BEAM GE-PON ONT

C504W

Installation Guide

Overview

The C504W is a high-speed ONT based on EPON technology for home and the small office. It supports 4 FE, and IEEE 802.11b/g/n interface to the subscriber. It can be connected to PON OLT via a fiber optic cable to provide perfect TPS service.

C504W, installed in an apartment, an office or a house, is connected to the IP terminal devices such as a subscriber's PC, laptops, smart phones or VoIP phone. Fast Ethernet Interface service up to 100Mbps and Wireless service up to 300Mbps C504W supports various functions, superior to those of the existing Ethernet switch, including Quality of Service (QoS) function, management function that allows to take prompt actions against the problems in the system and a subscriber line, security function that secures subscriber information safely, and subscriber management function that secures a user's right from illegal users such as crackers.

Key Features

- Supports IEEE 802.11b/g/n standard.
- Supports WEP 64-bit / 128-bit Security password authentication and 802.1x, WPA, WPA2.
- Powerful internet sharing function
- Supports IEEE 802.1q VLAN Configuration function
- 4 Ethernet LAN ports supported 10/100Mbps and one 1.25G EPON port for WAN
- Supports ProDHCP function (Server/Client)
- Supports specific application, virtual server, DMZ, Access Control and Firewall.
- The management program based on WEB and GUI
- Remote system management via Internet and software upgrade

Contents of the Package

C504W

Power Adaptor

User Guide

Precautions

Warning Before you install the C504W, read this section. This section contains important safety information you should know before working with the system.

Power Considerations

- Be careful when connecting the system to the supply circuit so that wiring is not overloaded.
- When plugging in a power socket or handling any power source, avoid ring, necklace, metal watch for better safety. If these materials touch the power socket or ground of the product, the parts can be burnt out.
- Always make sure if there is any possible danger in the workshop. Wet floor, ungrounded extension, rubbed-off power code, or unsafe (or ungrounded) floor might be dangerous.

Installing and Servicing the System

- Before installation, the power switch of the system should be turned OFF and disconnect all power and external cables.
- Remove all jewelry (including rings and chains) or other items that could get caught in the system or heat up and cause serious burns.
- Do not work alone under potentially hazardous conditions.
- Do not perform any action that creates a potential hazard to people or makes the equipment unsafe.

Disconnecting Power

When disconnecting power, note the following guidelines.

- Locate the emergency power-off switch for the room before working with the system.

- To completely turn off the system, disconnect the power connection to all power supplies.
- For DC power supplies, locate the circuit breaker on the panel board that services the DC circuit, switch the circuit breaker to the off position, and tape the switch handle of the circuit breaker in the off position.
- Do not touch the power supply when the power cord is connected. Line voltages are present within the power supply even when the power switch is off and the power cord is connected.

Connecting Cables

When you connect cables, note the following guidelines.

- Do not work on the system or connect or disconnect cables during periods of lightning activity.

Working with Lasers

If your system includes a fiber-optic port, note the following guidelines.

- To avoid exposure to radiation, do not stare into the aperture of a fiber-optic port. Invisible radiation might be emitted from the aperture of the port when no fiber cable is connected.
- Always keep unused fiber-optic ports capped with a clean dust cap.

Preventing EMI

- When you run wires for any significant distance in an electromagnetic field, electro magnetic interference (EMI) can occur between the field and the signals on the wires.
- Bad plant wiring can result in radio frequency interference (RFI).
- Strong EMI, especially when it is caused by lightning or radio transmitters, can destroy the signal drivers and receivers in the system, and can even create an electrical hazard by conducting power surges through lines and into the system.
- If Strong EMI occurs in the installation place, consult RFI experts to get rid of it.

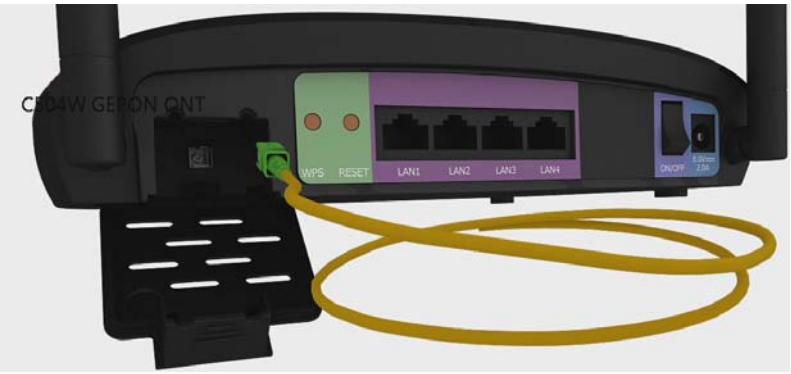
Disposing of the System

Dispose of the system and its components (including batteries) as specified by all national laws and regulations.

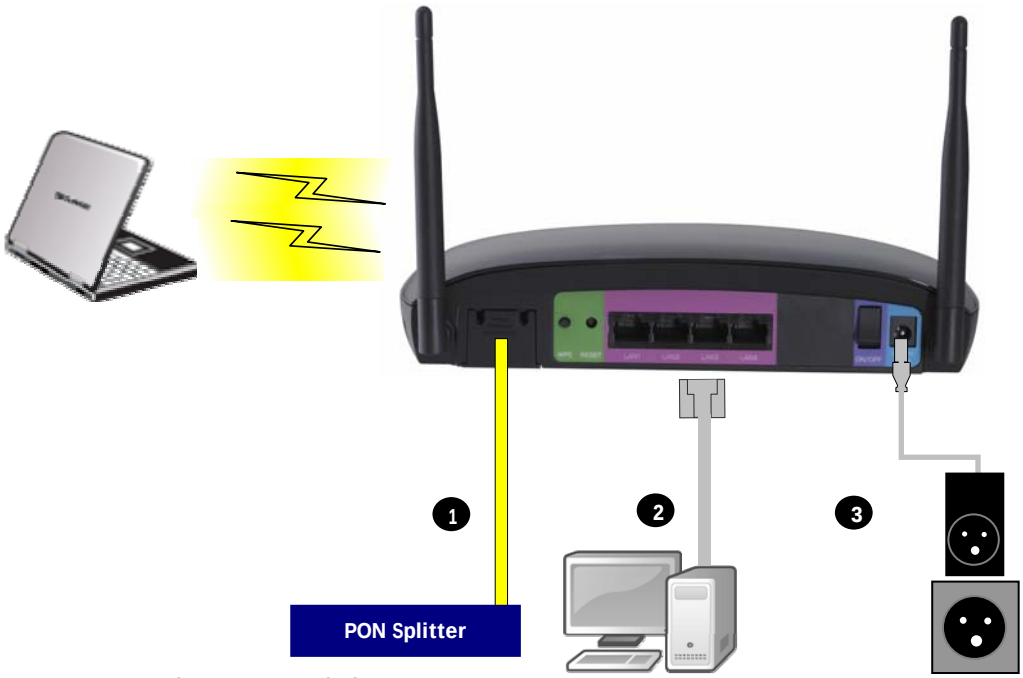
Installation

Warning Invisible laser radiation may be emitted from disconnected fibers or connectors. Do not stare into beams or view directly with optical instruments.

1. Connect the SC/PC connector on the side of a yellow single-mode optical fiber into the optical terminal of the optical outlet and the other connector into the PON port of C504W by pushing them until you hear a clicking sound.



2. Connect C504W and PC with Ethernet cable.
3. Connect the rated power adaptor (5V2A) provided together with C504W main body.



4. Turn on the power switch.
5. Make sure that the power LED is ON.

6. Make sure that LAN LED is ON.

7. Make sure that the PON LED is ON in several seconds or minutes. If PON LED is red, the optical signal is very low, so please contact the carrier.
8. If everything is installed properly, the user can see the DATA LED blink while Internet data is sent/received.
9. If you set the wireless configuration properly, the user can see the applicable wireless device (Wireless) LED blink while data is sent/received.

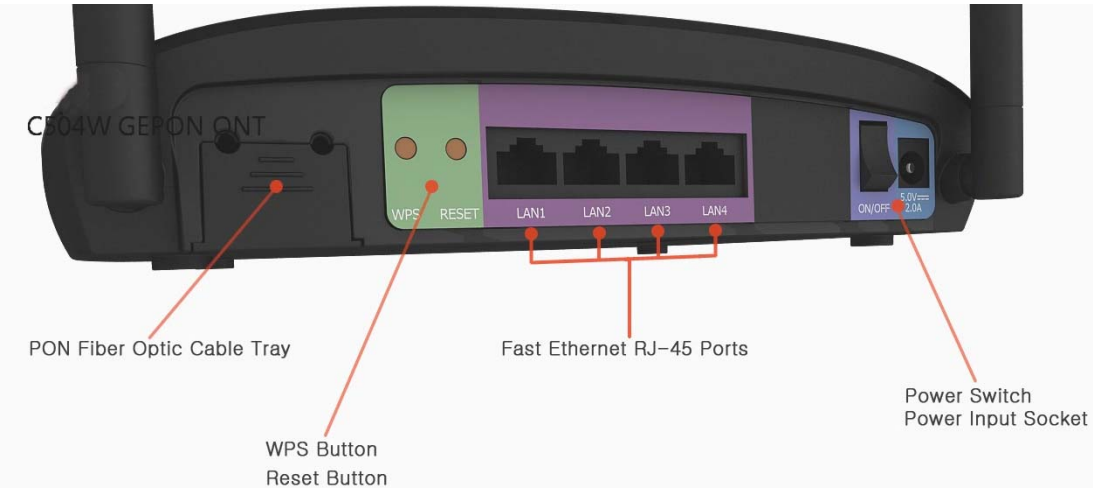
System Architecture

Front Panel

LED

Name	Color	Status	Function	Actions to take
POWER	GREEN	ON	Power ON	
		OFF	Power OFF	**Check Power switch at the back panel-> Power adapter & power outlet**
PON	GREEN	ON	**BEAM** Link Up (Normal)	**Normal Operation**
		BLINK (Every 1 sec)	**BEAM** Link Down. Optic signal ON	**Call BEAM**
	RED	ON	Optical signal has been lost	**Call BEAM**
	ORANGE	ON	**BEAM** Link Up but optical signal is very low	**Call BEAM**
DATA	GREEN	OFF	No Data transmitting/receiving	**Call BEAM**
		BLINK	Transmitting/receiving Data	**Normal Operation**
LAN 1~4	GREEN	ON	Ethernet Link Up	**Normal Operation**
		BLINK	Transmitting/Receiving Ethernet data	**Normal Operation**
		OFF	Ethernet Link Down	**Check cable at PCs**
Wireless	GREEN	ON	Wireless Link Up	**Normal Operation**
		BLINK	Transmitting/Receiving Wireless data	**Normal Operation**
		OFF	Wireless Link Down	**CALL BEAM**

Rear Panel



Indication	Description
PON Interface	1.25G PON Port
WPS	Wi-Fi Protect Setup
RESET	Resets the system to factory default.
LAN 1~4	FE Ports
ON/OFF	Power Switch
5.0V⎓2.0 A	Power Terminal

Bottom

Troubleshooting:

Symptom: Can not access to the Internet;

Step 1 Make sure that the ONT is turned on. Once you turn on the power, the POWER LED on the front panel of C504W should be turned on. If the POWER LED is turned OFF, please check if the power cable is connected to the power inlet of ONT properly or switch of power strip if any is turned ON. If the problem persists, please call BEAM Support.

Step 2 Make sure that the optical line is connected properly. Once the optic fiber is connected, the PON LED on the front panel of C504W should be turned on within few seconds. If the PON LED blinks, call BEAM Support to check the optical line connection.

Step 3 Make sure that the LAN cable is connected properly. Once the LAN cable is connected and user PC is turned on, LAN LED should be turned on. If the LED is not turned on, check the cable connection

Step 4 Make sure that network setting of your PC is correct. Select “set to ‘Obtain IP address automatically’.

Symptom: All the cables are connected, but still can not obtain IP address

Step 1 Look for the Network Neighborhood or My Network Places icon in your desktop. If it is not there, try your Start Menu.

Step 2 Right-click the Network Neighborhood/My Network Places icon. A drop-down menu will appear.

Step 3 Choose the "Properties" option, generally found at the bottom of the menu.

Step 4 Look for an icon named "Local Area Connection". The icon looks like a pair of computer connected by a link. Double-click this icon.

Step 5 Click the "General" tab, if it is not already selected. You will see a list of protocols to choose form.

Step 6 Scroll down and choose Internet Protocol (TCP/IP), and then click the button that is labeled "Properties".

Step 7 Again, click the "General" tab, it is not already selected. You will see two choices:
1) "Obtain an IP address Automatically"
2) "Use the following IP address..."

Step 8 Choose 1) option

Step 9 Click OK

Specification

Item		Description
Standard		IEEE 802.3ah
System Architecture	**Type**	Desktop
	Size (mm)	215(W) x 159.5(D) x 43.6(H)
Power		Input: 110~220 V ±15%, 60 ± 3Hz Output: +5V, 2A (power adaptor used) Consumption: Max 5.0W (typical: 4W)
Available Interface		
	PON interface	1 1.25G 1000Base-PX, 1 Core SMF
	User interface	4 10/100base-Tx (IEEE 802.3u)
	Wi-Fi Interface	IEEE802.11b/g/n compliant
Environmental Condition		- Operating Temperature/humidity: 0~50℃, humidity: 20~90% - Storage Temperature/humidity: -30℃~60℃/10%~90% - In compliance with EMI/EMC Class B
Function and Performance	**EPON**	- IEEE802.3ah MPCP, OAM compliant - 802.1Q VLAN - Per LLID Filtering/Classification - Supports up to four Logical Link IDs (LLID) - AES-128 Downstream decryption - Dying Gasp - Automatic Plug and Play function for WAN PON Port (Discovery and Authorization)
	L2 Features	- IEEE802.1Q VLAN - IEEE802.1D Spanning Tree Protocol - Support up to 256 MAC Address
	L3 Features	- DHCP Function (Server) - NAPT Function
	PPPoE	- PPPoE (RFC 2516) - Support AUTO, PAP, CHAP, MS-CHAP authentication - Added static IP address assignment.
	Multicasting	IGMP v1/v2, IGMP proxy/snooping for IPTV service
	QoS	- IEEE802.1P - Packet classification and marking (802.1P) - Rate limiting
	Security & filtering	- MAC address limiting

System Operation and Maintenance	**Diagnostic**	- Support OAM Remote Loop back test.
Physical Characteristics	**Optical characteristics**	- Transmission distance: 10Km or 20Km(Optional) - Transmission quality: BER 10^{-10} or lower - Transmission level : -1~ 4dBm
	Dielectric resistance	100Mohm or higher (based on DC 500V)

Certificate of Installation: (Customer copy)

Product Name		**BEAM GE-PON ONT**
Model Name		C504W
Serial No.		
Date of Installation		/ / 20 (MM/DD/YY)
CUSTOMER	**Name**	
	Account Number	
	Address	
	Phone	
	E-mail	

Warranty does not cover damages resulting from accident, misuse or unsuitable operating environment

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Certificate of Installation: (Company copy)

Product Name		**BEAM GE-PON ONT**	
Model Name		C504W	
Serial No.			
Date of Installation		/ / 20 (MM/DD/YY)	
CUSTOMER Feedback	**Name**		
	Address		
	Phone		
	E-mail		
	Structured Cabling done	YES	NO
	Demo given	YES	NO
	Signature		

Warranty does not cover damages resulting from accident, misuse or unsuitable operating environment

Ways to reach BEAM

Customer care: 040-66272727

Email: support@beamtele.com

http://www.facebook.com/officialbeamfiber

Bill Payment Modes:

Pay Online	**Visit Portal.beamtele.com -> My Account -> Pay bill**
	Visit www.beamtele.com -> Bill pay
Other options	At the e-seva centers
	Collection executive – Call us @ 66272727