

XPON ONU USER MANUAL

(ZTE125 1GE)

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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 and SFU 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+)
	BOB(Boas on Board)
PON Interface	Receiving sensitivity: ≤-27dBm
	Transmitting optical power: +1~+4dBm
	Transmission distance: 20KM
Wavelength	TX: 1310nm, RX: 1490nm
Optical Interface	SC/UPC Connector
LAN Interface	1 x 10/100/1000Mbps auto adaptive Ethernet interfaces. Full/Half, RJ45
	connector
Push-Button	1,For Function of Reset
On anoting Can dition	Temperature: 0°C~+50°C
	Humidity: 10%~90% (non-condensing)
Storing Condition	Temperature: -30°C~+60°C
	Humidity: 10%~90% (non-condensing)
Power Supply	Type-C 5V/1A
Poer Conswumption	≤3W
Dimension	21.5mm*17mm*92mm
Net weight	$0.03 \pm 0.0 \text{kg}$

Table 1: Technical parameters

1.4 Application chart



Figure 1-2: Application chart

1.5 Panel description



Figure 2-1: Interface diagram

LED	Status	Description
	On(Green)	The device is powered up.
	Off(Green)	The device is powered down.
LAN	On(Yellow)	Ethernet connected properly (LINK).
	Blink(Yellow)	Ethernet is sending or/and receiving data (ACT).
	Off(Yellow)	Ethernet connection exception or not connected.
	On(Green)	The device has registered to the PON system.
DOMAG	Blink(Green)	The device is registering the PON system.
PON/LOS	Off(Green)	The device registration is incorrect.
	Blink(Red)	The device doses not receive optical signals.
	Off(Red)	The device has received optical signal.

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



Table 3: Packing Contents

Figure 2-2: Actual package content

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.

5. Installation Requirements

To avoid equipment damage caused by improper use and personal injury, please observe the following precautions:

- Do not place the device near water or in damp places, in order to prevent water or moisture from entering the device.
- Do not put the device in an unstable place, avoid falling damage to equipment.
- Make sure that the supply voltage of the device matches the required voltage value.
- Do not open the equipment chassis without permission.
- Do not open the equipment chassis without permission.

Installation Environment requirements

ONU equipment must be installed in the interior, and to ensure the following conditions:

- Confirmation at the ONU installation at sufficient space to facilitate cooling machine.
- ONU suitable operating temperature of $0^{\circ}C \sim 50^{\circ}C$, humidity 10% to 90%.

Electromagnetic Environment

ONU equipment in use can be affected by external electromagnetic interferences, such as radiation and conduction through the impact on the device, this should note the following:

- Device workplace should avoid radio transmitters, radar stations, and high-frequency interface from power equipment.
- User cable typically require alignment indoors if outdoor lighting traces measures should.

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 "user", password is "user". 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.



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

_	Network	Security Application Administration Help	
evice Informat	ion	Model HTZ2027X	
Device Inform	nation	Serial Number 2012221101000060	Help
stwork Interfa	ce	Hardware Version V1.2	Logout
ser Interface		Software Version 125_V3.0.0801	
		Boot Loader Version V3.0.0B01	

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.

				HTZ2027X
Status	Network	Security Applicati	on Administration Help	
Device Informat	ion	Torre	10	10012-0110
Network Interfa	ce	Connection Norma	11 ^{er}	Help
WAN Connect	tion	LD Married	IDua fue	Logout
PON Inform		IP Version	Enabled	r.ollow
PON Alarm		IP	102 168 22 254/255 255 255 0	
lear Interface		DNS	192 168 22 1/192 168 72 2/0 0 0 0	
aser interrace		IPv4 Gateway	192 168 22 1	
		IPv4 Connection Status	Connected	
		IPv4 Disconnect Reason	None	
		IPv4 Online Duration	806 sec	
		Remaining Lease Time	394 sec	
		LLA	fe80::2d0:d0ff:fe00:1	
		GUA	11	
		DNS	::/::/::	
		IPv6 Gateway		
		IPv6 Connection Status	Connected	
		IPv6 Online Duration	804 sec	
		WAN MAC	00:d0:d0:00:00:01	

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.

			HTZ2027X
Status Network	Security Application /	Administration Help	
Device Information			
	GPON State	Init State	Help
Network Interface	Optical Module Input Power(dBm)	-20.6	
WAN Connection	Optical Module Output Power(dBm)	2.4	Logout
PON Inform	Optical Module Supply Voltage(µV)	3164000	
PON Alarm	Optical Transmitter Bias Current(µA)	8540	
User Interface	Operating Temperature of the Optical Module(°C)	44	

Figure 3-4:PON Inform

3.2.2.3 PON Alarm

This part shows the PON Alarm information.

Pervice Information PonSymPerAlarm 0 Helg Network Interface PonFrameAlarm 0 Logo WAN Connection PonFraPerAlarm 0 Logo PON Inform PonSecSumAlarm 0 Interface PON Alarm PonLinkAlarm 0 Interface Interface PonLinkAlarm 0 Interface	evice Information		
Non-prime chain is Interface PonFrameAlarm 0 WAN Connection PON Inform PonFraPeAlarm 0 Logo PON Alarm PonDygaspAlarm 0 iser Interface PonCirEveAlarm 0			PonSymPer∆larm
WAN Connection PonFraPerAlarm 0 PON Inform 0 Iogo PON Alarm 0 User Interface PonLinkAlarm 0 PonCirEveAlarm 0	etwork Interface	Help	PonFrameAlarm
PON Inform PonSecSumAlarm 0 PON Alarm PonDygaspAlarm 0 ser Interface PonLinkAlarm 0 PonCirEveAlarm 0	WAN Connection	Logou	PonFraPerAlarm
PON Alarm PonDygaspAlarm 0 ser Interface PonLinkAlarm 0 PonCirEveAlarm 0	PON Inform		PonSecSumAlarm
Ser Interface PonLinkAlarm 0 PonCirEveAlarm 0	PON Alarm		PonDygaspAlarm
PonCirEveAlarm 0	ser Interface		PonLinkAlarm
			PonCirEveAlarm
	ser interface		PonCirEveAlarm

Figure 3-5: PON Alarm

3.2.3 User Interface

This part shows the Ethernet Port Information.

		Sector and	HTZ2027X
Status Network	Security Application	Administration Help	
Device Information			
	Ethernet Port	LAN1	Help
Network Interface	Status	Up/100Mbps/Full Duplex	
User Interface	MAC Address	00:d0:d0:00:00:01	Logout
Ethernet	Bytes Received	804860	
-	Packets Received	7258	
	Unicast Packets Received	6042	
	Multicast Packets Received	578	
	Error Packets Received	0	
	Discard Packets Received	0	
	Bytes Sent	9697057	
	Packets Sent	14587	
	Unicast Packets Sent	8820	
	Multicast Packets Sent	103	
	Error Packets Sent	0	
	Discard Packets Sent	0	

Refresh

Figure 3-6: User 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. If you don't create a WAN connection, it works in SFU mode.

			HTZ2027X
Status Network	Security Application	Administration Help	
WAN WAN Connection	Connection Name Crea New Connection Name Enable VLAN	ate WAN Conne: 🗸	Help
Routing(IPv4)	Type Rout Service List INTE	te 🗸	
Port Configuration	MTU 1492 Link Type PPP	×	
	Username Password		
	DMS Name Authentication Type Auto Connection Trigger Alwa	ays On	
	IP Version IPv4 PPP TransType PPPc	ÞE V	I
	IPv4 🔗 Enable NAT 🗹		
			Croate Cancel

Figure 3-7: WAN Configuration

Р	arameter	Description
	Interface	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 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.
V	VanName	The description about this wan connection which you operate
VLAN	Enable VLAN	Checked indicates the packets are transmitted by the PON port take VLAN tag. Unchecked indicates the packets are transmitted by the PON port don't take VLAN tag.
	VLAN ID	Input the VLAN ID you want to set. Range is 1~4094. Usually VLAN 1 donot use.
	802.1P	Select VLAN priority you want to set. Range is 0~7. Default empty (means 0)
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.					
	MTU	Max transfer unit. Default Value (in Byte):					
MIU		1500(static/DHCP) or 1492(PPPoE).					
		Checked indicates the IGMP-Proxy Function is enabled.					
Enable 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.					
	DMS Name	PPPOE DMS Name.					
РРРоЕ	Authentication	Auto、CHAP、PPP, Usually default choose Auto					
	Туре						
	Connection	Always on /Connect on Demand/Manual					
	Trigger						
	ID T	Static: means use the statics IP					
	IP Type	DHCP: means use the DHCP Proctol to get the IP address					
IP Address		IP address about current WAN connection.					
Subnet Mask		Subnet mask about current WAN IP address.					
	Gateway	Gateway about current WAN connection.					
DI	NS Server1	The Primary DNS of current WAN connection					
D	NS Server2	The Secondary DNS of current WAN connection					
DI	NS Server3	The Tertiary DNS of current WAN connection					

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

	HTZ2027X
Status Network	Security Application Administration Help
WAN	NOTE: 1. The DHCP Start IP Address and DHCP End IP address should be in the same subnet as the LAN IP. Help
DHCP Server RA Service DHCP Server(IPv6)	LAN IP Address 192.168.1.1 Subnet Mask 255.255.255.0
Prefix Management Port Service(IPv6)	Enable DHCP Server DHCP Start IP Address 192.168.1.2
Routing(1Pv4) Port Configuration	DHCP End IP Address 192.168.1.254 Assign IspDNS DNS Server1 IP Address 192.168.1.1
	DNS Server2 IP Address DNS Server3 IP Address Default Gateway 192.168.1.1
	Lease Time 86400 sec
	MAC Address IP Address Remaining Lease Time Host Name Port There is no data.
	Submit Cancel

Figure 3-8: DHCP Server

Parameter	Description
Subnet Mask	Subnet Mask about DHCP Pool address and LAN IP
Assign IspDNS	Use ispDNS or set DNS manually
DNS1	The Primary DNS of DHCP Server
DNS2	The Secondary DNS of DHCP Server
DNS3	The Third DNS of DHCP Server
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.

					HTZ	2027X
Status Network	Security Applica	ation	Administration	Help		
WAN LAN DHCP Server RA Service DHCP Server(IPv6) Prefix Management Port Service(IPv6) Routing(IPv4)	Minimum Wait Time Maximum Wait Time M O	198 600 	(3 ~ 1350) (4 ~ 1800)			Help
Port Configuration						
				S	ubmit	Cancel

Figure 3-9: RA Service

3.3.2.3 DHCP Server(IPv6)

This page allows the user to set the IPv6 DHCP Server, including LAN IP, Enable DHCP Server, DNS Refresh Time.

		HTZ	2027X
Status Network	Security Application Administration Help		
WAN LAN DHCP Server	LAN IP Address [re80::1 / 64 Enable DHCP Server DNS Refresh Time 86400 sec		Help
RA Service DHCP Server(IPv6) Prefix Management Port Service(IPv6)	Allocated Address DUID IP Address Remaining Lease Time There is no data.		
Routing(IPv4) Port Configuration			
		Submit	Cancel

Figure 3-10: DHCP Server(IPv6)

3.3.2.4 Prefix Management

This page allows user to modify the Prefix Management.

WAN WAN Connection	Help					
LAN Prefix Source DHCP Server Prefix / RA Service Preferred Lifetime sec	Help					
DHCP Server Prefix / RA Service Preferred Lifetime sec						
RA Service Preferred Lifetime sec	Logout					
DHCP Server(IPv6) Valid Lifetime sec						
Prefix Management Prefix Delegation RA DHCPv6	Prefix Delegation 🖾 RA 👘 DHCPv6					
Port Service(IPv6)						
WAN Connection Prefix Source Prefix Preferred/Valid	Lifetime Prefix Modify Delegation					
dhcp_untag WAN INFINITY/IN	FINITY RA/DHCPv6					
Port Configuration						

Figure 3-11:Prefix Management

3.3.2.5 Port Service(IPv6)

This page allows user to set the relevant parameters of the IPv6 Port Service,





3.3.3 Routing(IPv4)

This part allows user to set the IPv4 Routing, including Default Gateway, Static Routing, Routing Table.

3.3.3.1 Default Gateway

This page allows user to choose WAN Connection as default gateway.

WAN WAN Connection dhcp_untag WAN Connection dhcp_untag WAN Connection dhcp_untag WAN Connection dhcp_untag		Help	ition	Administr	ition	Applica	Security	Network	Status
Routing Table	Help		~	9	dhcp_unta	nnection	WAN Co	way	N I Iting(IPv4) Default Gate Static Routin
								e on	Routing Table t Configuratio

Figure 3-13:Default Gateway

3.3.3.2 Static Routing

This page allows user to set the Static Routing, including WAN Connection, Network Address, Subnet Mask and Gateway.

Attention:only user has special network application and then need to set this Route Info.

1	HTZ2027	x
Status Network	Security Application Administration Help	
WAN LAN Routing(IPv4) Default Gateway Static Routing	WAN Connection dhcp_untag Help Network Address Subnet Mask Gateway Add	v
Routing Table	Network Address Subnet Mask Gateway WAN Connection Status Modify Delete There is no data, please add one first. The status Status	
Port Configuration		

Figure 3-14:Static Routing

|--|

WAN Connection	WAN Interface
Network Address	Destination Host IP or IP Segment
Subnet Mask	Subnet mask about Destination IP
Gateway	Gateway (The next host ip)

Table 6: Routing Configuration parameters

3.3.3.3 Routing Table

This page shows the Routeing Table information.

						HTZ2027X
Status	Network	Security	Application	Admi	nistration Help	
WAN LAN Routing(IPv4) Default Gater Static Routing Routing Table Port Configuratio	way g e	Network Address 0.0.0.0 1.0.0.0 16.0.0.0	Subnet Mask 255.255.255.255 255.255.255.255 255.255.	Gateway 116.0.00 116.0.00 116.0.00	Interface dhcp_untag LAN dhcp_untag	Help
						Refresh

Figure 3-15:Routing Table

3.3.4 Port Configuration

This part allows user to set the Port Configuration, including Mode, Port Isolation, Rate Limiting, Flow Control and MAC Configuration.

3.3.4.1 Mode

This page allows user to choose the Port Mode, including Auto, Disabled, 10Mbps, 100Mbps and 1000Mbps.

ALC: NO	The second s	HTZ	2027X
Status Network	Security Application Administration Help		
WAN LAN Routing(IPv4) Port Configuration Mode Port Isolation Rate Limiting Flow Control MAC Configuration	Port GE1 V Mode Auto V		Help
	s	ubmit	Cancel

Figure 3-16:Port Mode

3.3.4.2 Port Isolation

This page allows user to set the Port Isolation.

		HTZ	2027X
Status Network	Security Application Administration Help		
WAN			
LAN			Help
Routing(IPv4)			Logout
Port Configuration			
Mode			
Port Isolation			
Rate Limiting			
Flow Control			
MAC Configuration			
	s de la companya de l	Submit	Cancel

Figure 3-17:Port Isolation

3.3.4.3 Rate Limiting

This page allows user to set the Port Rate Limiting, including Ingress Rate limiting and Egress Rate limiting.

Status Network	Security Application	Administ	ration Help		
WAN	Rate limiting value o	f "0", means no li	mit.		Help
Routing(IPv4)	Port	GE1 🛩			Logout
Deut Configuration	Ingress Rate limiting	1024000	kbps(0~1024000)		
Port Connguration	DS Rate limiting	1024000	kbps(0~1024000)		
Mode Root Icolation					
Rate Limiting					
Flow Control					
MAC Configuration					
					1
				Submit	Cancel

Figure 3-18:Rate Limiting

3.3.4.4 Flow Control

This page allows the user to enable/disable Flow Control.

		нтг	2027X
Status Network	Security Application Administration Help		
WAN	Port GF1		
LAN	Flow Control		Help
Routing(IPv4)			Logout
Port Configuration			
Mode			
Port Isolation			
Flow Control			
MAC Configuration			
	2	Submit	Cancel

Figure 3-19:Flow Control

3.3.4.5 MAC Configuration

This page allows the user to set MAC Configuration, including MAC Aging Time, Port and Learning Limit.

1410 M		HTZ2027X
Status Network	Security Application Administration Help	
WAN	MAC Aging Time 60 secs	Help
Port Configuration Mode Port Isolation Rate Limiting Flow Control MAC Configuration	Port GE1 Learning Limit 4095 (0~4096) Learning Limit value of "4096", means no limit.	
	Sul	omit Cancel

Figure 3-20:MAC Configuration

3.4 Security

This part allows the user to set Security Configuration, including Firewall, Service Control, MAC Filter.

3.4.1 Firewall

This page allows the user to configure Firewall, including Enable/Disable Anti-Hacking Protection, Firewall Level

		HTZ2027X
Status Network	Security Application Administration Help	
Firewall Firewall Service Control MAC Filter	Enable Anti-Hacking Protection Firewall Level Off Euow Middle High Custom >>	Help Logout
v.		Submit Cancel

Figure 3-21:Firewall

100 million (1990)	Statement of the local division of the local			and the second
				HTZ202
Status Network	Security Application	Administration	Help	
Firewall	TD Manier	ID-4		
Firewall	IP Version Name	1994		H
Service Control	Enable			Lo
MAC Filter	Order	(0	i ~ 31)	
	Protocol	TCP V		
	State	ANY	~	
	Source IP Address			
	Start Source Port			
	End Source Port			
	Destination IP Address			
	Destination IP Mask			
	Start Destination Port			
	End Destination Port			
	The direction of data flow	WAN->CPE 🗸		
	Mode	Discard 🗸		
		Add		
	Name Protocol Source IP Address / Mask	Source Port Order	The direction	
	Enable State Destination IP Address / Mask	Destination Port Mode	of data flow	Modify Delete
	There is no	data, please add one f	irst.	

If you select custom, it will jump to another page to configure these parameters

Figure 3-22: Firewall Custom

3.4.2 Service Control

This page allows the user to configure Service Control.



Figure 3-23:Service Control

If you modify remote access port, it will jump to another page to configure.

1120			ricip	
rewall	Service Port	(1	~ 65535)	Help
Service control	Service	Port	Modify	Logout
AC Filter	нттр	80	2	
	FTP	21	2	
	SSH	22	2	
	TELNET	23		
	HTTPS	443	2	

Figure 3-24:Service Control Modify Port

3.4.3 MAC Filter

This page allows user to set the relevant parameters of the MAC Filter function,

including Permit and Discard. The Discard indicates that forbidden access, Permit indicates that allow access.

200 - C		HTZ2027X
Status Network	Security Application Administration Help	
Firewall	1 If you choose the Permit mode please add the MAC address	of
Service Control	 your PC first, otherwise internet access is not allowed. 2. Enable switching or Mode switching will take effect immediate 	Help
MAC Filter		Logout
MAC Filter	Enable	
	Mode Discard V	
	Type Bridge V	
	Protocol IP V Source MAC Address : : : : : : :	
	Destination MAC Address	
	Add	
	Type Protocol Source MAC Address Destination MAC Address Modify De	lete
	There is no data, please add one first.	

Figure 3-25:MAC Filter

3.5 Application

This menu allows user to configure Multicast, BPDU and port forwarding.

3.5.1 Multicast

This part allow user to set IGMP Mode, Basic Configuration and Maximum Address Configuration.

3.5.1.1 IGMP Mode

This page allow user to set IGMP Mode, including Disable, Snooping Mode, CTC IGMP.

1					HTZ	2027X
Status Network	Security	Application	Administratio	on Help		
MultiCast						
IGMP Mode	Multic	ast Mode Snoopin	g Mode	~		Help
Basic Configuration						Logout
Maximum Address Configuration						
BPDU						
Port Forwarding						
					Submit	Cancel
					oubline	Curreer

Figure 3-26: IGMP Mode

3.5.1.2 Basic Configuration

This page allows the user to set the Basic Configuration, including Aging Time and Enable/Disable Non-fast Leave.

14				HTZ	22027X
Status Network	a Security	Application	Administration Help		
MultiCast IGMP Mode Basic Configuration Maximum Address Configuration BPDU Port Forwarding	A Non-f	ging Time 300	(1-604800) sec		Help Logout
				Submit	Cancel

Figure 3-27: Basic Configuration

3.5.1.3 Maximum Address Configuration

This page allows the user to set Maximum Address Configuration.

			1		HTZ	2027X
Status Network	Security	Application	Administration	Help		
MultiCast IGMP Mode	🚹 The Ma	ximum Number of A	ddresses is 1024.			Help
Basic Configuration Maximum Address Configuration	Port LAN1	Maximum Num 1024	ber of Addresses 4			Logout
BPDU Port Forwarding						
Port for warding						
					Submit	Cancel

Figure 3-28: Maximum Address Configuration

3.5.2 BPDU

This page allows the user to enable or disable BPDU Forwarding.

199					HTZ2027X
Status Network	Security	Application	Administration	Help	
MultiCast	Enable B	PDII Forwarding 🔽			
BPDU	LINDIC				Help
BPDU					Logout
Port Forwarding					
				s	ubmit Cancel
					A Sunda

Figure 3-29: BPDU

3.5.3 Port Forwarding

This page allows user to set the relevant parameters of the Port Forwarding function,

Redirect common wan special packets to local device which on the private network behind NAT Firewall.

Attention: This function is not required generally, but if user need to use local server such as Web server, the rules must be filled correctly.

		HTZ2027X
Status Network	Security Application Administration Help	
MultiCast	Enable	Help
Port Forwarding	Protocol TCP V	Logout
Port Forwarding	WAN Host Start IP Address	
	WAN Connection V WAN Start Port (1 ~ 65535)	
	WAN End Port (1 ~ 65535)	
	LAN Host Start Port (1 ~ 65535) LAN Host End Port (1 ~ 65535)	
	Add	
	Name Start IP Start Address Port Port Madific Delete	
	Protocol WAN Host WAN LAN Host LAN Host LAN Host Address Port Port	
	There is no data, please add one first.	

Figure 3-30:Port Forwarding

3.6 Administration

This menu allows user to set the basic function, including User Management, Login Timeout, Device Management, Diagnosis, Loopback Detection and Led Control.

3.6.1 User Management

This page allows the user to set User Management, including Administrator and User.

				HTZ2027X
Status Network	Security Application	Administration	Help	
User Management User Management Login Timeout Device Management Diagnosis Loopback Detection Led Control	User Privilege: Adminis User Privilege: User Username admin Old Password New Password Confirmed Password	itrator		Help
			Su	bmit Cancel

Figure 3-31: User Management

3.6.2 Login Timeout

This page allows the user to set the Login Timeout.

743		لمر					HTZ	Z2027X
Status Network	Security	Ĩ,	Application	Admini	istration	1 Help	1	
User Management Login Timeout Login Timeout Device Management Diagnosis Loopback Detection Led Control	1. 2:	Any vali	ue between 1 m inges of Timeout	inute and 30 take effect) minutes i after re-lo min	s allowed. gin.		Help
						1	Submit	Cancel

Figure 3-32:Login Timeout

3.6.3 Device Management

This page allows the user to set the Device Management, including System Management, Software Upgrade and User Configuration Management.

3.6.3.1 System Management

This page allows the user to reboot or restore default the device.

If users want to make the device Factory Reset, please click the button "Restore Default", and the configuration would change into default.



Figure 3-33:System Management

3.6.3.2 Software Upgrade

This page allows the user to update the software of the device. Click the "Choose File" button to select the software and then click the "Upgrade" button to update. When the device upgrade succeed, it would reboot automatically. The whole process of upgrade will take 3-4 minutes.

Status Network	Security Application	Administration	Help	
ser Management	A The device will reheat after	an unana dina		
ogin Timeout	The device will reboot art	er upgrading.		Help
Vevice Management	Please select a new softw	are/firmware image		Logout
System Management		Choose file		
Software Upgrade	Upgra	de		
User Configuration Management				
liagnosis				
oopback Detection				
ed Control				

Figure 3-34:Software Upgrade

3.6.3.3 User Configuration Management

This page allows the user to export and import the onu configuration file. If you want to save the system current configuration ,you need to click "Backup Configuration", and download the file "config.bin"; If user want to reload the ONU configuration, please click the "Choose file" to choose the saved file about ONU configuration and then click "Restore Configuration" finally, the device will reboot automatically and ONU configuration would change into as "config.bin".

		HTZ2027X
Status Network	Security Application Administration Help	
User Management	Backup user configuration file from the device	Help
Login Timeout Device Management	Backup Configuration	Logout
System Management Software Upgrade	1 The device will reboot after operating.	
User Configuration Management	Please select a user configuration file Choose file	
Diagnosis	Restore Configuration	
Loopback Detection		
Led Control		

Figure 3-35:User Configuration Management

3.6.4 Diagnosis

This menu allows user to diagnose the current network and set Mirror Configuration.

3.6.4.1 Ping Diagnosis

This page shows about the ping test. Users can diagnose network connection via ping Host IP or URL.

ALS -		HTZ	2027X
Status Network	Security Application Administration Help		
User Management	ID Address of Hest Name		
Login Timeout	Egress V		Help
Device Management			Logout
Diagnosis Ping Diagnosis Mirror Configuration			
Loopback Detection			
Led Control			
		Submit	Cancel

Figure 3-36:Ping Diagnosis

3.6.4.2 Mirror Configuration

This page allows the user to set Mirror Configuration.

				HTZ2027X
Status Network	Security Applica	ation Administration	Help	
User Management	A Cannot configure	the same rules, and a source	port cannot	
Login Timeout	correspond to m	ultiple destination ports.		Help
Device Management	Source	wdp 🗸		Logout
Diagnosis	Destination	LAN1 V		
Ping Diagnosis		Add		-
Mirror Configuration	Source	Destination is no data, please add one firs	Delete st.	
Loopback Detection				
Led Control				

Figure 3-37: Mirror Configuration

3.6.5 Loopback Detection

This page allows the user to set Loopback Detection, including Basic Configuration, Enable Configuration and VLAN Configuration.

3.6.5.1 Basic Configuration

This page allows the user to Basic Configuration, including Destination MAC, Ethernet Type, Send Interval, Port Closing Time and Loopback Recovery Time.

233				HTZ2027X
Status Network	Security Application	Administration	Help	
User Management Login Timeout Device Management Diagnosis Loopback Detection Basic Configuration Enable Configuration	Destination MAC: Ethernet Type 880a Send Interval 250 Port Closing Time 60 Loopback Recovery Time 15	00000000000000000000000000000000000000	J Address 00 - ffff) 000) ms 10)sec)sec	Help
Led Control			Subr	nit Cancel

Figure 3-38:Basic Configuration

3.6.5.2 Enable Configuration

This page allows the user to Loopback Detection Enable Configuration, including Loopback Enable, Alarm Enable and Port dislooped Enable.

Status Network	1 5	ecurity	Applicatio	n l Ad	Iministration	Help		
Jser Management .ogin Timeout	Port LAN1	Loopback E	nable Ala	rm Enable	Portdisloope	ed Enable		Help
Device Management								Logout
oopback Detection								
Enable Configuration VLAN Configuration								
ed Control								
							Submit	Cancel

Figure 3-39: Enable Configuration

3.6.5.3 VLAN Configuration

This page allows the user to set Loopback VLAN Configuration.

		HTZ2027X
Status Network	Security Application Administration Help	
User Management		
Login Timeout	Port LAN1 V	Help
Device Management	VLAN(1 - 4094)	Logout
Diagnosis	Add	
Loopback Detection Basic Configuration Enable Configuration VLAN Configuration Led Control	Port VLAN Modify Delete There is no data, please add one first.	

Figure 3-40:VLAN Configuration

3.6.6 Led Control

This page allows the user to control the LED. When turn off LEDS, it will leave only a single power LED.

					HTZ2027X
Status Network	Security	Application	Administration	Help	
User Management					
Login Timeout		Turn Off Leds			Help
Device Management					Logout
Diagnosis					
Loopback Detection					
Led Control					
Led Control					
				5	
				Subr	nit Cancel

Figure 3-41:Led Control

Chapter 4 Application scenario

SFU mode accept vlan configuration from olt side (No WAN Connnection is SFU)

HGU mode use Route wan connection.

4.1 Requirment

(XPON 1GE Internet service with VLAN-100)

Scenario 1(SFU):

User client gets IP address from ISP DHCP/PPPoE Server or set the statics IP.

Scenario 2(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 1, it needs to configure VLAN service in OLT side

For scenario 2, 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 ONT Port VLAN

//Scenario 1(SFU)

MA5608T(config)#interface gpon 0/1

MA5608T(config)#ont port native-vlan 2 1 eth 1 vlan 100

(8)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 1(SFU):

If you don't configure WAN Connection, it will work in SFU Mode.

Attention:

Please disable LAN DHCP Server when device works in SFU Mode.

Scenario 2(HGU_Route):

Configure ONU WAN connection in the ONU Webpage

Alt -		HTZ2027X
Status Network	Security Application Administration Help	
WAN WAN Connection LAN Routing(IPv4) Port Configuration	Connection Name Create WAN Conner New Connection Name Enable VLAN Type Route Service List INTERNET MTU 1492 Link Type PPP Username Password DMS Name Authentication Type Auto Connection Trigger Always On	Help
	IP Version IPv4 v PPP TransType PPPoE v IPv4 Enable NAT 2	
	Crea	te Cancel

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;