



**TECHNICAL DATA SHEET  
FOR XPON ONU  
(TECH H-4412 4GE+CATV+WIFI6)**

**Technical Specifications**

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## 1. Overview

The TECH H-4412 is a G/EPON optical terminal access device (AX3000Mbps) that is highly integrated with dual-frequency Wi-Fi6. It is an optical fiber to the home terminal product of the operator. It supports ultra-bandwidth access through G/EPON upstream technology, and provides users with basic WIFI functions, routing, gigabit Ethernet functions. The TECH H-4412 upstream network ports are G/EPON ports. The downstream user ports include four GE electrical ports, one USB port, one CATV, and one AX3000 WiFi6 WLAN port.



## 2. Interface function

- 1 \* G/EPON interface: SC/UPC/APC interface, G/EPON standard
- 4 \* Ethernet interface: 10 MBPS / 100 MBPS, 1000 MBPS, RJ - 45, IEEE802.3-2005 standard
- 1 \* CATV, C/N:  $\geq 43$ dB, C/CTB:  $\geq 55$ dB, C/CSO  $\geq 55$ dB, MER  $\geq 32$ dB, BER  $\leq 1 * 10E-6$  (optional)
- 1 \* USB interface: standard USB 2.0/3.0 interface
- Dual-band WIFI6 AX3000 (2.4G 2T2R, 5.8G 3T3R)

<b>Hardware Parameters</b>	
Flash	256MB NAND
Memory	512MB DDR3
LED	POWER+PON/LOS+NET+LAN+WiFi+CATV+WPS+USB
Port	4*RJ45(GE)
	1*Reset+1*Power +1*WiFibutton+1*WPS
	1*SC/UPC (or SC/APC)
	1*CATV
	1*DC
	1*USB2.0 or 3.0
Size	190mm*135mm*33mm(L*W*H)
Consumption	≤18W
<b>Interface Parameters</b>	
Ethernet Port	Ethernet port-based VLAN tags and tag removal VLAN transparent and mark MAC address learning 10/100/1000Mbps Autonegotiation
USB	Usb 2.0/3.0

### Product Function

- G/EPON
- ITU-T G.984.1-4
- ITU-T G.988/TR255/TR156
- 15 TCONTS /256GEM ports
- 8 Egress queues per TCONT at leastVLAN/ priority/VEIP gem mapping modeSN/LOID/SN+
- Password authenticationPerformance monitoring: ethGem portDying gasp

### Layer 3 Features

- PPPoE/Static IP/DHCP
- NAT/NAPT
- Port forwarding
- ALG, UPnP
- DDNS
- IPv6/IPv4 dual stack, and DS-Lite
- Static/Default routes
- Multiple services on one WAN port
- RIPv2 with passive mode

### Layer 2 Features

- MAC learning (SvL)/aging
- Support max frame length to 1518 bytes
- VLAN tagging for untagged packets
- Support VLAN 1-4094
- VLAN transparent/translation

### QOS

- Support 8 Queues with Strict Priority
- Ethernet port rate limitation
- 802.1ppriority
- SP/WRR
- Service flow classification

### Multicast

- IGMP v2 (RFC 2236) and IGMP v3 (RFC 3376)
- IGMP snooping and IGMP Proxy
- MLD v1/v2

### Product Function-Continued

#### Management

- OMCI/Web UI/TRO69
- Telnet/SSH management with CLI
- commands Dual-system software backup and rollback

<b>WiFi6(AX3000)</b>	
WiFi protocol	2.4GHz supports 802.11b/g/n/ax 5GHz supports 802.11a/n/ac/ax
Transmit power	2.4G 100mw,5G /200mw
Antenna gain	5 dBi
Antenna	dual-antenna MIMO(2*2)(2.4G&5G)+1*5G-antenna
WLAN penetrate	one reinforced concrete walor two ordinary brick walls(non-reinforced concrete)
WLAN access capability	64 /SSID
channel	2.4GHz(channel 1- 13)5GHZ(channel 36- 161)
WPS	WLAN terminal devices withWPS Push Button functionestablish connection within 2minutes
WLAN security function	WPA-PSK、WPA2-PSK、 WPA3、WPA-PSK/WPA2-PSK AES、AES+TKIP
Air Speed	574 Mbps (2.4GHz) , 2402Mbps (5GHz)
<b>CATV</b>	
Remote control CATV	ON/OFF
optical AGC	-10~+2dBm
Output level	76 dBuV
RF bandwidth	47 -1000 MHZ
In band fatness	±1.25dB
Output return loss	≥ 12dB
CATV system parameters	C/N ≥ 43dB ,C/CTB ≥ 55dB,C/CSO>55dBMER ≥ 32dB , BER ≤ 1* 10E-6
<b>Environment</b>	
Operating Temperature	-10°C ~55°C
Storage Temperature	-20°C ~70°C
Operating Humidity	5% ~ 95% (non- condensing)
Power Supply	12V/1.5A