Note that depending on the device model, additional button clicks may be required to land on the information page.

3.2 Serial console

An alternative way to find the IP address is to connect to the device's serial console using an adapter cable. After logging in, the command `show ip` will reveal the currently active IP addresses.

```
Username: admin
Password:

Welcome to PDU S/N 100499 running 4.1.0

hostname> show ip
ETH1/2
  ipv4 address 10.0.10.37/24
  [...]
  ipv6 address 2a04:ee41:80:f2ec:d666:a8ff:fe10:35e/64
  [...]
```

The vendor of the device can be contacted to obtain a suitable serial cable.

3.3 DHCP leases

Another option to obtain the IP address of a device is by consulting the DHCP lease table of the DHCP server. The device will identify itself with its hostname which by default contains the serial number of the device itself.

Note that access to this information is heavily dependent on the installed equipment and may only be available to network administrators.

4 User interfaces

4.1 Web-Client

The device can be accessed and controlled by its integrated web interface. A detailed description on how this works is available in the *Web-Client Reference Manual* which is contained in the Firmware archive.

4.2 CLI (Command Line Interface)

The device can be accessed and controlled with its own command line interface (CLI). The CLI is the most powerful control interface of the device and has all analysis and configuration options. Refer to the *CLI Reference Manual* for a detailed description of all possible commands.

Three ways to access the CLI exist:

- SSH (Secure Shell)
- RS232 serial console
- Telnet

Regardless of the connection method, the features of the CLI are identical. CLI sessions will time out after 15 minutes of inactivity. This delay can be modified using a configuration on the CLI.

To access the CLI, logging in is required unless users are configured with SSH key authentication. SSH and Telnet sessions time out after 15 minutes of inactivity. This timeout can be modified using a configuration on the CLI.

Warning: Factory defaults - Change password!

The default username is "admin" and the default password is "admin". It is crucial to change the default password immediately after completing the initial configuration.

4.2.1 Serial Console Connection

To use the serial console interface connect your PC to the highest AUX port of the device. E.g. if the device features, two AUX ports, the serial console is available on AUX2. A suitable USB to AUX serial adapter can be obtained from the device vendor.

Once physically connected, a standard terminal application (e.g. PuTTY) can be used to access the CLI.

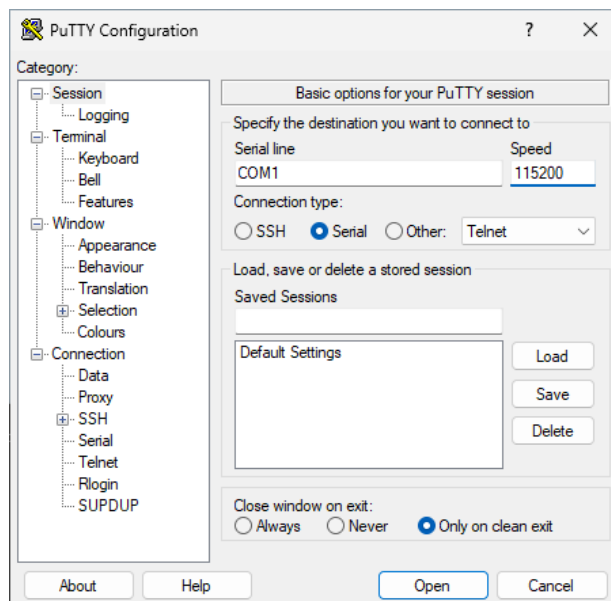


Figure 1: Serial console with PuTTY

The serial console connection may come handy for initial network configuration or if a remotely performed configuration caused a loss of connectivity. For larger deployments, it is thus highly suggested to have a suitable serial adapter cable handy.

The serial interface configuration is `115200/8-N-1` i.e. 115'200 bits per second, 8 data bits, no parity bit, 1 stop bit.

Warning: Logout

Before unplugging the serial cable, make sure to logout from the CLI as the session will remain open.

4.2.2 SSH connection

The most secure way to connect to the device's CLI is by using an SSH connection over one the network interfaces. Refer to *Finding the IP address of the PDU* to obtain the IP address of a device.

Most OSes come with an SSH client which allows secure connections to the device. As followed an example connection with a built-in SSH client:

```
ssh admin@10.0.10.10
admin@10.0.10.10's password: <type password>

Welcome to PDU S/N 100499 running 4.1.0

updu-100499>
```

Alternatively, a graphical terminal application such as PuTTY can be used.

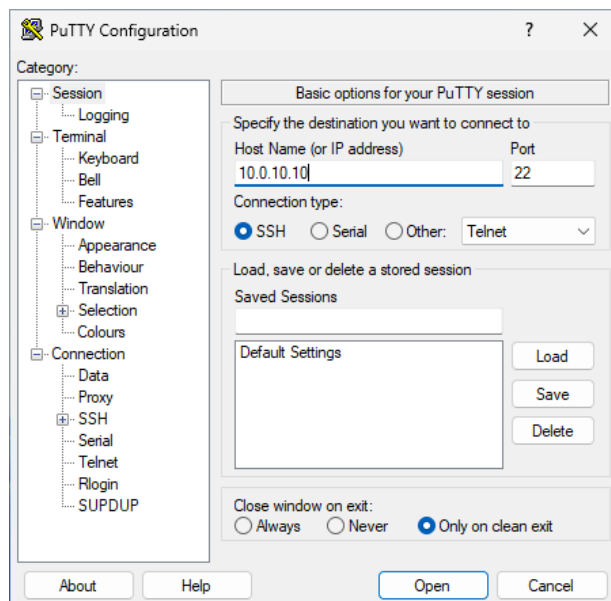


Figure 2: SSH connection with PuTTY

4.2.3 Telnet connection

If enabled, the CLI can also be accessed with the Telnet protocol. The protocol must be explicitly enabled in the settings.

Warning: Telnet Security

The Telnet protocol transmits information (including passwords) in plain text. The protocol is therefore disabled by default.

Most OSes come with a Telnet client which allows connections to the device. As followed an example connection with a built-in Telnet client:


```
$ telnet 10.0.10.10

Trying 10.0.10.10...
Connected to 10.0.10.10.
Escape character is '^]'.

PDU 4.1.0

Username: admin
Password: <type password>

Welcome to PDU S/N 100499 running 4.1.0

updu-100499>
```

Alternatively, a graphical terminal application such as PuTTY can be used.

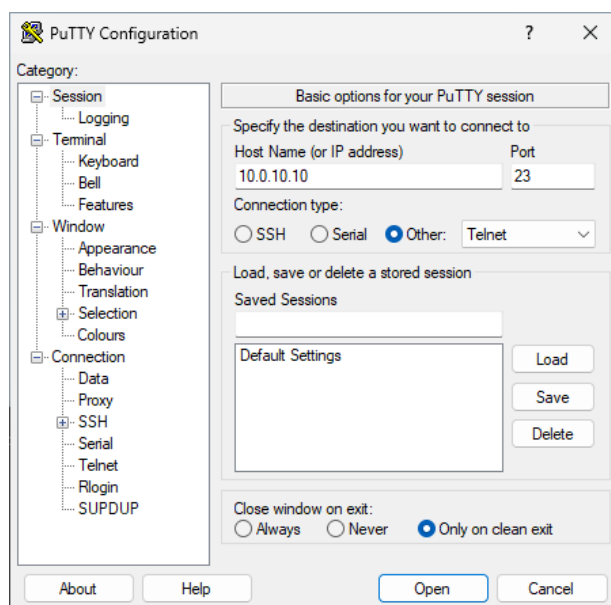


Figure 3: Telnet connection with PuTTY

5 SNMP

SNMP is the default protocol to obtain information such as measurement values from the device. This device supports both SNMP v2 and SNMP v3.

In order to use SNMP, it must first be enabled and configured via one of the available user interfaces (CLI or Web-Client).

In order to use SNMP v3, it is also required to configure a user which has a role containing the `snmp-read` permission assigned.

Note: MIB files

The MIB files can be downloaded from the device's Web-Client and are also distributed with the firmware archive. Note that these files are barely human-readable, thus an application such as "iReasoning MIB Browser" or similar can be used to analyze the MIB structure.

Warning: Remote control operations

When remotely switching a relay, the operator must be sure that the load connected to the outlet being remotely switched, will not generate a dangerous situation. A such example would be starting a dangerous machine.

6 Fleet Management

Managing a large fleet of devices may need dedicated tools to keep the devices up-to-date with the latest firmware and configuration settings.

6.1 UPDU Tool

The *RNX UPDU and E3METER IPS PDU Tool* allows automated discovery and mass firmware upgrades of multiple devices with a simple command line interface. Binaries are available for Windows, MacOS and Linux from the vendor's support site.

Usage instructions are found in the *README.txt* file included with the distributed archive.

6.2 Ansible

An easy to use *Ansible Collection* is maintained and available from the vendor's support site. Examples and details on how to use integrate it in an existing *Ansible* setup are provided along with the open-source project.