

# GL-E8211U-CM

## (1GE+1FE+1POTS+WIFI+CATV)

### Product overview :

E8211U-CM is an ONU equipment terminal in the EPON system. In cooperation with the OLT, the ONT can provide various broadband services to connected users, such as Internet, VoIP, HDTV, Video Conference and other services. It is based on the mature, stable and cost-effective EPON technology, providing one PON interface, one 10/100M, one 1000M adaptive electrical interface, one VOIP telephone interface and one USB interface. Adopt single fiber wavelength division multiplexing technology (downlink 1490nm, uplink 1310nm), only need an optical fiber to connect to the OLT, the maximum transmission distance can reach 40 kilometers, support power failure report function, support local WEB management function, professional for hotel industry applications , Full iron case, wide temperature range products.

### Product interface:

**Interface:** hardware interface, looking at the interface direction from left to right, the interface sequence is: RJ11 telephone interface, network port 2-network port 1 (where network port 2 is the iTV interface), wireless switch, reset button, USB interface, DC 12 volt interface, power switch.

**Indicator light:** LED definition from left to right: power supply, optical fiber G, optical signal, broadband, telephone, network port 1-2, USB



### Product feature:

1. HGU ONU product form, supports bridging and NAT modes;
2. BOB product technology;
3. 802.11 b/g/n wireless access;
4. Wireless use 2T2R built-in dual antenna;
5. Provide a VOIP interface to support connection to ordinary telephones;
6. The USB interface supports configuration saving and restoration;
7. 12V/1A external power supply.

**Product key features:**

## • Processor features

- >Support ARM processor with 800MHz frequency;
- >Support 32KB I-Cache and D-Cache;

**Key product features:**

## \* EPON

- >Comply with ITU-T G.984.1/2/3/4 standard;
- >Support the downlink rate is 1.244Gbit/s, and the uplink rate is 1.244Gbit/s;
- >Support 32 TCONT, 256 GEMPORT;
- >Support two-way FEC, support RS (255,239), RS (255,223) FEC codec;
- >Support AES128 encryption and decryption function;
- >Support SBA and DBA bandwidth allocation;
- >Support synchronous Ethernet function;
- >Support Dying-Gasp, support rogue onu detection;
- >Support EPON energy saving in accordance with G987.3 protocol;

## \* VOIP

- >Support 1-channel voice processing;
- >Support various prompt sound generation;
- >Support G.711, G.722, G.729, T38 and other codecs;
- >Support FoIP function;
- >Support Fax/Modem VBD (Voice Band Data) function;
- >Support echo suppression, voice activity detection, comfortable background noise, voice frame compensation and other functions;
- >Support VoIP statistics and fault diagnosis functions;
- >Each POTS can be individually configured with VoIP codec, codec priority order and packing interval can be configured;
- >Support DTMF detection, generation, transmission and recovery functions;
- >Support FSK generation, with calling number display function;
- >Support two-stage dialing, support RFC2833 in-band transmission of DTMF tones;
- >Support tripartite conference function;

**Business performance**

- > Two-way wire-speed forwarding of Layer 2 data services, supporting 4K MAC address tables in bridge mode;
- >Support 802.3, 802.1Q Tag/Untag Ethernet frame, support QinQ;
- >Support flexible tag processing, compatible with CTC2.1, TR156 requirements;
- >Support flexible flow classification, up to 8K flow classification rules;
- >Support special message capture;
- >Support link error event monitoring and loopback monitoring;
- >Support L2, L3 (IPv4/6) multicast forwarding, and support multiple forwarding methods;
- >Support multicast replication function, support 3K V4 multicast groups and 768 V6 multicast groups;
- >Support the replication capability of the user port;

- >Support 802.1ag/Y.1731, support connectivity monitoring and performance detection;
- > Three-layer data service two-way wire-speed forwarding: support IPv4, IPv6 dual stack, support DS-Lite, 6RD hardware acceleration;
- >Support NAPT hardware acceleration and 8K hardware acceleration table;
- >Ethernet MAC supports auto-negotiation and manual setting of speed and duplex mode;
- >UNI interface supports 802.1x authentication, STP (Spanning Tree Protocol)/RSTP (Rapid Spanning Tree Protocol) spanning tree protocol processing;
- > Provide QoS guarantees for different priority services through SLA constraints, Policing, queue management, scheduling/congestion avoidance, and discard management methods;
- >Support ingress-based flow control. For services that exceed the flow, you can choose packet loss or Pause frame back pressure;Support QoS function;

**\* WIFI feature**

- >Technical standards: IEEE802.11b, IEEE802.11g, IEEE802.11n;
- > Modulation method: 802.11b: DSSS/BPSK/QPSK/CCK
- >802.11g: OFDM/DSSS/BPSK/QPSK/CCK;
- >802.11n: OFDM/DSSS/BPSK/QPSK/CCK;
- >Speed: 802.11b: compatible with 11,5.5,2,1 Mbps;
- >802.11g: compatible with 54,48,36,24,18,12,9,6 Mbps;
- >802.11n: compatible with 130,117,104,78,65,58,52,39,26,19.5,13,6.5Mbps;
- >Channel: 1~11 (USA, Canada); 1~13 (Europe); 1~14 (Japan);
- >Frequency range: 2.4GHz-2.4835GHz;
- >Transmitting power: 11b: 17dBm +/- 1.5dBm;
- >11g: 14dBm +/- 1.5dBm;
- >11n: 11dBm +/- 1.5dBm;
- >Receiving sensitivity: 11b: 83dBm;
- >11g: 70dBm;
- >11n: 64dBm;
- >Coverage range: up to 100m;
- >Security: 64/128-bits WEP; WPA/WPA2;
- >Antenna quantity: 2\*3dBi built-in antenna;

**Support agreements and standards:** >ITU-T G.984.1/2/3/4、IEEE802.3、IEEE802.3u、IEEE802.3x、IEEE802.3z、IEEE802.1d、IEEE802.1p、IEEE802.1q、IEEE802.1x、RFC1155、RFC1157、RFC1112、RFC1113 etc

**CATV parameters:**

Item	Unit	Performance	Remarks
Received light wavelength	nm	1210~1610	
Received optical power	dBm	-2~-18	
Optical AGC range	dBm	-5~-15	
Optical connector		FC/APC or SC/APC	Specify when the user orders
RF connector		F head inch or metric	Specify when the user orders
Frequency Range	MHz	47~1000	
Frequency response flatness	dB	±0.75	-10dBm received optical power
		±1.5	-15dBm received optical power
Output reflection loss	dB	≥16	
Output RF impedance	Ω	75	
Nominal output level	dBuV	76±2	-15dBm received optical power
C/N	dB	≥43	-9dBm received optical power, 59 PAL-D
C/CSO	dB	≥62	analog signals +16 digital channels

C/CTB	dB	≥62	
MER value	dB	≥32	-10dBm received optical power, 80 digital signals
MER value	dB	≥30	-15dBm received optical power, 80 digital signals
Operating temperature	°C	-25~+55	

**Port characteristics:**

- 1\* PON port
- 1\* 10/100/1000M Ethernet port, 1\* 10/100M Ethernet port
- 1\* POTS voice port
- 1\* way 2.4G WIFI interface
- 1\* CATV interface

**Other features:**

- Certification: Comply with CE, FCC, ROHS and other standards
- EMC / EMI: Comply with VCCI Class B, FCC Part 15 B standards
- Safety: Comply with UL 60950 safety regulations
- Anti-lightning and anti-surge voltage protection: in line with ITU-T K.21 standard

**Physical characteristics:**

- Physical size: 210\*135\*33 (length×width×height, unit: mm)
- Power supply: 12V/1A
- Power consumption: 8W
- Temperature:
- Working temperature: -10~55°C
- Storage temperature: -30~60°C
- Relative humidity: 10~90% (non-condensing)