

XPON ONU USER MANUAL

(WIFI 6 AX3000)

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Chapter 1 Product Introduction

1.1 Product Description

The product is designed as HGU (Home Gateway Unit)/SFU(Single Family Unit) in different FTTH solutions. The carrier-class FTTH application provides data service access. It is based on mature and stable, cost-effective XPON technology. XPON can switch automatically with EPON and GPON mode when it accesses to the EPON OLT or GPON OLT. It adopts high reliability, easy management, configuration flexibility and good quality of service (QoS) guarantees to meet the technical performance of EPON Standard of China Telecom CTC3.0 and GPON Standard of ITU-TG.984.X

1.2 Special features

- Support EPON/GPON mode and switch mode automatically
- Support HGU Function
- Support Route mode for PPPoE/DHCP/Static IP and Bridge mode
- Support IPv4 and IPv6 Dual Mode
- Support LAN IP and DHCP Server configuration
- Support Port Mapping and Loop-Detect
- Support Firewall function and ACL function
- Support IGMP Snooping/Proxy multicast feature

Specialized design for system breakdown prevention to maintain stable system

1.3 Technical Parameter

Technical item	Details	
	1 G/EPON port (EPON PX20+ and GPON Class B+)	
PON Interface	BOB(Boas on Board)	
	Receiving sensitivity: ≤-27dBm	
	Transmitting optical power: +1~+4dBm	
	Transmission distance: 20KM	
Wavelength TX: 1310nm, RX: 1490nm		
Optical Interface	SC/UPC Connector	
	4 x 10/100/1000Mbps auto adaptive Ethernet interfaces. Full/Half, RJ45	
LAN Interface	connector	
	1,For Function of Reset	
Duch Dutton	2,For Function of Reset,Power On/Off	
Push-Button	3,For Function of WPS	
	4,For Function of WIFI	
	Temperature: 0℃~+50℃	
Operating Condition	Humidity: 10% \sim 90% (non-condensing)	
	Temperature: -30℃~+60℃	
Storing Condition	Humidity: 10%~90% (non-condensing)	
Power Supply	DC 12V/1.5A	
Power Conswumption	≤6W	

Table 1: Technical parameters

1.4 Application chart



Figure 1-2: Application chart

1.5 Panel description

LED	Status	Description		
POWER	On	The device is powered up.		
	Off The device is powered down.			
DON	On The device has registered to the PON system.			
Blink The device is re		The device is registering the PON system.		
Off The device registration is incorrect.				
LOS	Blink	The device doses not receive optical signals.		
	Off	The device has received optical signal.		
	On	Ethernet connected properly (LINK).		
LAN1/2/3/4	Blink	Ethernet is sending or/and receiving data (ACT).		
	Off	Ethernet connection exception or not connected.		
	On	Wifi enable		
WIFI(2.4/5G)	Blink	WIFI is sending or/and receiving data		
	Off	Wifi disable		
DOTO	On	POTS connected properly (LINK).		
P015	Blink	POTS is sending or/and receiving data		

	Off	POTS connection exception or not connected.
WPS	Off	WPS connection exception or not connected.
	On	WPS connected
	Blink	WPS is conecting.

Table 2: Panel Lights Description

Chapter 2 Quick Installation

2.1 Standard Packing Contents

When you receive our products, please check carefully to make sure that our products whether have some defects or not. If something wrong with shipings, please contact carrier; other damage or lack of some parts, please contact with dealer.

Contents	Description
ONU	1 pcs
Power Adapter	1 pcs

Table	3:	Packing	Contents
-------	----	---------	----------

2.2 Quick Installation

1. Connecting the optical fiber cable to the unit.

- a) Remove the protective cap of the optical fiber.
- b) Clean the end of the optical fiber with an optical fiber end cleaner.
- c) Remove the protective cap of the ONU optical interface (PON interface). Connect the fiber to the PON port on the unit.

Note: When measuring the optical power before connecting to the ONU, it is recommended to use a PON Inline Power Meter. The receiver optical power should be between -8dbm and -27 dbm by using 1490nm.

While connecting, please note:

- Keep the optical connector and the optical fiber clean.
- Make sure there are no tight bends in the fiber and that the bending diameter is greater than 6cm. Otherwise, the optical signal loss may be increased, to the extent that signal may be unavailable.
- Cover all optic ports and connectors with protective cap to guard against dust and moisture when the fiber is not used.
- 2. Apply power to the unit. If the product has the power button, please push the power button before used.
- 3. After the ONU is power ON, Indicators should light up as for normal operation. Check whether the PON interface status LED (PON) is on continuously. If it is, the connection is normal; otherwise there is either problem of the physical connection or the optical level at either end. This may be caused by either too much or too little attenuation over the optical

fiber. Please refer to the Panel Lights Description for normal LED activity.

4. Check all signal levels and services on all the ONU communication ports.

Unit Installation Adjustment

Installing the ONU on a horizontal surface (Bench top)

Put the ONU on a clean flat, sturdy bench top. You must keep the clearance for all sides of the unit to more than 10cm for heat dissipation.

Chapter 3 Configuration

After finishing the basic connection configuration, you can use its basic function. In order to satisfy individuation service requirements, this charter provides the user parameter modification and individuation configuration description.

3.1 Login

The device is configured by the web interface. The following steps will enable you to login:

- 1、 Conform "2.2 Quick Installation" to install;
- 2. The device management default IP address is 192.168.1.1;
- 3. Open your web browser, type the device IP in address bar;
- 4. Entry of the user name and password will be prompted. Enter the default login user name /password and check code in the picture.

By default, there are two user levels for management. Administration level user name is "admin", password is "admin". Normal level user name is "useradmin", password is "Zxic521!".

The Administration account is able to access and modify all settings of ONU.

The normal account can only be used to view configurations, status and configure few parameters.

	Username:	admin	
23	Password:	admin	. 8/9/
Ľ.		Original password is on the back	2-3/3
		Confirm	na la come de la come

Figure 3-1: Login

3.2 Status

This menu supports to check the device information, Network Interface, User Interface.

3.2.1 Device

This part shows the main information of device status and basic settings

			HUZ4001XR
Status Betwork	Security Application	Administration	Maintenance Help
Device Information Device information	Operator		中文
Network Information	Wodel Serial Number	HUZ4001XR 2012221101000060	Help
User Information VoIP Status	Hardware Version Software Version	V1.0 OSSHV1.0.1	Logour
Remote ManageMent Status			

Figure 3-2: Device Information

3.2.2 Network Interface

This part shows the main information of WAN IPv4/IPv6 Configuration,PON Inform,PON Alarm.

3.2.2.1 WAN Connection

This part shows the WAN IPv4/IPv6 Configuration.

				1	HUZ	4001XR
Status	Notwork	Security A	Application A	ministration	Maintenance	Help
Device Informat	tion	Туре	PPP-0E			中文
Network Informa	ation	Connection Name	3_INTERNET_R_VID_			Help
IPv4 Connect	tion.	BAT	Enabled			. adp
IPv6 Connect	tion	IP	10, 0, 33, 241			Logout
4inő Tunnel		DNS1	10.0.33.1			
Alara Inform	ation	DNS2	172.19.0.2			
		DNS3	0. 0. 0. 0			
User Informatio	on	WAN MAC	00:D0:D0:00:00:02			
VoIP Status		Gatevay	10, 0, 33, 1			
Remote ManageMe	ant Status	Connection Status Disconnect	Connected			
		Online Duration	37 sec			
		Туре	DBCP			
		Connection Name	4_INTERNET_R_VID_			
		NAT	Enabled			
		IP	192.168.22.234/255.2	55, 255, 0		
		THICL	114 114 114 114			

Figure 3-3:WAN Connection

3.2.2.2 PON Inform

This part shows the main information of PON module(Tx Power/Rx Power) and EPON/GPON register Status.

		-	HUZ4001XR
Status Metwork	Security Application	Administration	Maintenance Help
Device Information		trade and the second	中文
Network Information	GPON State	Authentication Success	
IPv4 Connection	Optical Module Input	-12.1	Help
IPv6 Connection	Optical Module Output	1.7	Logout
4in6 Tunnel	Optical Module Supply Voltage(uV)	3204000	
Alarm Information	Optical Transmitter Bias Current(uA)	16450	
	Operating Temperature of the Optical Module(°C)	18	
User information	Ethernet Port	GEMPORT1	
VoIP Status	Encryption mode	Disable	
Remote ManageMent Status	Receive frame	0	
	Frame Sent	0	
	Bytes Received	0	
	Bytes Sent	0	

Figure 3-4:PON Inform

3.2.2.3 PON Alarm

This part shows the PON Alarm information.

					/	HU	Z4001XR
Status	Network	Securîty	Application	Administrat	tion	Naintenance	Help
Device Informa Network Inform IPv4 Connec IPv6 Connec 4inô Tunne: Link inform Alars Infor User Informati VoIP Status Remote Managel	ation mation ction tion mation reation ion	Serv Proce Co	Device Alara ice Quality Alara ssing Error Alara amunication Alara Environment Alara	WOICE link Alara			中文 Help Logout
							Refresh

Figure 3-5: PON Alarm

3.2.3 User Interface

3.2.3.1 Ethernet

This part shows the Ethernet Port Information.

Status Tetwork	Sep	urity	11	Application		dažni skrati on	. Bai	ntenauce	licip
Device Information									中文
Network Information	DHCP add	tress in	forma	tion					-
theme to forward has	IP Address MAC Address			Device Type LAN				Help	
Jser information	192.168.	1,2	8 B2:0C:D3:77:A4:97		:14:97	电影	9	SSID1	-
VLAN									Logou
Rtgarret	Ethernet	port s	tate						-
USB	LAN	LAB Status		Receiver		-	Sent But of frame		-
	Network	Half	Auto	Equipment disconnected	0	0	1095079	8459	
olf Status	îTV	Half Duplex	Auto	Equipment disconnected	o	0	1094823	8455	
lemote ManageMent Status	Network port3	Half Duplex	Auto	Equipment disconnected	0	0	1094823	8455	
	Network port4	Full Duplex	1001	Equipment connected	2304971	20610	26003879	23770	

Figure 3-6: Ethernet Interface

3.2.3.2 WLAN interface

This part shows the WLAN Information.

							1		1	UZ40	01XR
Status	letwork	Gsouri		Applicatio		Admiroi#	tration	1.	intenance		Buly
Device Informatio Network Informati	n on	On this SSIDs.	page, yo	u can see the	VLAN VO	rking st	ate and c	onfigurat	ion of		中文 Help
User Information		MLAN networ	k state		_						111-18-
VLAD		SSID index		Wlan Connection Channe Status		Channel					Logou
Ethernet		1		Enable 6							
USB		þ	_	Enable		100		_			
		Encryption	_		_		_	_			1
VoIP Status		COTD Sadan	COTD as	Receive		red		Sent			
		SSID INGEX	SSID ha	Bytes		f	rane	Bytes	fra	ae	1
Remote ManageWent	Status	1	WIFI-SS	ID1 69207		6	849	42719	395	_	1
		<u>b</u>	WIFI-SS	105	0	0	,	0	0	_	1
		Group Key U	pdate Int	terval							1
		SSID index	SSID na	ne	Security configur	ation	Authenti Type	cation	ion Encryption mo]
		1	VIFI-SS	ID1	Configur	ed.	WPA-PSK,	WPA2-PSK	TRIPEAES		1
		5	WIFI-SS	ID5	Configur	rd	MPA-PSK	VPA2-PSK	TRIPBAES		

Refresh

Figure 3-7: WLAN Interface

3.2.3.3 USB interface

This part shows the USB Information.

			HUZ	4001XR
Status Network	Security Applica	tion Administration	Maintenance	Help
Device Information Network Information	Port Device Name	1 Nass Storage		中文
User Information	Device Type	USB Mass Storage		Logout
Ethernet USB	vendor ib/Product ib	1950_1950		
VoIP Status				
Remote ManageMent Status				
				Refresh

Figure 3-8: USB Interface

3.3 Network

This part allows the user to configure WAN connection, LAN information, Routing and Port Configuration.

3.3.1 WAN

This part allows the user to configure WAN connections. You can add/delete/modify WAN connections according to local network demand.

		UZ4001XR
Status Networ	rk Security Application Administration Maintenance	e Help
WAN Connection 4in0 Tunnel Settings	IP Version 1Pv4 V Type PPPoE V	中文 Help
ARP Setting DHCP Release First	Connection Name Create WAN Connection V Port Binding LAN1 LAN2 LAN3 LAN4 OSSID1 OSSID2 OSSID3 OSSID4	Logout
Binding LAN Address Setting	SSID5 SSID6 SSID7 SSID8 Enable DHCP Server 🗹 Enable NAT 🇹	
Prefix Management WLAN	Service List INTERNET	
Remote Management QoS	DSCP	
SWTP Routing	Username Password Enable PPPoE Proxy	
	Enable Pass Through Authentication Type Auto Dial Mode Always Or	
	Idle Timeout 1200 sec	

Figure 3-9: WAN Configuration

Р	arameter	Description
		The interface of WAN connection which system will distribute
		automatically according to the current wan connections
		If you want to create a new WAN connection, please select "Create
	Interface	WAN connection" and input other WAN Parameters at the same
		time and then click "Create" button. If you want to modify/delete
		WAN connection, please select the WAN interface which you want
		to change and then click "Modify" or "Delete" button.
		Checked indicates the packets are transmitted by the PON port
	Enable VLAN	take VLAN tag. Unchecked indicates the packets are transmitted
VLAN		by the PON port don't take VLAN tag.
		Input the VLAN ID you want to set. Range is 1~4094. Usually
	VLAN ID	VLAN 1 donot use.
		Select VLAN priority you want to set. Range is 0~7.
	802.1P	Default empty (means 0)
I	Link Type	IP/PPP.

		IP mode(IPoe):ONU works on Route mode, wan connection get the
		IP via DHCP or set the statics IP.
		PPP mode(PPPoe):ONU works works on Route mode,wan
		connection get the IP via PPPoE.
		If you select Route WAN Connection, the NAT option is default
E	nable NAT	enable.If you select Bridge WAN connection, the NAT option is
		default disable. Checked indicates the NAT Function is enabled.
		Service mode indicates what the wan connection is used for.
S	ervice List	INTERNET for choosing.
		INTERNET: means wan connection used for Internet service.
		Max transfer unit. Default Value (in Byte):
	MIU	1500(static/DHCP) or 1492(PPPoE).
		Checked indicates the IGMP-Proxy Function is enabled.
Enabl	e IGMP-Proxy	If you want to use multicast function in Route wan
		connection, please enable this option.
I	P Version	IPv4、IPv6、IPv4/IPv6
	Username	PPPOE account.
	Password	PPPOE password.
DDD+E	DMS Name	PPPOE DMS Name.
PPPOE	Authentication	Auto、CHAP、PAP, Usually default choose Auto
	Туре	
	Dial Mode	Always on /Connect on Demand
	ID Tours	Static: means use the statics IP
	ПР Туре	DHCP: means use the DHCP Proctol to get the IP address
I	P Address	IP address about current WAN connection.
Sı	ıbnet Mask	Subnet mask about current WAN IP address.
	Gateway	Gateway about current WAN connection.
D	NS Server1	The Primary DNS of current WAN connection
D	NS Server2	The Secondary DNS of current WAN connection
D	NS Server3	The Tertiary DNS of current WAN connection
Po	ort Binding	Network port binding WAN connection
D	HCP Server	Enable/Disable DHCP Server

Table 4: WAN parameters

3.3.2 LAN

This menu supports the management of the LAN DHCP Server, RA Service, DHCP server(IPv6), Prefix Management, Port Service(IPv6).

3.3.2.1 DHCP Server

Dynamic Address management, including Dynamic Address distribution, and parameters distributed to equipment, such as lease time, address range, DNS, etc.

	HUZ40	001XR
Status Hetwork	Security Application Administration Waintemance	Help
WAN Binding	LAN IP Address 192.168.1.1 Subnet Mask 255.255.0	中文 Help
LAN Work Mode DHCP Server	Enable DHCP Server 🗹 Enable Option125 🗹	Logout
DHCP Binding DHCP Conditional Serving Pool	Lease Time One day V DHCP Start IP Address 192.168.1.2 DHCP End IP Address 192.168.1.254	
RA Service DHCP Server(IPV6)	NOTE: if device accessed is not specified type, the address will be allocated from address pool . Allocated Address	
Prefix Nanagement (IPv6)	MAC Address IP Address Remaining Time Host Wamm Port. There is no data.	
Prefix Management WLAN		
Remote Management. QoS		

Figure 3-10: DHCP Server

Parameter	Description
Subnet Mask	Subnet Mask about DHCP Pool address and LAN IP
Lease Time	Lease time of LAN DHCP Server

Table 5: DHCP Server parameters

3.3.2.2 RA Service

This part supports the management of RA Service, including Minimum Wait Time, Maximum Wait Time, Manage Flag and Other Config Flag.

				-	HUZ4001XR			
Status	Tetwork	Security	Application	Administration	Taintenance	Help		
VAB						中文		
Einding		Wining	Enable	(3 ~ 1950)				
	1.14	Finiata	Wait Time 200	(4 ~ 1800)		Help		
LAN Address Se	etting	And I alian	¥ []	1. 1000/		Locard		
LAN Work M	ode		0 🔽			rogour		
DHCP Serve	r		and a state of					
DHCP Sindi DHCP Condi Serving Po	ng tional ol							
DHCP Port :	Service							
TA Service								
DHCP Serve	r(IPV6)							
Prefix Management	(IPv6)							
Prefix Manager	aent							
VLAN								
Renote Manager	aent							
QoS								
SNTP								

Figure 3-11: RA Service

3.3.2.3 DHCP Server(IPv6)

DHCP Setting, include enable DHCP or not, and setting parameters of device lease time, device address and so son.

				HUZ	4001XR
Status Network	Security	Application	Administration	Maintenance	Help
AN Sinding AN Address Setting LAN Work Mode DHCP Server DHCP Binding DHCP Conditional Serving Pool	LAN IN Enable DHO DHCP Start IN DHCP End IN DNS Refn LAN side DNS acc	 Address P Server Address effectiv Address effectiv resh Time quisition wANCo 	e) Qast 6 e) Qast 6 e) Sec	4 bits 4 bits	中文 Help Logout
DBCP Port Service RA Service DBCP Server (IPV6) Prefix Management (IPv6) Prefix Management FLAN Remote Management CoS	Allocated Add	ress IP Address	Remaining	Time	

Figure 3-12: DHCP Server(IPv6)

3.3.2.4 Prefix Management

This page is used to display and modify the prefix information. The prefix can be obtained automatically, or configued manually. And the information is not allowed to be modified when prefix source is None.

Status	Network	Securi ty	Appli	cation	Administr	ation	Maintenance	Relp
AN inding AN Address Set refix Manageme	tting	Pre	Pref WAN Connecti Prefix Sour ferred Lifeti	ix	/			中文 Help Logou
Prefix Manas	genent	Prefix	Vallu Lifeti Delegati VAN	on RA	Preferred/Valid	CP⊽ð Delegatio	n Wodify	
emote Manageme oS	mt		-onnection	There is r	o data.			
NTP								

Figure 3-13:Prefix Management

3.3.2.5 DHCP Port Service

Configure the DHCP serivce of each port.

					~	H	UZ4001XR
Status	Network	Securi ty	Application	Admini	stration	Maintenance	e Help
VAN Binding LAN Address Sett LAN Work Mode DHCP Server DHCP Einding DHCP Conditio Serving Pool DHCP Port Ser RA Service DHCP Server(I Prefix Wanagement(IP Prefix Managemen VLAN Remote Managemen QoS SNTP Routing	ing mal vice PV6) v6) t t	û Onc	e a port was checked, LAW1 LAW2 LAW3 LAW4 SSID1 SSID2 SSID3 SSID4 SSID6 SSID6 SSID7 SSID8	its DHCP S	ervice will	be closed.	中文 Help Logout

Figure 3-14:Port Service

3.3.3 WLAN

3.3.3.1 Basic

Configure WLAN basic parameters, such as radio, channel, wireless mode, transmitting power, etc.

			-		
Status Network	Security Applica	tion /	dainistration	Maintenan	ce Help
AN					中文
inding	Enable Wireless RF				Help
AN Address Setting refix Management	≣ode Band Vidth	Mixed(802.1 20MHz	1b+802.11g+802	.11n) 👻	Logout
LAN	Channel SCI Enable	Auto	•		
Basic SSID Settings	Beacon Interval Tx Rate	100 Auto	#S		
Security EasyMesh	Transmitting Power QoS Type	100% •			
emote Management	Choose SSID	SSID1	-		
loS					
outing					

Figure 3-15: WLAN Basic

3.3.3.2 SSID Settings

SSID name, hiding SSID, Enable, SSID priority, etc.

Status Network	Security	Application	Adminis	stration	Maintenance	Help
NAN Sinding LAN Address Setting Prefix Management VLAN Basic SECURITY EasyNesh Remote Management QOS SNIP		Choose SSID Broadcast Disable SSIDEnable Maximum Clients SSID Name	SSID1	(1 ~ 32)	(0 ~ 27	中文 Help Logout

Figure 3-16: SSID Settings

3.3.3.3 Security

SSID security setting, supported methods: None, WEP, WPA, WPA2, WPA/WPA2, etc.

			HUZ4001XR
Status Network	Security Application	Administration	Eaintenance Help
WAN			中文
Binding LAN Address Setting Prefix Management WLAN Basic SSID Settings Security	Choose SSID Authentication Type WPA Passphrase Password Strength WPA Encryption Algorithm	SSID1 V WPA/WPA2-PSK	(8 ~ 63 characters) Logout
Remote Management QoS SNTP Routing			Submit Cancel

Figure 3-17: WLAN Security

3.3.4 Routing

3.3.4.1 Dynamic Routing

Dynamic routing, enable RIP, RIPv1 and RIPv2 protocol can be supported, including RIPv2 authentication.

Status Lot	ank	Formite	Annilia	tion 1	Administration			Role
Status Netw	OFK	Security	Applica	tion	Administra	ci on	Taintenance	інетр
AN			Enable RIP	0				中文
inding			Version	RIP v2	~			Holo
AN Address Setting		Authenti	cation Type	None	~			TIBIP
refix Management								Logou
LAN								
enote Vanagement								
loS.								
NTP								
louting								
Dynamic Routing								
Static routing								
Nouting Table								
	_						_	_

Figure 3-18: Dynamic Routing

3.3.4.2 Static Routing

Static Routing Configuration:select a WAN connection as the Route Interface, then configure destination IP, Mask, Gateway.

XPON	ONU	USER	MANUAL

			-	HUZ	4001XR
Status Network	Security	Application	Administration	Maintenance	Help
MAN Binding	WAN Connect: Network Addro	ion ess		~	中文 Help
AN Address Setting Prefix Management	Network Address	Add Subnet Rask	WAN Status Modi	fy Delete	Logout
kenote Nanagement	There	is no data, pl	ease add one first.		
NTP					
Dynamic Routing Static routing					
Routing Table					

Figure 3-19: Static routing

3.3.4.3 Routing Table

Route Information View, such as Network Address, Subnet Mask, Gateway, Interface Information.

					HUZ	4001XR
Status Hetwork	Security	Application	Administ	ration	aintenance	Help
YAN	Naturne address	Submat Mask	Category	Interface		中文
Binding	192.168.1.0	255, 255, 255, 0	Gateray	LAN		
LAN Address Setting						Help
Prefix Management						Logout
VLAN						
Remote Nanagement						
QoS						
SNTP						
Routing						
Dynamic Routing						
Static routing						
Routing Table						

Figure 3-20: Routing Table

3.4 Security

3.4.1 Firewall

3.4.1.1 Security level

Security level, the use of the operation, you can set the firewall level (IPv4) to high or low, after setting, a new firewall status will be showed.

				HI	JZ4001XR
Status Networ	k Security	Application	Administration	Maintenance	Help
URL Filter Firewall Security level Anti-Hacking Protection WAC Filter IP Filter Telnet	Firewall Instruction:: Big Lo	Level(IPv4) Off v h: Allow legal URL a	Cocess but Ping is forbid	den. ted.	中文 Help Logout
				Submit	Cancel

Figure 3-21: Firewall level

3.4.1.2 Anti-Hacking Protection

Attack protection Settings, you can open or close Anti-Hacking Protection.

				н	JZ4001XR
Status Betwork	Security	Application	Administration	Laintenance	Holp
URL Filter Firevall Security level Anti-Hacking Frotection MAC Filter IP Filter Telnet	Enable A	nti-Hacking Protection			中文 Help Logout
			_	Subait	Cancel

Figure 3-22: Anti-Hacking Protection

3.4.2 MAC Filter

MAC Address Filter: The MAC Address Filter settings can set the relevance parameters of the MAC filter function. The user interface will display the set MAC Filter rules after setting completed.

Status Network	Security Application Administration Maintenance	Help
RL Filter irevall AC Filter	If you choose the Permit mode, please add the MAC address of your PC first, otherwise internet access is not allowed. 2. MAC filter take effected both IPv4 and IPv6. 3. Enable switching or Mode switching will take effect immediately.	中文 Help
Rad Filter P Filter elnet	Enable Node Discard V Source MAC Address : : : : : : : : : : : : : : : : : :	Logou
	Source MAC Address Destination MAC Address Rodify Delete There is no data, please add one first.	

Figure 3-23: MAC Filter

3.4.3 IP Filter

This page allows the user to set the rule to filter the packet. After setting, this page displays the rule.

							HL	JZ4001XF
Network	Security	App	lication	Ч.	Administratio	om	Maintenance	
		Frahla	-					中文
	P	rotocol	TCP	~				_
		Name			1			Help
	Start Source IP #	Address						Logou
_	End Source IP /	Address						
	Start Destinat	tion IP						
	End Destinat	tion IF						
	Start Sour	ce Port						
	End Source	ce Port						
	Start Destinatio	on Port						
	End Destination	on Port						
	1	Ingress					*	
		Egress					*	
		Mode	refuse	~				
			Add	1				
	Sf Enable Name Sour Adw ProtocolNode End IP A	tart rc∈ IP iress Source ddress	Start Source D Port J End Source D Port J	Star estina IP Addr End estina IP Addr	t Start tion Destinationess Port End tion Destinationess Port	on Ingre on Egres	ss ÆddifyDelete s	
	Sotvork	Start Source IP - Start Source IP - End Source IP - Start Destinat End Destinat Start Source End Source Start Source End Source Start Source End Source Start Source End Source Start Source End Source Start Source End	Security App Enable Protocol Name Start Source IP Address Start Source IP Address Start Destination IP Address End Destination IP Address Start Source Port End Destination Port End Source Port Start Destination Port End Destination Port End Destination Port Engress Brode Start Protocol Node Start Posteres Protocol Node End Source Port	Security Application Enable Protocol TCP Name Protocol Protocol Start Source IP Address Protocol Protocol Start Destination IP Address Protocol Address Start Source Port Protocol End Destination Port Ingress Protocol Mode refuse Address Mode Protocol Protocol	Security Application Enable Protocol Protocol TCP Name Name Start Source IP Address Name End Source IP Address Name Start Destination IP Address Address Start Destination IP Address Start Source Port End Destination Port Ingress End Destination Port Ingress End Destination Port Address End Destination Port Address End Destination Port Ingress End Destination Port Destination Port End Destination Port Destination Port Ingress Regress Mode refuse Address Port IP Address Port Protocol Node End Source IP Source IP Address End Destination Port Destination Ingress Red Ingress Red Ingress Red Ingress Red Ingress Red Ingress Red	Security Application Administration Enable Protocol TCP Protocol TCP Name	Security Application Administration Enable - - Protocol TCP • Name - - Start Source IP Address - - End Source IP Address - - Start Destination IP - - Address - - End Destination IP - - Address - - Start Destination Port - - End Destination Port - - Ingress - - Regress - - Mode refuse - Add - -	Intervent Security Application Administration Security Enable

Figure 3-24: IP Filter

3.4.4 Telnet

Telnet configuration: used to open or close the Telnet Telnet function and WAN side.

			-	HU	24001XR
Statui: Network	Security	Application	Administration	Maintenance	Hulp
URL Filter	Rn	ahle Telnet 🔽			中文
Firewall	8000				Heln
MAC Filter					
IF Filter					Logout
Telnet					
Telnet					
				Submit	Cancel

Figure 3-25: Telnet

3.5 Application

3.5.1 Advanced NAT Settings

3.5.1.1 ALG Setting

This page allows the user to set ALG switch. After setting, this page displays the new state of ALG switch.

			-	HU	Z4001XR
Status Notwork	Security	Application	Administration	Raintenance	i fielp
DDWS Setting		410			中文
dvanced WAT Settings		SIP			
in a second		🗹 H323			Help
DW7 Setting		RTSP			Constant of the
Port Forwarding		PPTP			Logout
TOLT FOLKALOLING		IPSE	0		
PnP Settings		TP FTP			
oip Settings					
CMP Settings					
aily Application					
WS Settings					
LD Settings					
WS Service					
Samba Service					
				Dist:	(1) (1)

Figure 3-26: ALG Setting

3.5.1.2 DMZ Setting

This page allows to set DMZ Host and displays the information of DMZ Host.

Status Nutwork DDNS Setting Advanced NAT Settings ALG Setting DM2 Setting Port Forwarding UPnP Settings Voip Settings IGMP Settings	Security En VAN Connec Enable MAC Map DMZ Host IP Add	Application	Administration	■aintenance	Help 中文 Help Logout
DDNS Setting Advanced NAT Settings ALG Setting DMZ Setting Port Forwarding UPnP Settings Woip Settings IGMP Settings	En VAN Connec Enable MAC Map DMZ Host IP Add	nable [] ction [pping [] tress [~	中文 Help Logout
Daily Application DMS Settings MLD Settings DMS Service Samba Service					

XPON ONU USER MANUAL

Figure 3-27: DMZ Setting

3.5.1.3 Port Forwarding

Users can use the application name to set a virtual server. if you enable virtual server configuration, you can use Wide Area Network to access the virtual host.

Status Hetwork	Security	Application	Administration	Taintenance	Help
DDNS Setting	Frah				中文
dvanced NAT Settings	Enab. Na	10 U			
ALC Setting	Protoc	ol TCP V	1		Help
DWZ Setting	WAN Host Start	IP			Logou
Port Forwarding	WAN Host End IP Addre	\$\$			-
PnP Settings	VAN Connecti	on		~	
in corrange	VAN Start Pos	rt			
oip Settings	VAN End Por	rt			
CMP Settings	Enable NAC Mappin	ng 🗌			
aily Application	LAN Host IP Addre	\$\$			
MNS Settings	Virtual host po	rt			
LD Settings		Add			
WS Service	VAN : Dane Star	Host VAN t IP Start Co	VAN nnection Virtual		
Samba Service	Protocol VAN Ho. IF Ad	ress Fort st End VAN End L dress Fort J	N Host port AN Host port	/ Delete	
	There	is no data, pleas	se add one first.		

Figure 3-28: Port Forwarding

3.5.2 DNS Service

3.5.2.1 Domain Name

Domain Name is represent a small network in LAN side with a name space, it can be configured on interface of LAN side.

Status Network	Securi ty	Application	Administration	Taintenance	Help
OWS Setting		Domain Name			中文
dvanced NAT Settings					Help
IPnP Settings					
oip Settings					Logout
GMP Settings					
Waily Application					
MS Settings					
LD Settings					
MS Service					
Domain Name					
Hosts					
Samba Service					

Figure 3-29: Domain Name

3.5.2.2 Hosts

Host Name is mapped with a IP Address, they can be configured by user to resolve DNS request.

	security	Application	Administration	Taintenance	Help
DDWS Setting		Heat Hone			中文
dvanced NAT Settings		IP Address			
PnP Settings		Add			Help
oin Sattings					Logou
orb percrugs	The item which co	s with disabled butto uldn't be operated.	ons are allocated from	a DHCP server,	
GMP Settings	Hos	t Name	IP Address	Modify Delete	
aily Application		There is no data	a, please add one first		
NS Settings					
NS Settings LD Settings					
MS Settings LD Settings NS Service					
MS Settings LD Settings NS Service Domain Name					
NS Settings LD Settings NS Service Domain Name Hosts					



3.5.3 IGMP Settings

3.5.3.1 IGMP SNOOPING

Enable IGMP Proxy, IGMP Snooping and configure some other parameters.

				HUZ	4001XR
Status Network	Security	Application	Administration	Maintenance	Belp
DDNS Setting					中文
dvanced NAT Settings	Enable IG	MP Snooping 🗹	1.000		Links
PnP Settings	Forwarding Entry	Aging line 360	secs		Help
oip Settings					Logout
IGMP Settings					
IGMP SNOOPING					
IGMP PROXY					
aily Application					
MS Settings					
LD Settings					
ONS Service					
Samba Service					
				_	
				Submit	Cancel

Figure 3-31: IGMP SNOOPING

3.5.3.2 IGMP PROXY

If you select "AutoSense" radio button, the configuration of binding relationship which you manually configure will be cleared away. If you select "Manual" radio button, you can choose the WAN Connection of bridge or route type for IGMP packet.

				HU	24001XR
Status Butwork	Security	Application	Administration	Maintenance	Belp
DDNS Setting Advanced WAT Settings UPnP Settings Volp Settings IGMP Settings IGMP SNOOPING	Enable ICMP WAN Conn	Proxy 🗹		×	中文 Hetp Logout
Daily Application DWS Settings WLD Settings DWS Service Samba Service					
				Submit	Cancel

Figure 3-32: IGMP PROXY

3.6 Administration

3.6.1 User Management

Maintaining the WEB users accounts information of the device.

Status Network S User Management User Management System Management Log Management	ecurity Applica User manageme to change the	ation Admin mt refers to the a terminal user acc	aintenance user	Maintenance	Help 中文
User Management User Management System Management Log Management	User manageme to change the	mt refers to the a terminal user acc	aintenance user	can force	中文
Indicator light control WoIP Protocol Switch Uplink Mode	Username New Password Password Strength Confirmed Password	useradain			Help

Figure 3-33: User Management

3.6.2 System Management

3.6.2.1 System Management

Reboot or restore default if needed.

				HUZ	4001XR
Status Network	Security	Application	Administration	Maintenance	Help
User Management		Click this buttor	to report the device.		中文
System Nanagement	4	Reboot			Help
System Management Soft Update			and the second second		Logout
USB Backup Setting	-	Click this button reboot automatica	i to carry out factory illy).	reset(system will	
USB Recovery Setting	_	Factory re	set		
Log Nanagement					
Indicator light control					
YoIP Protocol Switch					
Uplink Mode					



3.6.2.2 Soft Update

With this operation, the version file can be upgraded.

		Application	Administration	Maintenance	Help
er Management stem Management	🛕 The	device will reboot af	ter upgrading.		中文 Help
System Wanagement Soft Update USB Backup Setting USB Recovery Setting	Ple	ase select a new soft 选择文件 未选择任何) Upgrad	vare/firmvare inage 文件 e		Logout
eg Management dicator light control					
IP Protocol Switch					

Figure 3-35: Soft Update

3.6.2.3 USB Backup Setting

You should backup user configuration on USB storage device.

				н	Z4001XR
Status Betwork	Security	Application	Administration	L Maintenance	l Help
User Management					中文
System Management System Management		WSB Device	~		Help
Soft Update		No USE storage d	svice detected!		Logout
USE Backup Setting USB Recovery Setting		Start B	ackup		
Log Management					
Indicator light control					
VoIP Protocol Switch					
Uplink Mode					

Figure 3-36: USB Backup Setting

3.6.2.4 USB Recovery Setting

Use this function to restore user configuration.



Figure 3-37: USB Recovery Setting

3.6.3 Log Management

3.6.3.1 Log Management

Log Management: set the log enable, the log level. Log Search: based on different log level you chose, device displays the corresponding log. Clear Log: delete the current log.

				HUZ4001XR
Status Tetrork	Security Applicat	on Administr	ation Mainten	ance Belp
Vser Management	Enable Save Log	8		中文
System Management	Log Level	Error 🗸		Help
Log Kanagenent Log Kanagenent Diagnosis	Manufacturer:2XIC; FroductClass:HU24001XR; SerialMumber:2012221101000060; IP:192.168.1.1; HWYer:V1.0; SWVer:0SSHV1.0.1;			Logout
Indicator light control	2023-01-05 16:42:09 [Error] i 224.0.0.251 2023-01-05 16:43:03 [Error] i	gap_proxy Not a mult	icast address	
VoIP Protocol Switch	224.0.0.252 2023-01-05 16:43:03 [Error] i	gmp_proxy Not a mult	icast address	
Uplink Mode	224.0.0.252 2023-01-05 16:43:04 [Error] i 224.0.0 252	gmp_proxy Not a mult	icast address 🖕	
	Refresh	Clear Log		
	D	wnload Log		
	Download log	file from the device		
			Subs	it Cancel

Figure 3-38: Log Management

3.6.3.2 Diagnosis

End of maintenance, complete maintenance report.

			2	KPON ONU USER	MANUA
				HUZ4	001XR
Status Setwork	Security	Application	Administration	Taintenance	licip
Oser Nanagement System Management Log Management Log Management Discrete Discrete Indicator light control VoIP Protocol Switch Uplink Mode		Select this butt Naintain	oon to complete the end Ove	of the maintain report	Help Logout

Figure 3-39: Diagnosis

3.6.4 Uplink Mode

PON mode configuration

			1	HU	Z4001XR
Status Network 3	Security Applica	tion Admi	nistration	Maintenance	Help
User Nanagement	After mod	e changed, the de	wice will retart		中文
System Management	Uplink Mode	PON Uplink	*		Help
Log Nanagement	PON Mode	Self-Adaption	*		
Indicator light control					Logout
VoIP Protocol Switch					
Uplink Mode					
Uplink Mode					
				Submit	Cancel

Figure 3-40: Uplink Mode

3.7 Maintenance

3.7.1 Network Diagnosis

3.7.1.1 Ping Diagnosis

This pages is used for diagnosing the network connectivity from this device to the specified IP address or host name.

Status Network	Security	Application	Administration	Waintenance	Help
work Diagnosis Ping Diagnosis Trace Route Test ARP Table Manually Inform Simulation WOICE simulation Mirror Configuration	IP Address or WAN C	Host Name		~	中文 Help Logou

Figure 3-41: Ping Diagnosis

3.7.1.2 Trace Route Test

For the diagnosis of this home gateway between the IP address or host name specified network status.

Status Hetwork Network Diagnosis I Ping Diagnosis I Trace Route Test ARP Table Manually Inform	Security App IP Address or Host Name WAN Connection	lication	Administration	Maintenance	Help doV
Network Diagnosis Ping Diagnosis Trace Route Test ARP Table Manually Inform	IP Address or Host Name WAN Connection				中文
Simulation WOICE simulation Mirror Configuration	Maximum Hops Wait Time Protocol	30 (1 5000 UDP V	~ 64)	~	Help

Figure 3-42: Trace Route Test

3.7.1.3 ARP Table

ARP Ifomation show.

				/	HU	Z4001XR
Status	Hetwork	Security	Application	Administration	Maintenance	Help
Network Diagno Ping Diagno Trace Routo ARP Table Manually In Simulation WOICE simul Mirror Cons	osis osis e Test nform lation figuration	Network Address 192.168.1.121	MAC Address 70:b5:e8:95:14:30	Interface LAN		中文 Help Logout
						Refresh

Figure 3-43: ARP Table

3.7.1.4 Manually Inform

Manually Trigger reporting TR069 Inform.

				н	Z4001XR
Status Network	Security	Application	Administration	Baintenance	i Help
Network Diagnosis Fing Diagnosis Trace Route Test ARF Table Minumity Inform Simulation VOICE simulation Mirror Configuration	Onu Info	rm to ITMS Unrepo	rted(Terminal is startin	1 <u>9</u>)	中文 Help Logout

Figure 3-44: Manually Inform

3.7.1.5 Mirror Configuration

Mirror configure, which is used to send mirror data of WAN connection to LAN, then developers or maintenance personnel can analyze caught packets.

			HI	JZ4001XR
Status Network	Security Applica	tion Administrati	on Haintenance	Belp
Network Diagnosis Ping Diagnosis Trace Route Test ARP Table Manually Inform	Cannot configure correspond to au Source Destination	the same rules, and a so ltiple destination ports. WAN_ALL v LAN1 v	urce port cannot	中文 Help Logout
Simulation VOICE simulation	Source	Add Destination	Delete	
Mirror Configuration	There i	s no data, please add one	first.	
				_

Figure 3-45: Mirror Configuration

Chapter 4 Application scenario

HGU mode use Route wan connection.

4.1 Requirment

(XPON 4GE Internet service with VLAN-100)

Scenario (HGU_Route):

ONU works on Route wan mode, WAN interface gets IP address from ISP DHCP/PPPoE Server or set the statics IP.

4.2 Configurations

For scenario, it needs to configure VLAN service in OLT side and WAN connection in ONU webpage.

4.2.1 OLT Configuration

In this case, we take Huawei MA5608T for example, to introduce how to configure Internet service with VLAN 100.

Huawei MA5680T Configurations

(1) Create VLAN

MA5608T(config)#vlan 100 smart

(2) Configure uplink port's VLAN

MA5608T(config)#port vlan 100 0/2 1

MA5608T(config)#interface mcu 0/2

MA5608T(config-if-mcu-0/2)#native-vlan 1 vlan 100 // (if necessary)

(3) Creat DBA profile

MA5608T(config)#dba-profile add profile-id 10 profile-name test type3 assure 102400 max 899968

(4) Creat ont-line profile

MA5608T(config)#ont-lineprofile gpon profile-id 10 profile-name test

MA5608T(config-gpon-lineprofile-10)#tcont 1 dba-profile-id 10

MA5608T(config-gpon-lineprofile-10)#gem add 1 eth tcont 1

MA5608T(config-gpon-lineprofile-10)#gem mapping 1 1 vlan 100

MA5608T(config-gpon-lineprofile-10)#commit

(5) Creat ont-service profile

MA5608T(config)#ont-srvprofile gpon profile-id 10 profile-name test

MA5608T(config-gpon-srvprofile-10)#ont-port eth 1

MA5608T(config-gpon-srvprofile-10)#commit

(6) Authorize ONT

MA5608T(config)#interface gpon 0/1

MA5608T(config-if-gpon-0/1)#port 2 ont-auto-find enable

MA5608T(config-if-gpon-0/1)#display ont autofind 2

MA5608T(config-if-gpon-0/1)#ont add 0 1 sn-auth OEMT-0303B9BD omci ont-lineprofile-id 10 ont-srvprofile-id 10

(7)Configure service-port

MA5608T(config)#service-port vlan 100 gpon 0/1/2 ont 1 gemport 1 multi-service user-vlan 100

4.2.2 ONU Configuration

Scenario (HGU_Route):

Configure ONU WAN connection in the ONU Webpage

	HU	Z4001XR
Status Retwork	Security Application Administration Maintunance	Belp
VAN VAN Connection	IP Version IPv4	中文
4inö Tunnel Settings ARP Setting DHCP Release First	Connection Name Create WAN Connection Fort Binding LAN1 LAN2 LAN3 LAN4 SSID1 SSID2 SSID3 SSID4	Logout
Binding LAN Address Setting	SSID5 SSID6 SSID7 SSID8 Enable DHCP Server Z Enable NAT Z	
Prefix Management	Service List INTERNET	
¥LAN Remote Management	VLAN Type UnTag V Enable DSCP	
QoS	NTU 1492	
SNTP Routing	Username Password Enable PPPoE Proxy	
	Enable Pass Through Auto	

Figure 4-1

					/	HU	Z4001XR
Status	Network	Security A	pplication	Administrat	ion	Maintenance	Help
Device Informa	tion						中文
Network Inform	ation	Type	A THIRDWRT D U	TD			
IPv4 Connec	tion	Connection wake	*_INIERAEI_K_*	10_			Help
IPv6 Connec	tion	NAT	Enabled				Lonout
4in6 Tunnel		IP	10. 0. 33. 254				Logoal
Link inform	ation	DNS1	10.0.33.1				
Alara Infor	mation	DWS2	172.19.0.2				
		DNS3	0.0.0.0				
User Informati	on	WAN MAC	00:D0:D0:00:00	:02			
VoIP Status		Gateway	10.0.33.1				
Remote ManageM	ent Status	Connection Status Disconnect	Connected				
		Online Duration	4 sec				
		Туре	DHCP				
		Connection Name	3_INTERNET_R_W	ID_			
		NAT	Enabled				
		IP	192.168.22.250	/255. 255. 255. 0			
		DNS1	114.114.114.11	4			

Figure 4-2

Attention:

Please enable LAN DHCP Server, otherwise user client couldn't get the IP address from LAN DHCP Server.

Chapter 5 FAQ

1. Why does LED of LAN not light?

Reasons:

- 1) Network cable is damaged or loose connection;
- 2) Cable type errors;
- 3) Cable length exceeds the allowable range

Solution:

1) Plug the cable tightly;

2) Replace the network cable and pay attention to the standard cable must be parallel or crossing lines.

2. Why is LED of LOS always blinking?

Reasons:

- 1) Fiber connector loose and dirty;
- 2) ONU PON module broken;
- 3) Center office equipment failure;

Solution:

1) Check the connection characteristics of optical fiber, whether connected to the correct

connector and whether optical power is in a normal range;

2) Contact your operator.

3.Why does LED of PON flashed instead of always on?

Reasons:

- 1) Fiber connector loose and dirty;
- 2) ONU PON module broken;
- 3) Center office equipment failure;

Solution:

1) Inspect fiber is connected property, is connected to the correct connector, optical power is normal;

2) Contact your operator.

4. Why does ONU stop working after working for a long time?

Reasons:

- 1) Power supply is not working properly;
- 2) Central office equipment failure;

Solution:

- 1) Change the power adapter;
- 2) Reboot the ONU;
- 3) Contact your operator;