

G4202TCP-RPF Master G4202TCP Client

G.hn Wave2 PoX/PoE Master/Client Set

Coaxial Firmware

Instruction manual

Version 1.2
May 2023

For more information and purchase requests
contact info@gigacopper.net

1. Packing

- G4202TCP-RPF Master or G4202TCP Client
- 1.5m coax connection cable with F-plug
- IEC TV/F jack adapter
- Bracket for wall mounting

2. Specifications

- Dimensions: 103 * 78 * 32mm
- Weight: 0.36 kg
- Operating temperature: -10°C - 45°C
- Enclosure Rating: IP30

For full specification, see G4202TCP-RPF and G4202TCP datasheets

3. G.hn specification

- G.hn Wave2, 2-200 MHz
- Physical bandwidth (PHY): approx. 1800 Mbit/s
- Netwidth: approx. 16 00Mbit/s
- Maximum allowable attenuation of the cable connection: 75dB

1. Introduction

With the G.hn modem set G4202T CP-RPF and G4202TCP you can easily expand your network and at the same time supply the PoE/PoE+ compatible end devices (access points, IP camera as, IP phone etc.) with power.

Both modems can be powered locally via a USB-C PD power supply (max. 90W) or via the G.hn connection. G4202TCP-RPF can also inject power into the G.hn connection.

The modems can use any type of coaxial cable for data and power transmission. The bandwidth is up to 1.6.00Mbit/s, the range is up to 600m. Connected end devices are supplied with power via another 100m long Ethernet cable according to the 802.3af/at standard.

The G4202TCP client can also be combined with a non-PoX/PoE-capable G.hn master modem (such as G4201C or G420 4C).

If there are multiple parallel connections over coaxial cables, the G4224 Master Switch can be used. It provides central administration of all G4202TCP clients.

4. Connections

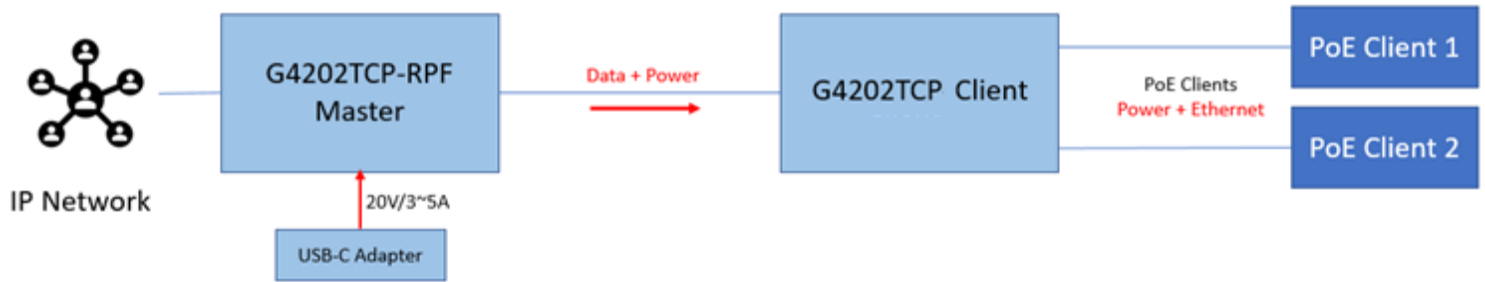


Panel and LED description

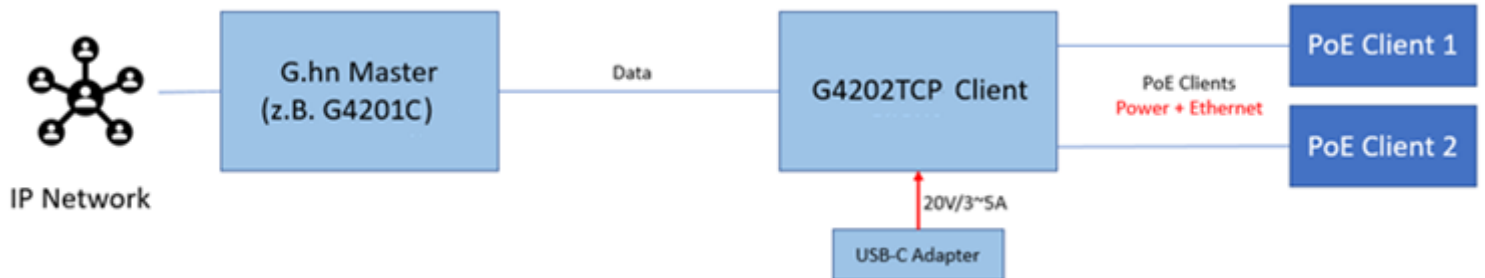
Lettering	Description
5-20V/1-5A USB-PD	USB-C Power Delivery 3.0 power connector, max. 90W
PoX/RPF LINE	G.hn connection, telephone or coax, use according to firmware
G1, G2	2x 1 Gigabit Ethernet port with PoE/PoE+
PWR LED	Indicates power availability
LINE LED	Status of the G.hn connection (green – OK, yellow – weak signal, off – no connection)
RPF LED	G4202TCP-RPF only: Status Power output over G.hn port
G1/G2 LED	Right: Status Ethernet connection Left: Status PoE supply
	Recessed reset button (15 sec.)

5. Typical applications

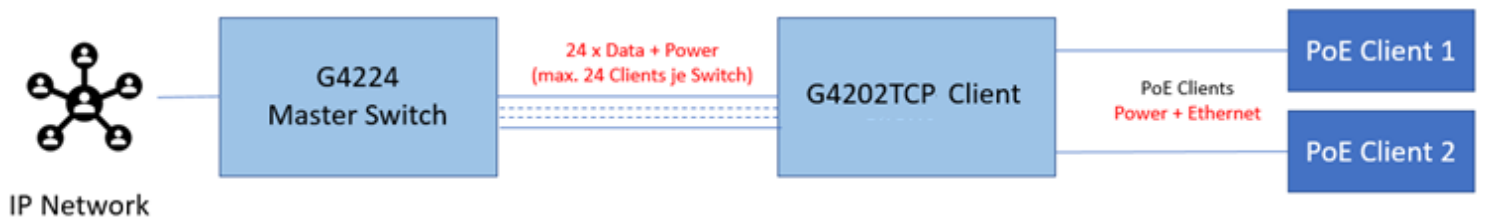
Variante 1: G4202TCP-RPF Master + G4202TCP Client. Master draws power from the USB-C adapter, client - via G.hn link.



Variante 2: G4202TCP as client together with G4201C Master. G4202TCP draws power from the USB-C adapter.



Variante 3: G4202TCP as client on the G4224 switch. Each switch can power up to 24 clients, 4 of which are 90W.



6. Installation Notes

- The G.hn modem can be connected directly to a coaxial cable as well as to an antenna socket. When connecting to an antenna socket, use the "DATA" connector (5-862MHz). Other connections (TV, radio, SAT) are only suitable if they are open in the frequency range 5-862MHz. Please refer to the information in the data sheet.
- The negotiated bandwidth can be queried via the web interface of the devices (see point 9).

Further information and recommendations can be found on our homepage www.gigacopper.net under the heading Support.

7. IP address

The modems do not require IP addresses from the local network segment during operation, because they mediate data traffic via the MAC addresses. By default, they do not obtain addresses from the local DHCP server.

If desired, static IP addresses can be configured or the DHCP client can be activated (menu "IP" in the web interface).

8. Administration

IP-Address: 192.168.10.252 (master), 192.168.10.253 (client). Login Password: paterna Work-Reset Password: betera

Registration via web interface

- Connect your computer to the G.hn modem via the G1 or G2 port.
- Assign your computer a fixed IP address, e.g. 192.168.10.100 (netmask 255.255.255.0).
- Open a web browser and connect to 192.168.10.252 or 192.168.10.253.
- Log in with the default password: paterna

G4202TCP-RPF Web Configuration

Authentication

This unit is password protected. Please enter the correct password to access the web pages

•Password

Factory Reset*:

•Password

*Warning! Current configuration will be lost

9. Query the negotiated bandwidth

The bandwidths negotiated by the devices for both transmission directions can be queried via the web interface of each device. The reported values are gross data transfer rates at the physical layer (PHY). The transfer speed at the application level is about 15-20% lower.

192.168.10.252

G4202TCP-RPF Web Configuration

[G.hn](#)
[IP](#)
[Ethernet](#)
[Device](#)
[Multicast](#)
[QoS](#)

[G.hn spectrum](#)
[ACL](#)
[Log file](#)
[Advanced](#)

Basic settings

•MAC address 00:1e:6e:03:dc:1f

•Device ID 1

•Domain Name Ghn

•Force node Type DOMAIN_MASTER ▾

•Node type* DOMAIN_MASTER

* Node type change can take some time, please refresh page to update state

•G.hn profile COAX 200 MHZ ▾

Neighboring Domain Interference Mitigation (NDIM)

•NDIM mode MANUAL ▾

•Domain ID (DOD) 1

Available Connections

Device ID	MAC Address	Phy Tx (Mbps)	Phy Rx (Mbps)
2	00:1e:6e:03:db:e0	1876	1880

10. Notching

For compatibility with other signals in the frequency range 2-200MHz, a reduction of up to 40dB or complete blocking (100dB) of the required frequencies can be made in the G.hn spectrum.

The setting must be configured in the master modem or G.hn switch.

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Notches Configuration				
Notch index	Start freq (KHz)	Stop freq (KHz)	Depth (dB)	Type
0	0	1954	100	Regulation

Add new user notch

- Index (0..9)
- Start frequency (KHz)
- Stop frequency (KHz)
- Depth (0..40dB, 100 removes notch)

Remove user notch

- Index (0..9)

11. VLAN usage in the network

The devices support VLANs according to the 802.1Q standard.

In the factory setting, the VLAN tags are forwarded transparently. External Ethernet switches can be used for the formation and use of VLANs.

Instead of external Ethernet switches, VLAN configuration can be done by the manageable G.hn switch G4224. Both Ethernet ports of the G4202TCP-RPF and the G4202TCP modem can be configured independently of each other.

12. Use of Multicast IP-TV

For the transmission of multicast IP-TV (e.g. Telekom MagentaTV) in the network, "IGMP Snooping" must be activated in the multicast configuration.

Multicast Configuration*

- IGMP Snooping
- MLD snooping
- IGMP/MLD broadcast report
- IGMP/MLD broadcast report mode
- Filter unknown multicast traffic
- IGMP Multicast ranges:

Minimum IP address			Maximum IP address		
224	0	.0.0	239	254	.255.255
0	0	.0.0	0	0	.255.255
0	0	.0.0	0	0	.255.255
0	0	.0.0	0	0	.255.255

Broadcast suppression

- Broadcast xput limit (Mbps)

13. Warranty

We offer a 12-month warranty on all products purchased from us. Full warranty terms can be found at <https://www.gigacopper.net/wp/en/warranty/>