GIGA COPPER NETWORKS

G4224 Switch

Quick Installation Guide

V1.1

GIGA Copper Networks GmbH

1. Package List

G4224 *1

Other Accessories

Grounding wire*1	Power Cable*1	Screw Kits*4
Type-C Cable*1	Wall-mount Lits*2	SYNC Cable*1

2. Hardware Introduction

2.1 Physical and Environmental

- Dimension (W*D*H):440mm *300mm *44mm , 1U high

- Weight: <4.2Kg

- Operating temperature: 0℃ ~ 40℃

- Storage temperature: -25℃ ~ 70℃

- Power consumption: 600 watts

- Power consumption:10% ~ 90% non-condensing

2.2 Front Panel

The G4224 front panel contains 2 *10/100/1000M Base-T uplink port, 2*10G SPF+ uplink port, 2* F-type SYNC connector, 1*RS232 console port, 1*USB Type-C 3.1 console port and 24*G.hn ports (RJ45 connector, F-Type connector or BNC connector)

G4224 Chassis with Two G4224-12TP Line Cards
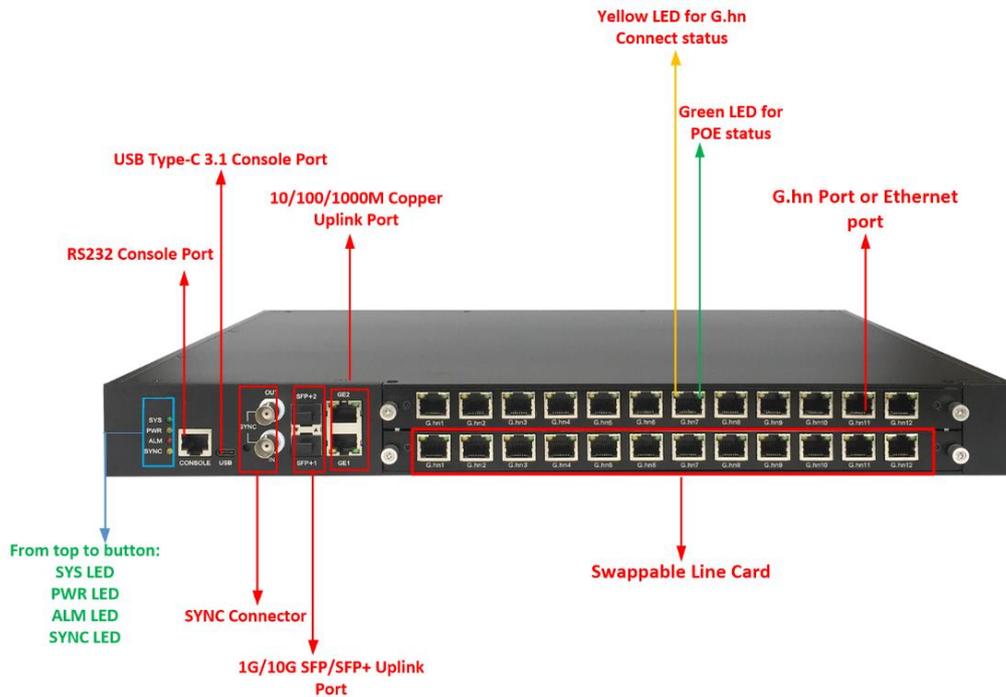
G4224 Chassis with Two G4224-12BP Line Cards
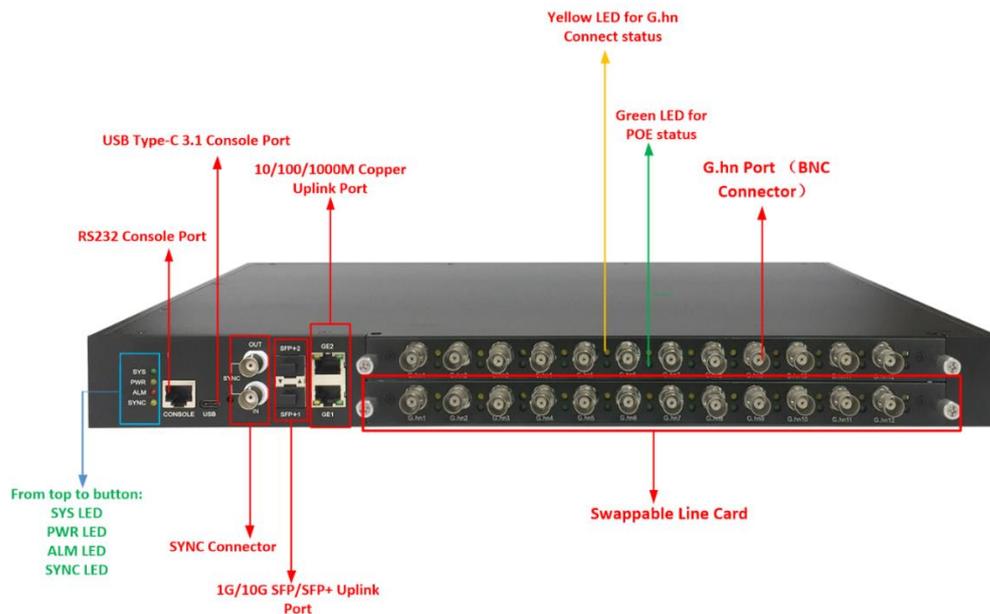
G4224 Chassis with Two G4224-12CP Line Cards:

Yellow LED for G.hn Connect status

Green LED for POE status

USB Type-C 3.1 Console Port

10/100/1000M Copper Uplink Port

G.hn Port （F-Type Connector）

RS232 Console Port

SYS
PWR
ALM
SYNC

From top to button:
SYS LED
PWR LED
ALM LED
SYNC LED

SYNC Connector

Swappable Line Card

1G/10G SFP/ SFP+ Uplink Port

G4224 Rear View:

PowerB switch

PowerA switch

ON   OFF
PWRA

IN 50-54V

OUT 50-54V

PWRB
ON   OFF

PWRA:100-240V AC power input

50-54V DC input

50-54V DC output

ground connection

PWRB:100-240V AC power input

2.3 Panel Description

Label	Description
CONSOLE	A RJ45 connector RJ232 console for connection to a computer control/ administration. The RS-232 console port can be used for accessing the device CLI (command line interface) for out-of-band management. Bit per second:115200
USB	A USB Type-C 3.1 connector console for connection to a computer control/ administration. The USB console port can be used for accessing the device CLI (command line interface) for out-of-band management. Bit per second:115200 **Note**:(1) The driver needs to be installed (2) As different types of laptops have different ways to detect USB port, it is recommended that do not connect other USB devices(such as USB mouse and power adapter) on the laptop when using USB serial port to avoid affecting the use of USB serial port
SYNC	2 BNC connectors, one for signal input and one for signal output, used for transmitting 50Hz SYNC clock.
SFP+1/SFP+2	2 *SFP or SFP+, Support 1/10 Gbps
GE1/GE2	2 *10/100/1000BT RJ-45 Ethernet Port
G.hn port (line card)	G.hn ports with POE output feature (G.hn1/Ethernet Port1-G.hn10/Ethernet Port10 support 30W, G.hn11/Ethernet Port11 and G.hn12/Ethernet Port12 support 90W). The G.hn port include 4 types: BNC female connector, F female connector, RJ45(for G.hn) and RJ45(for Ethernet), each type of connector are related to a corresponding line card
Hot-swappable Line card	2 Slots for hot-swappable G.hn or standard Ethernet, power over cable capable. There are 3 types of line cards: Type1:G4224-12BP(12*BNC, female connector) Type2:G4224-12CP(12* F female connector) Type3:G4224-12TP(12* RJ45,for G.hn)
PWR A/B	100-240V AC power input

-48VRTN	50-54V DC input/output, provide power to other G4224 device
PWR Switch	Power on/off Switch
Ground connection	Connecting ground wire

2.4 LED Description

Label	Type	Color	State	Description
PWR A/B	Power status	Yellow	On	The power is on and supplying the current to the system
			Off	The power is off or it is not supplying the current to the system
SYS	System status	Green	On	System is started
			Off	System is not started
G.hn	G.hn link status	Green	On	The corresponding port connection normal
			Off	The link condition is poor or there is no connection to this port
		Yellow	On	The corresponding port connection is abnormal and link quality is poor
			Off	The link condition is normal or there is no connection to this port
SFP+1/SFP+2	10G Ethernet link status	Green	On	The corresponding port connection is normal
			Off	there is no connection to this port
ALM	Alarm	Red	On	FAN fault alarm
			Off	The FAN is normal
SYNC	SYNC Status	Yellow	On	50Hz SYNC clock is working
			Off	50Hz SYNC clock is not working
GE1/GE	Ethernet link	Green	On	Lights to indicate the port is link up and

2	status			the rate is 1000Mbps
			Off	Indicates that the port is link down or the port is link up but connect rate is 10/100 Mbps
		Yellow	On	Lights to indicate the port is link up
			Off	Indicates that the port is link down
			Blink	The port is up and has data transmission

3. Application

G4224-12TP

UTP

G4202TCP

UTP

PD Device

G4224-12CP

Coaxial

PD Device
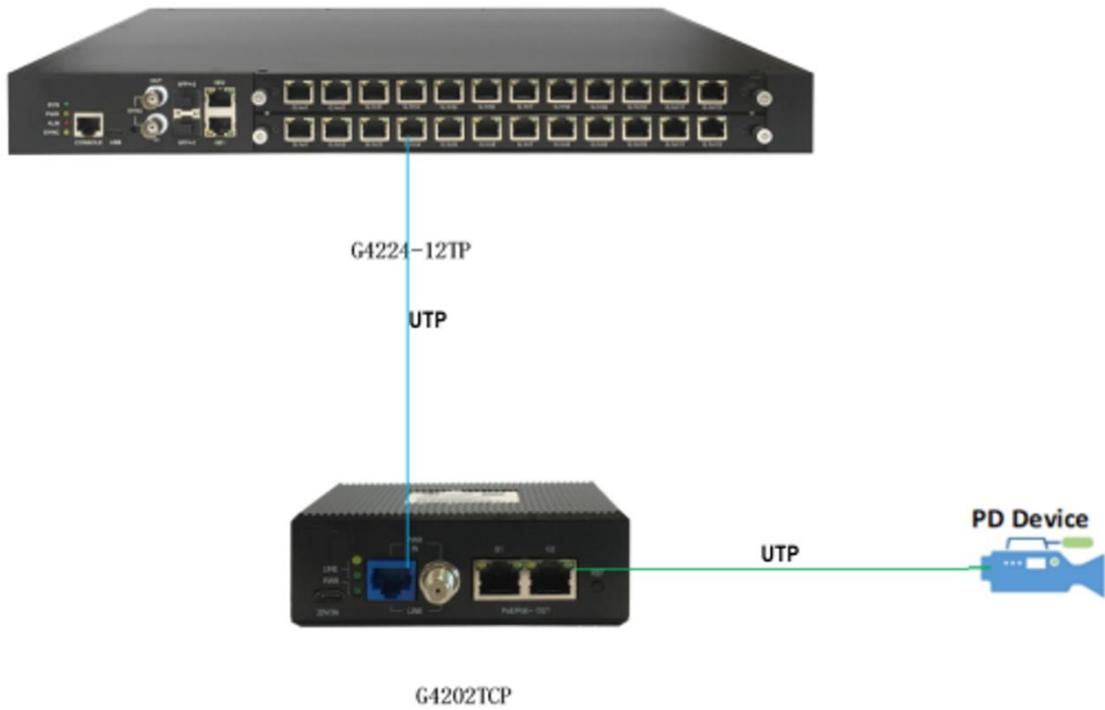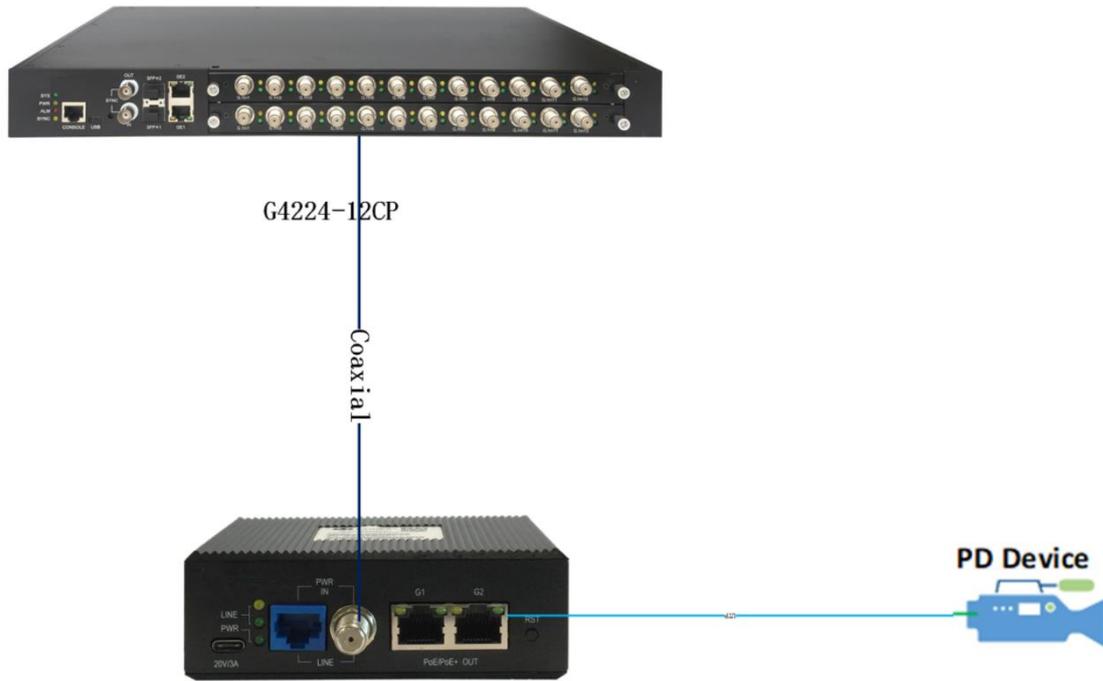
4. Service Installation

If there are more than one G4224 in the same network, you must use the SYNC connector to synchronize G.hn signal, one of them is the primary and the rest are secondary, the SYNC signal is sent from the primary, input into the secondary. Following picture shows
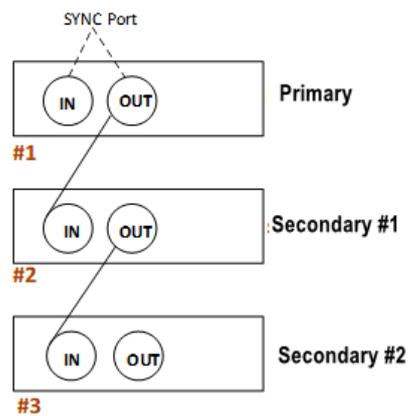
the SYNC port connection:

📖 **Note**	You must power on primary first and then secondary#1 and then secondary#2

4.1 G4224 Service Installation

Step 1：Connect to uplink Ethernet port, 10/100/1000BT or 10G

If you use CAT5 cable, please connect to 10/100/1000BT port.

If you use fiber, please insert a proper SFP/SFP+ module into the cage and connect the fiber to the SFP/SFP+ module.

Step 2：Connect to downlink coaxial cable or twist pair to the G.hn port.

Step 3：Insert power cord and turn on the power switch.

The power LED will turn yellow, G.hn port green LEDs will be on shortly and then off. The SYS green LED on the G4224 will turn on within one minute. If the remote clients are connected and power on, the LEDs of the G.hn ports will be lighted on.

4.2 G4202TCP Service Installation

Step 1：Connect to uplink coaxial cable or twist pair to the G.hn port, if G4224 is power on and connection is good, G4202TCP will be fed power from the cable, and you will see the PWR LED of G4202TCP on.

Step 2：Connect to downlink RJ-45 Ethernet port, if the downlink device supports PoE, it will be powered supply from G4202TCP.

Please refer to "G4202TCP Quick Installation Guide" for detail.

5. Web Management

Default Configuration

IP address: 192.168.0.252

IP Sub Network: 255.255.255.0

Username: superuser

Password: 123

You can browse http://192.168.0.252, input username and password to login WEB interface of G4224 as following:

5.1 Change IP

You can configure IP address for G4224 via WEB interface, Click "VLAN Management" -> "VLAN Interface" from the left menu to configure IP address as following:

5.2 Change Device Time

You can change system time through the path Administration >SNTP.

5.3 Save Configuration

You can save configuration information through the path Administration >Save Configuration.

Save Current Configurations

Save

5.4 Check Device Basic Information

You can check device basic information through the path System Information>Basic Information

5.5 Check Link Status between Local Device and Client Device

You can click "System Information"-> "Node Summary" from left menu to check the G.hn information as following:

Interface	Node Name	Location	MAC Address	Domain Name	Role	Node ID	US/DS Ratio	Service	IP	Firmware Version	Hardware Version	VectorBoost
Ghn1.Local	Gnow HE	GHN NODE	00-1e-6e-20-20-01	Gnow	DM	1	30% : 70%		192.168.10.252	v7_8_r590+6_cvs R22	1_0	Enabled
Ghn2.Local	Gnow HE	GHN NODE	00-1e-6e-20-20-02	Gnow	DM	2	30% : 70%		192.168.10.252	v7_8_r590+6_cvs R22	1_0	Enabled
Ghn3.Local	Gnow HE	GHN NODE	00-1e-6e-20-20-03	Gnow	DM	3	30% : 70%		192.168.10.252	v7_8_r590+6_cvs R22	1_0	Enabled
Ghn4.Local	Gnow HE	GHN NODE	00-1e-6e-20-20-04	Gnow	DM	4	30% : 70%		192.168.10.252	v7_8_r590+6_cvs R22	1_0	Enabled
Ghn5.Local	Gnow HE	GHN NODE	00-1e-6e-20-20-05	Gnow	DM	5	30% : 70%		192.168.10.252	v7_8_r590+6_cvs R22	1_0	Enabled
Ghn6.Local	Gnow HE	GHN NODE	00-1e-6e-20-20-06	Gnow	DM	6	30% : 70%		192.168.10.252	v7_8_r590+6_cvs R22	1_0	Enabled
Ghn7.Local	Gnow HE	GHN NODE	00-1e-6e-20-20-07	Gnow	DM	7	30% : 70%		192.168.10.252	v7_8_r590+6_cvs R22	1_0	Enabled
Ghn8.Local	Gnow HE	GHN NODE	00-1e-6e-20-20-08	Gnow	DM	8	30% : 70%		192.168.10.252	v7_8_r590+6_cvs R22	1_0	Enabled

You can click "System Information"-> "Interface Information" from the left menu to check the node connection speed as following:

Interface	Master ID	Link	Local MAC Address	Remote MAC Address	Remote Name	Remote Location	MAX BAND PLAN(MHz)	Wire Length(Meters)
Ghn1.Local	1	🟠	00-1e-6e-20-20-01	00-00-00-00-00-00	-	-	200	-
Ghn2.Local	2	🟠	00-1e-6e-20-20-02	00-00-00-00-00-00	-	-	200	-
Ghn3.Local.1	3	🟢	00-1e-6e-20-20-03	00-1e-6e-20-03-08	G4202TCP	GHN NODE	200	5
Ghn4.Local	4	🟠	00-1e-6e-20-20-04	00-00-00-00-00-00	-	-	200	-
Ghn5.Local	5	🟠	00-1e-6e-20-20-05	00-00-00-00-00-00	-	-	200	-
Ghn6.Local	6	🟠	00-1e-6e-20-20-06	00-00-00-00-00-00	-	-	200	-
Ghn7.Local	7	🟠	00-1e-6e-20-20-07	00-00-00-00-00-00	-	-	200	-
Ghn8.Local	8	🟠	00-1e-6e-20-20-08	00-00-00-00-00-00	-	-	200	-
Ghn9.Local	9	🟠	00-1e-6e-20-20-09	00-00-00-00-00-00	-	-	200	-
Ghn11.Local	11	🟠	00-1e-6e-20-20-11	00-00-00-00-00-00	-	-	200	-
Ghn12.Local	12	🟠	00-1e-6e-20-20-12	00-00-00-00-00-00	-	-	200	-
Ghn13.Local	13	🟠	00-1e-6e-20-20-13	00-00-00-00-00-00	-	-	200	-

5.6 Check System Logs

You can check system logs through Administration > System Logs > System Logs.

G.hn
+ System Information
+ Configuration
+ VLAN Management
+ QoS Configurations
+ Forwarding
+ Security
+ Spanning Tree
+ Monitoring
+ SNMP Manager
+ RMON
+ LLDP
− Administration
  • IP Configuration
  • DHCP Server
  • Language
  • SNTP
  • Ping Diagnosis
  • Traceroute Diagnosis
  • Account
  • Firmware Upgrade
  + Reboot&Reset
  + Configuration Management
  • Save Configuration
  − System Logs
    • Syslog Server
    • System Logs

System Logs
2015/7/1 00:04:14 Ethernet interface of Ghn3 is up.
2015/7/1 00:04:13 Ethernet interface of Ghn3 is down.
2015/7/1 00:02:12 Ethernet interface of Ghn4 is up.
2015/7/1 00:02:10 Ethernet interface of Ghn4 is down.
2015/7/1 00:00:55 192.168.0.249 logins the system via Telnet, level 3.
2015/7/1 00:00:15 192.168.0.249 logins the system via WEB UI!
2015/7/1 00:00:13 RJ45/G1 is up.
2015/7/1 00:00:12 Ethernet interface of Ghn4 is up.
2015/7/1 00:00:10 Ethernet interface of Ghn3 is up.
2015/7/1 00:00:06 Starting system!
2015/7/1 00:18:03 192.168.0.249 reboots system with WEB!
2015/7/1 00:17:08 Ethernet interface of Ghn1 is up.
2015/7/1 00:17:05 Ethernet interface of Ghn1 is down.