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BLU-CASTLE BCUM138E GPON Compact and Efficient Device



Specifications

Main technical specifications		
Standard	GPON	ITU-T G.984
	Uplink	1.25Gbps
Rate	Downlink	2.5Gbps
	1 WAN port	SC/APC, Single Mode optical fiber
	4 LAN ports	RJ-45 10/100/1000Mbps, auto-MDI/MDIX
	1 POTS port	RJ-11 FXS
Interface	WiFi 2.4Ghz WiFi	802.11n/ax (2T2R MIMO) 576Mbps
interrace	5Ghz	802.11ax (2T2R MIMO) 2402Mbps
Physical characteristics and environment requirements		

Power adapter input	100V 240V AC 50Hz 60Hz
Whole-device power supply	12V DC 1.5A
Standard power consumption	<18W
Operating temperature	0°C 45°C
Operating humidity	10%~90% (non-condensing)
Dimension	L x W x H 200mm x 125mm x 36mm
Weight	<500g

Safety guidance

Safety check

Before installing the device, you must check the following items.

1. Electric safety

- Ensure that there are no inflammable, conductive or moist objects around. Check whether the cables are aged and whether other electrical appliances are placed stably.
- 2. check whether the alternating or direct input current is within the allowed range of the device, whether the polarity of the direct current is correct, and whether the earth line is properly connected.

2. Device position

- 1. Because the running electric device easily generates heat, please ensure to place the device in a well-ventilated environment.
- 2. avoid direct sunshine and do not place the device on a PC case.
- 3. keep the device away from heat and water.
- check whether power supply is available. The input voltage fluctuation range must be smaller than 10%. The power plug should not share one socket with a hair drier, an iron or a refrigerator.

Safety caution

- Read the quick installation guide carefully before using the device.
- note all cautions in the quick installation guide.
- do not use any accessory that does not belong to the device without prior consent of the manufacture, as it may cause fire or product damage.
- use the power adapter accompanied in the package.
- do not place any object on the device.
- keep the device dry, ventilated, rainproof and clean.
- during lightning weather, unplug the power plug and all connection cables, to protect the device against lightning.
- clean the device using a soft and dry cloth rather than liquid or atomizers. Power off the device before cleaning it.
- power off the idle device.
- keep the ventilation hole clean and prevent any object from dropping into the device through it. Otherwise, it may cause short circuit and further cause device damage or fire. Do not spray liquid on the surface of the device.
- do not open the case of the device, especially during device power-on,
- before plugging or unplugging the power, ensure that the power is off, thus avoiding surge.
- be careful when unplugging the power, as the transformer may be very hot.
- cover the optical interface with fiber interface cap when it is not in use. Avoid direct
 eye exposure to the laser emitted from the optical interface. Wear safety glasses if
 possible, to protect your eyes

Caution: Please read the above safety guidance carefully before device use. Users should assume responsibilities for any accidents due to incompliance with the above instructions.

Overview

This chapter mainly describes functions and the structure of the device.

Features and Function

- strong maintainability. Provide various statuses of LED indicators, to help troubleshooting.
- long transmission distance, up to 20 km.

Front Panel



Fig1. Front Panel

On the front panel a row of LEDs is placed. Those LEDs allows you to easily check the status of the device and it's interfaces.

Table 2.ONU LED indication table for Easy Mesh agent mode

LE D	Colo	Stat	Opis	
РО		On	Power is ON.	
W ER	White	Off	Power is OFF / Fau Ity PSU.	
РО		Blink s	Device detected by OLT.	

N	White	On	Device registered by OLT.	
LO	LO	Blink	No connection with OLT.	
S	Red	Off	Active connection with OLT.	
NE		On	Network access.	
T	White	Off	No network access.	
		On	Ethernet link up.	
LA N1	White	Blink s	Data transmission.	
-4	-4	Off	Ethernet link down.	
		On	VoIP account regist ered.	
TE L	White	Blink s	Active call.	
		Off	VoIP account not registered.	
2.4 G		On	WiFi interfaces ena bled.	
	White 5G	Blink s	Data transmission.	
5G		Off	WiFi interfaces dis abled.	
			I.	1

		On	WPS enabled.	
W PS	White	Blink	Pairing in progres.	
		Off	WPS disabled.	

LED	Kolor	Status	Opis
		On	Got WAN IP address successfully.
WPS	White	Blink	Connecting with controller.
		Off	Device in bridged mode or no IP.

Table 3.ONU LED Indication Table for Easy Mesh contorller mode

LED	Kolor	Status	Opis
		On	The connection of Ethernet interface is normal.
2.4G		Blink	Initialization of adding a agent.
		Off	The connection of the Ethernet interface fails to establish.
		On	The connection of Ethernet interface is normal.
5G		Blink	Initialization of adding a agent.
	White	Off	The connection of the Ethernet interface fails to establish.
		On	Pairing ok.
WPS		Blink	Initialization of adding a agent.
		Off	Not activated/not triggered.

Rear Panel



Fig2. Rear Panel

ONU rear panel description

Table 4.Rear panel port description

	Function
ON/OFF	Device power ON/OFF button.
POWER	PSU socket.
RESET	Press and hold the button for at least 30 seconds (and no longer than 40 seconds) to restore the device to factory settings.
WPS	Hold for 5s to activate WPS If MESH is enabled, press for 10 seconds to activate MESH pairing. In MESH mode, WPS paring is disabled.
WIFI	Hold for 5s to activate/deactivate WiFi.

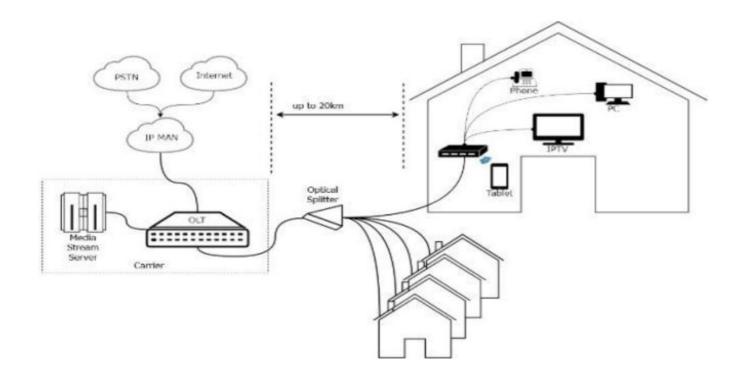
LAN1-4	Ethernet socket (RJ45).
TEL	Phone socket (RJ11).

ONU installation

The chapter describes the required installation operations before you use the device for the first time.

Product networking application – FTTH

Fiber to the Home (FTTH) means to install the ONU to residences or enterprise buildings. The optical line terminal (OLT) is placed in the central equipment room. The ONU can be placed in the home of a user, or it can provide connection for the user through the Ethernet interface, according to the user requirement. The OLT connects to the ONU with an optical distributor in a point-to-multipoint way. See the following figure.



Caution: ONU can be placed in a room or the corridor. Because installation and cabling in the corridor are relatively complex, let the professional engineers deploy according to the actual situation. This manual describes the procedure for installing the device at home, and is for reference only.

Connecting ONU



Wiring connection and power on

- 1. Connect fiber optical cable (ended with AC/APC plug) to the optical port located on the bottom of the device.
- 2. You can connect an Ethernet devices to LAN1-LAN4 (ex.computer with wired NIC, printer, gaming console, set-top-box, TV, etc.)
- 3. You can connect a phone to TEL socket
- 4. Plug in the PSU plug to the POWER socket. Before you install the PSU please make sure the ON/OFF button is in OFF position
- 5. Connect the PSU to the power grid socket
- 6. Turn on the device by pressing the ON/OFF button.

Caution:

When a fiber is not in use, ensure to cover the optical interface of the ONU and the dust cap of the optical fiber. Prevent grease, dust pollution or water immersion, which may lead to unavailable fiber and optical interface of the device. If fibers need to be fixed or bended during cabling, do not fasten the fibers too tight. Avoid fiber extrusion, which may lead to increase of fiber material or unavailable fiber.

Troubleshooting

Symptom	Solution
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The POWER indicator is not on	Check whether the power connection is correct,check whether the power adapter matches the device.
The PON indicator is n ot on	= Check whether the SN of ONU matches OLT,= check whether the optical attenuation is in the normal range.
The LOS indicator is o	Check whether the optical fiber cable is properly inserted,check whether the optical fiber connector is clean.
The LAN indicators are not on	 Check whether the PC NIC is enabled, check whether the network cables included in the device package are used, check whether the network cable connection is normal, check whether the LED for your corresponding LAN port is on, check whether the network adapter works in the normal state.

Appendix a acronyms and abbreviations

GPON	Gigabit Passive Optical Network
FTTB	Fiber to the Building

FTTH	Fiber to the Home
OLT	Optical Line Terminal
ONU	Optical Network Unit
PON	Passive Optical Network

Additional information

Declaration of Conformity (CE)

This device has been tested and found to comply with the stated standards which are required by the Council Directive of 2014/30/EU and Part 15. The device complies with this CE Declaration when the installation is done in accordance with the instruction and documentation. The importer don't take responsibility for any issues caused by improper use of the device.

Recycling

This product bears the selective sorting symbol for Waste electrical and electronic equipment (WEEE). This means that this product must be handled according to European directive 2012/19/EU in order to be recycled or dismantled. This will minimize the negative effects on the environment and human health resulting from the possibility of the presence in the equipment substances, mixtures and hazardous components. A user can give the product to a competent recycling organization, to WEEE collection points or to a distributor (in accordance with local regulations).

FCC Statement

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

- 1. This device may not cause harmful interference.
- 2. This device must accept any interference received, including interference that may cause undesired operation.

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Note: This equipment has been tested and found to comply with the limits for a class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. if this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

The device has been evaluated to meet the general RF exposure requirement, This equipment should be installed and operated with a minimum distance of 20 cm between the radiator and your body.

FAQ

Q: What should I do if the POWER LED is off?

A: Check the power supply, ensure correct connection, and use the provided power adapter.

Q: How can I clean the device?

A: Use a soft, dry cloth for cleaning. Ensure to power off the device before cleaning.

Q: What does the LOS LED indicate?

A: The LOS LED indicates the connection status with the OLT.

Documents / Resources



BLU-CASTLE BCUM138E GPON Compact and Efficient Device [pdf] Inst allation Guide

BCUM138E GPON, BCUM138E GPON Compact and Efficient Device, C ompact and Efficient Device, Efficient Device, Device

References

- User Manual
- BLU-CASTLE
- ▶ BCUM138E GPON, BCUM138E GPON Compact and Efficient Device, BLU-CASTLE, Compact and Efficient Device, device, Efficient Device

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