

Reduxi Controller 2.0

Network settings

Use the additional LAN port of Reduxi Controller 2.0 for more cyber security and a more robust system.

🔧 Reduxi Controller 2.0

🔌 LAN1 and LAN2 are interchangeable

🔒 Isolated devices use static IP addresses



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1 LAN ports of Reduxi Controller 2.0

1.1 Additional LAN port

One of the key features of Reduxi 2.0 is the additional LAN port. It increases the cyber security and the robustness of the system.



Note

LAN1 and LAN2 have the same function and can be freely exchanged. The examples below are given as an illustration.

2 Typical network settings

2.1 Network setup

This type of network settings is used most often. That usually means:

- There is a router connected to the internet.
- All devices (PV, BESS, EVSE, HVAC...) are connected to the router.
- All devices can and should connect to the internet.

2.2 Configuration

In this case, connect a network cable from the router to the **LAN1** port. Configure the network settings as shown in the screenshot.

The screenshot shows the 'Settings' menu with 'LAN 1' selected. Below the menu, the 'Type' dropdown is set to 'DHCP'. The 'Network isolation' toggle is turned 'Yes'.

Network settings for the typical setup

Text description of this image

3 Cyber security related network settings

3.1 Why isolate devices

To increase the cyber security of your installation, isolate the devices from the network. If devices (for example the battery) are isolated, a malicious user cannot control them from the internet, outside of your network.

3.2 Network setup

The network setup in this case is:

- There is a router connected to the internet.
- All devices (PV, BESS, EVSE, HVAC...) are **not** connected to the router that can access the internet.
- All devices are connected to a switch and have static network settings.
- The switch with the devices is connected to **LAN2** of the Reduxi Controller.
- The Reduxi Controller is connected to the router via **LAN1**.

3.3 Network isolation setting



Mandatory

To isolate the devices connected on LAN2, use the following setting for the network isolation.

The screenshot shows the 'Settings' page for 'LAN 2'. The tabs at the top are LAN 1, LAN 2 (selected), Wi-Fi, Mobile, DNS server, Proxy server, and Network redundancy. The settings are as follows:

Field	Value
Type	STATIC
IP	10.10.10.1
Netmask	255.255.255.0
Gateway	
Network isolation	Yes

Network isolation setting

Text description of this image

The next screenshot shows a typical definition of the network settings. All devices have a static IP. The Reduxi Controller works as a gateway.

Edit IP settings

Manual



IPv4



On

IP address

10.10.10.2

Subnet mask

255.255.255.0

Gateway

10.10.10.1

Preferred DNS

8.8.8.8

DNS over HTTPS

Off



Alternative DNS

Save

Cancel

4 Redundancy related network settings

4.1 Redundant network

To set up a redundant network, use the following settings.

The screenshot shows the 'Settings' page with the 'Network redundancy' tab selected. The 'Enable' toggle is turned on. The 'Ping IP' is set to 8.8.8.8, 'Ping interval' is 60 seconds, 'Ping retry' is 3, 'Number of ping replays for successful test' is 2, and 'Ping timeout' is 5000 ms. The 'Priority' table lists four network interfaces with their respective priorities and up/down arrows.

Priority			
High	LAN 1		↕
High	LAN 2		↕
Medium	Wi-Fi		↕
Lowest	Mobile		↕

Network settings for a redundant network

Text description of this image

✓ Summary

Basics (Point 1): Reduxi Controller 2.0 has an additional LAN port. LAN1 and LAN2 have the same function.

Typical setup (Point 2): The router connects to LAN1. All devices connect to the router and to the internet.

Cyber security (Point 3): Devices connect to a switch with static IPs. The switch connects to LAN2, the router to LAN1. Use the mandatory network isolation setting.

Redundancy (Point 4): Use the redundancy network settings shown in the screenshot.

→ Common issues

ISSUE	SOLUTION
Devices on LAN2 can reach the internet	To isolate the devices connected on LAN2, the network isolation setting is mandatory. See Point 3.
Devices on LAN2 are not reachable	All devices behind the switch need static network settings. The Reduxi Controller works as gateway.

→ Related articles

Matching guides from the Reduxi knowledge base:



What steps are required to enable internet access to Reduxi Controller

Network settings for DHCP, static IP, Wi-Fi and proxy.



Device setup guides

All step-by-step guides for connecting devices to the Reduxi Controller



Strategies for the Reduxi Controller

Energy manager and other strategies explained