

User Manual v. 3.0

FiberTechnic® Ftech G-01





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⇒FiberTechnic

1 Note

1.1 Installation Precautions

- Do not near flammable or conductive items, high temperature, direct sunlight or moist environment, or on PC chassis, and check whether other home equipment placed around stability
- Check the cable line. Test and confirm the ac or dc input voltage in the range of allowable, and direct current (dc) correct polarity.
- Unless the manufacturer has given permission, please use the volume and the types of the power supply with Ming products attached adapter
- To prevent lightning damage to the product, make sure that the power outlet and the power adapter ground are securely grounded. In the thunderstorm, be sure to unplug the power and all the connections.
- Equipment shall be less than 10% of the input voltage fluctuations, power plug with a refrigerator, hair dryer, electric iron not use the same socket.
- To avoid any damage to body by power socket overload, or damage to cause electric shock or fire plug, please check the power cord, if found damaged, please change immediately.
- Please place the equipment on the smooth plane and equipment cannot be placed on other items.
- Equipment is easy heat when working, should maintain the appropriate cooling space to avoid damage caused by overheating products. The elongated holes on the housing are designed for heat dissipation. Keep the ventilation clean and prevent the items from falling into the inside of the equipment. Doing so may cause damage or fire to the equipment. Do not spill liquid onto the surface of the equipment.

1.2 Precautions for Use

- Please read the user manual carefully before using the equipment and follow all the precautions on the user manual.
- Do not look straight at fiber which may damage the eyes. Please wear safet y glasses to effectively protect your eyes from damage. Wear the fiber cap wh en fiber no in use.
- Power off the device when it not in use.
- Please make sure the power switch is closed before plug the power supply, to avoid surge. Please be careful when remove the power supply, transformer temperature may be higher.
- For safety, please do not open the shell of equipment, especially equipment power on.

- Unplug the power supply before cleaning equipment. Use a soft dry cloth cleaning equipment, do not use the liquid or spray.
- Do not use this product connected to any electronic products unless got our engineer allow. because any wrong connection may cause electricity or fire danger.

2 Introduce

The double-mode series ONU is GPON/EPON adaptive terminal products to meet the telecom, radio and television FTTH fiber to the home multi-service access. This series of products based on mature and stable, cost-effective Gigabit GPON/EPON technology, integration Gigabit and Fast Ethernet switching technology and powerful routing and forwarding technology. With high bandwidth, high reliability, easy management and good quality of service (QoS) guarantee, the technical performance of the equipment meets the requirements of ITU G.984 equipment and other specifications.

It is easy to manage and can be flexibly upgraded, expanded, and networked. The equipment has been implemented with GPON/EPON central office equipment (Huawei / ZTE / FiberHome / Alcatel-Lucent) OLT) interoperability, composed of Gigabit systems, to meet access needs of the two-in-one video, data services, FTTH / FTTO.

2.1 Product Feature

- Support both GPON and EPON mode adaptation
- Internet service access
- Fully in line with GPON ITU-T G.984 standard, using GPON uplink 1.25G, downlink 2.5G standard
- Support G.984 standard, China Telecom CTC2.1&3.0
- Support bidirectional FEC, supports the RS (255, 239) FEC decoding
- Support PPPoE, DHCP, static IP broadband service access
- Support NAT, static routing, port forwarding
- Support data encryption, VLAN transparent, vlan tag, vlan trunk
- Support up and down traffic limit function
- Supports port loop detection / port link status detection / power dying gasp alarm
- Support OLT remote upgrade / WEB local upgrade function
- Supports broadcast storm suppression
- Support port flow control

- Support managed by different manufacturers OLT work as SNMP-agent. Easy to install and maintain
- Provide a variety of fault alarm function, easy to fault diagnosis
- Support AES-128 decryption, support key generation and switching
- Support DBA technology and priority Dual management model to ensure minimum bandwidth requirements for users

2.2 Environmental Requirements

Operation temperature: -0°C~50°C Operation humidity: 10%—90%(Non-condensing) Power adapter input: 12V / 0.5A Transmitted optical power: 0.5~5dBm Input optical power: -8 ~ -28dBm

2.3 Product Operation Introduction

The dual-mode ONU is a "combination" of GPON and EPON ONU. Compared with the single-mode EPON/GPON ONU, the main difference lies in the registration process. The dual-mode ONU adds a pre-judgment to the current application system (EPON/GPON). That is, the dual-mode ONU first switches mode, and then starts and completes registration process in the corresponding mode. When the ONU runs normally in the current system, its configuration and processing of various messages are basically the same as single-mode EPON/GPON ONU.

This product mode switch depends on the packet sent by the front-end OLT device to the ONU. When ONU receives the packet sent by the EPON OLT, the ONU automatically switches to the EPON mode after detecting it. In this case, the ONU can be regarded as the EPON ONU. When the ONU receives the packet sent by the GPON OLT, the ONU automatically switches to the GPON mode after detecting it. In this case, the ONU can be used as the GPON ONU.

2.4 Product Interface Definitions



2.5 Product LED Definitions



Indicator			Description
1	LAN	LAN port status	On: Ethernet connection is normal; king: Data is being transmitted through the Ethernet port; Off: Ethernet connection is not set up;
2	LOS	XPON optical signals	On: Optical power lower than receiver sensitivity ; Off: Optical in normal
3	PON	ONT Register	On: Success to register to OLT; Blinking: In process of registering to OLT; Off: Failed to register to OLT or no normal optical signal input;
4	PWR	Power status	On: The ONT is power on; Off: The ONT is Power off;

2.6 Device Connection

- Connecting the fiber: Insert the SC fiber connector into the PON connector on the rear panel of the ONU.
- Connect the Ethernet cable: Connect the RJ-45 Ethernet cable to any LAN port of the ONU and the home device, ie, the computer, IPTV set-top box.
- Connect the AC adapter: Plug the AC / DC adapter into the AC wall jack and the ONU 12V DC power jack.



2.7 Network Application



3 ONU Local WEB login

3.1 ONU and PC physical Connection

a) Connect your computer's local network card to the LAN port or ETH port of the ONU via a

network cable.

b) Set the IP address of the computer's local network card to 192.168.101.X (X: 2-254).

ou can get IP settings assigned his capability. Otherwise, you r or the appropriate IP settings.	d automatically if your network supports need to ask your network administrator
Obtain an IP address auto	matically
Ose the following IP addre	ss:
IP address:	192 . 168 . 101 . 212
Subnet mask:	255 . 255 . 255 . 0
Default gateway:	
 Obtain DNS server address Obtain DNS server address 	s automatically ver addresses:
Preferred DNS server:	
Alternate DNS server:	•C 32•-2 50
III water a second	t Advanced

c) The computer opens the cmd window. To ensure that the computer can ping ONU management ip address 192.168.101.1

Administrator: Command Prompt	
Microsoft Windows [Version 6.1.7601] Copyright (c) 2009 Microsoft Corporation	. All rights reserved.
C:\Users\tcll>ping 192.168.101.1	
Pinging 192.168.101.1 with 32 bytes of da	ata:
Reply from 192.168.101.1: bytes=32 time=1	1ms TTL=64
Reply from 192.168.101.1: bytes=32 time=1	1ms TTL=64
Reply from 192.168.101.1: bytes=32 time=	1ms TTL=64
Reply from 192.168.101.1: bytes=32 time=1	1ms TTL=64
Ping statistics for 192.168.101.1:	
Packets: Sent = 4, Received = 4, Lost	t = 0 (0% loss),
Approximate round trip times in milli-see	conds:
Minimum = 1ms, Maximum = 1ms, Average	e = 1ms
C:\Users\tcll>	

3.2 Computer Access ONU Local WEB

In the case # 3.1 computer can communicate with the ONU, open the computer's <u>Web browser (IE, Firefox, google)</u>, copy and paste the ONU access URL: <u>http://192.168.101.1</u>, pop-up as follows ONU prompt landing page:



Enter the ONU super login user: **adminisp** password: **adminisp** Click **"Login"** button, there will be the following ONU main login interface:

	Status
	Device Information
	PON Information
1	WAN Information
	Eth Port Information
	LAN Allocated Status
	WAN Configuration
	LAN Configuration
	Routing(IPv4)
	Security Configuration
	Network Application
	System Tool
	Diagnosis
	Help Information

PON Information

EPON State	Unregistered and unauthorized
OAM_Link	Not Established
Optical Module RX Power(dBm)	-inf
Optical Module TX Power(dBm)	-inf
Optical Module Working Voltage(uV)	3309900
Optical Transmitter Blas Current(uA)	408
Working Temperature of the Optical Module(°C)	49

After entering the main interface of the ONU, the ONU can be set up further. For details, see the following setup guide.

4 ONU Registration Information Configuration(When adaptive to GPON mode)

4.1 ONU Registration Status View

web login ONU select the **Status -> PON inform**, you can check whether the ONU registered successfully:

			F501	Logout
0	PON Information			
V Status	GPON State	Authentication Success		
PON Information	Optical Module RX Power(dBm)	-22.60	3	
WAN Information	Optical Module TX Power(dBm)	1.80		
Eth Port Information	Optical Module Working Voltage(uV)	3309900		
LAN Allocated Status	Optical Transmitter Bias Current(uA)	10404		
WAN Configuration	Working Temperature of the Optical	50		
 LAN Configuration 	Module(°C)	50		
 Routing(IPv4) 				
 Security Configuration 				
 Network Application 				Refresh
 System Tool 				
> Diagnosis				
> Help Information				

4.2 ONU Optical Power Information View

web login ONU select the Status ->PON inform, you can view the ONU input

and output optical power information:

			F501 Logo
0	PON Information		
	GPON State	Authentication Success	
PON Information	Optical Module RX Power(dBm)	-22.60	
WAN Information	Optical Module TX Power(dBm)	1.80	
	Optical Module Working Voltage(uV)	3309900	
LAN Allocated Status	Optical Transmitter Bias Current/uA)	10404	
WAN Configuration	Working Temperature of the Optical		
LAN Configuration	Module(°C)	50	
Network Application			Refresh
System Tool			Kencon

4.3 ONU Registration LOID Configuration

The LOID of the ONU is mainly applicable to the authentication mode of LOID and LOID + Password. General ONU authentication mose is SN, and rarely use the LOID authentication mode, so normal circumstances do not need to configure the LOID. The LOID of the ONU is configured as follows:

1.web login ONU select the **WAN Configuration-> ONT Authentication**, you can set and view the ONU LOID and password:

			F501	Logout
> Status	Configure the C	ONT Authentication		
WAN Configuration	LOID	user	\supset	
WAN	Password	(\supset	
PON Mode			8	
ONT Authentication				
> LAN Configuration		Apply Cancel		
> Routing(IPv4)				
> Security Configuration				
> Network Application				
> System Tool				
> Diagnosis				
> Help Information				

2.After completing the LOID and password settings, you can click the "Apply" button below to complete the setup.

4.4 ONU Registers SN Configuration

The SN of the ONU is mainly applicable to the OLT SN authentication mode by default. Sometimes it may be related to the problem of compatibility, need to modify the default SN of the ONU, you can refer to the following ways to modify, SN by 4 characters prefix (letters) + 8 ASCII code. The standard specifies this length.

1.web login ONU and select the **WAN Configuration-> ONT Authentication**, you can set and view the ONU SN and password (generally do not need to modify):

				F501	Logout
> Status		Configure the Of	NT Authentication		
WAN Con	iguration 0	LOID	user		
WAN		Password	()		
PON Mo	te			Ĩ.	
ONT Aut	hentication (2)	SN	DH11E695488D	3	
LAN Conf	guration	SN Password	()		
Routing(IF	V4)				
Security C	onfiguration				
> Network A	pplication		Apply Cancel		
> System To	ol		-		
Diagnosis					
 Help Infor 	mation				

2.After completing the SN and password settings, you can click the "Apply" button below to complete the setup.

5 ONU Registration Information Configuration(When adaptive to EPON mode)

5.1 ONU Registration Status View

web login ONU select the **Status ->PON inform**, you can check whether the ONU registered successfully:

0	PON Information		
Oevice Information	EPON State	Registered and certified 3	
PON Information	OAM_Link	Established	
WAN Information	Optical Module RX Power(dBm)	-22.29	
	Optical Module TX Power(dBm)	1.80	
LAN Allocated Status	Optical Module Working Voltage(uV)	3309900	
 WAN Configuration 	Optical Transmitter Bias Current(UA)	11016	
LAN Configuration	Working Temperature of the Optical		
	Module(°C)	48	
Network Application			
> Help Information			

F501

5.2 ONU Optical Power Information View

web login ONU select the **Status ->PON inform**, you can view the ONU input and output optical power information:

			F501	Logout
	DONLIG			
v Status	PON Information			
Device Information	EPON State	Registered and certified		
PON Information	OAM_Link	Established		
WAN Information	Optical Module RX Power(dBm)	-22.29		
Eth Port Information	Optical Module TX Power(dBm)	1.80 3		
LAN Allocated Status	Ontical Module Morking Voltage(ii)/	2200000		
> WAN Configuration	Opical Module Working Volage(uV)	3309900		
LAN Configuration	Optical Transmitter Bias Current(uA)	11016		
Routing(IPv4)	Working Temperature of the Optical Module(°C)	48		
Security Configuration	modulo(C)			
Network Application				
> System Tool				
> Diagnosis				
> Help Information				

5.3 ONU Registration LOID Configuration

The LOID of the ONU is mainly applicable to the authentication mode of LOID and LOID + Password. General EPON ONU authentication method is MAC address, and rarely use the LOID authentication mode, so normal circumstances do not need to configure the LOID. The LOID of the ONU is configured as follows:

1.web login ONU select the WAN Configuration-> ONT Authentication, you

can set and view the ONU LOID and password:

			F501 Logout
	O	ONIT As the set of the set	
> Status	Configure the C	JNT Autnentication	
V WAN Configuration	LOID	user	\supset
WAN	Password	(*******	
PON Mode			3
ONT Authentication			
> LAN Configuration		Apply Cancel	
> Routing(IPv4)			
> Security Configuration			
> Network Application			
> System Tool			
> Diagnosis			
> Help Information			

2.After completing the LOID and password settings, you can click the "Apply" button below to complete the setup.

6 Internet Basic Configuration

ZTE ONU series of products support route function, Internet can work by route mode or bridge mode, the difference between the two modes are as follows:

Routing mode Broadband Internet access: ONU as a home gateway equipment, ONU on route mode can obtained IP address in three ways: **DHCP**, **static IP** and **PPPoE**. The IP address of the user terminal device (PC, etc.) obtained by the ONU own DHCP address pool or manually set the static IP address the same as DHCP address pool.

Bridging mode broadband Internet access: ONU itself will not get the IP address assigned by the upper device, or can not manually set the static IP address, then ONU as a relay device. The IP address of the user device (PC) connecting the ONU LAN port obtained by the OLT upper layer server. The PC is connected to the Internet through DHCP, PPPoE, and static ip address.

6.1 Routing mode broadband Internet settings

6.1.1 **PPPoE broadband Internet access in routing mode**

1. web login ONU and select WAN Configuration->WAN->NEW, and then set

the following parameters:

【Connection Name】 Enter a qualified name.

[Enable] Check this option, It makes the WAN you configured take effect

【WAN Mode】 Select "Route".

[Mode] Select "PPPOE".

[IP Protocol] Select 'Ipv4'; If there is Ipv6 in the network, we can select 'Ipv4/Ipv6'.

[Service Type] Check "INTERNET".

- [Enable VIan] Configure this option according to our network plan. If the network plans the vlan of broadband Internet, this item needs to choose ; If the network has no vlan planning for broadband Internet access, this option is not to choose.
- [Vlan ID] This will appear after the selection "tag", and the vlan id of the network plan should be filled in.
- [802.1p] Set the priority of vlan, The same as "enable Vlan", depending on the network vlan planning to configure. The default priority is 0.
- [PPP TransType] Select "PPPoE".
- [Username] Enter the PPPoE Internet PPPoE account provided by the network operator.
- [Password] Enter the PPPoE password provided by the network operator.
- 【Authentication Type】 Select "Auto".
- [Connection Trigger] The default is "Always On".
- [Enable NAT] Check the "Enable NAT" function; NAT function is mainly used for internal network and external network communication address translation function, the default is checked enabled state, if not check the network ONU not get the network.
- [MTU] The default is 1492 does not need to modify; if you meet can ping DNS but the web browser can not access the site. Modify MTU smaller, such as: 1400.

[As default gateway] Choose to tick according to your needs

Note: ZTE solution ONU series of products is no port binding function, because the ONU is SFU (pure data)+ Routing, the ONU either works in SFU mode, or is working in routing mode.

				Logoal	
itus	Configure the WAN Co Current Entry Number: 0	onnections	3 New	Delete	
WAN	Enable Connection Name	VLAN/802.1p	Mode IP Protoc	ol Modify	
PON Mode ONT Authentication N Configuration uting(IPv4) curity Configuration twork Application stem Tool genosis & Information				F501	
	Edit the WAN Co	nnections			
	Basic Information				
tus N Configuration	Basic Information Connection Name	(IPoEConn	ection1		
us I Configuration IAN	Basic Information Connection Name Enable		ection1		
us N Configuration (AN ON Mode	Basic Information Connection Name Enable WAN Mode	(IPoEConno Route	ection1		
lus N Configuration VAN PON Mode NT Authentication	Basic Information Connection Name Enable WAN Mode Mode	(IPoEConne Route PPPoE	ection1		
us N Configuration (AN ON Mode NT Authentication I Configuration	Basic Information Connection Name Enable WAN Mode Mode IP Protocol	(IPoEConno Route PPPoE IPv4	ection1		
us I Configuration AN Mode NT Authentication Configuration ing(IPv4)	Basic Information Connection Name Enable WAN Mode Mode IP Protocol Service Type	(IPoEConno Route PPPoE IPv4 INTERNET	ection1		
us I Configuration IAN ON Mode NT Authentication Configuration ting(IPv4) urity Configuration	Basic Information Connection Name Enable WAN Mode Mode IP Protocol Service Type	(IPoEConn ■ Route PPPoE IPv4 INTERNET	ection1		
us I Configuration IN Mode IT Authentication Configuration ting(IPv4) urity Configuration vork Application	Basic Information Connection Name Enable WAN Mode Wode IP Protocol Service Type VLAN Information	(IPoEConn Route PPPoE (IPv4 INTERNET	ection1		
IS I Configuration AN ON Mode VT Authentication Configuration ing(IPv4) Intry Configuration Fork Application em Tool nosis	Basic Information Connection Name Enable WAN Mode Mode IP Protocol Service Type VLAN Information Enable Vian	(IPoEConnormality) Route PPPoE IPv4 INTERNET	ection1		
IS I Configuration AN AN ON Mode NT Authentication Configuration ing(IPv4) irity Configuration rork Application ern Tool nosis Information	Basic Information Connection Name Enable WAN Mode Wode IP Protocol Service Type VLAN Information Enable Vian VLAN ID	(IPOEConn Route PPPoE IPv4 INTERNET	ection1	·4094)	
IS I Configuration AN ON Mode NT Authentication Configuration ing(IPv4) Irity Configuration rork Application ern Tool nosis Information	Basic Information Connection Name Enable WAN Mode Wode IP Protocol Service Type VLAN Information Enable Vlan VLAN ID 802.1p	(IPoEConnel Route PPPoE (IPv4 INTERNET 1000 [0	ection1	-4094)	
US I Configuration AN AN N Mode NT Authentication Configuration ing(IPv4) inty Configuration vork Application ern Tool nosis Information	Basic Information Connection Name Enable WAN Mode Mode IP Protocol Service Type VLAN Information Enable Vlan VLAN ID 802.1p	(IPoEConnu Route PPPoE IPv4 INTERNET	ection1	-4094)	
IS Configuration AN AN Mode VT Authentication Configuration ing(IPV4) rity Configuration ork Application arm Tool nosis Information	Basic Information Connection Name Enable WAN Mode Mode IP Protocol Service Type VLAN Information Enable Vlan VLAN ID 802 1p PPP Configuration PPP TransType	IPOEConn Route PPPoE IPv4 INTERNET 1000 0 PPPoE	ection1	-4094)	
IS I Configuration AN ON Mode NT Authentication Configuration ing(IPv4) Irity Configuration rork Application ern Tool nosis Information	Basic Information Connection Name Enable WAN Mode Mode! IP Protocol Service Type VLAN Information Enable Vian VLAN ID 802.1p PPP Configuration PPP TransType: Username	(IPoEConn Route PPPoE [IPv4 INTERNET 1000 [0 [PPPoE [test	ection1	-4094)	
IS I Configuration AN ON Mode NT Authentication Configuration ing(IPv4) inty Configuration rork Application ern Tool nosis Information	Basic Information Connection Name Enable WAN Mode Mode IP Protocol Service Type VLAN Information Enable Vian VLAN ID 802 1p PPP Configuration PPP TransType Username Password	IPoEConn Route PPPoE IPv4 INTERNET 1000 0 PPPoE test		-4094)	
IS I Configuration AN NMode NT Authentication Configuration ing(IPv4) rity Configuration ork Application em Tool nosis Information	Basic Information Connection Name Enable WAN Mode Mode IP Protocol Service Type VLAN Information Enable Vlan VLAN ID 802.1p PPP Configuration PPP TransType Usiername Password DMS Name	(IPoEConnel Route PPPoE IPv4 INTERNET 1000 0 PPPoE test test		-4094)	
IS A Configuration AN AN ON Mode NT Authentication Configuration ing(IPv4) inty Configuration work Application err Tool nosis Information	Basic Information Connection Name Enable WAN Mode Mode IP Protocol Service Type VLAN Information Enable Vlan VLAN ID 802.1p PPP Configuration PPP TransType Username Password DMS Name Authentication Type	IPoEConne Route PPPoE IPv4 INTERNET 1000 0 PPPoE test Auto		-4094)	

> Diagnosis	Password	
> Help Information	DMS Name	
	Authentication Type	Auto
	Connection Trigger	Always on 🗸
	Enable NAT	
	мти	1492
	As default gateway?	
Sec.	В	ack Apply Cancel

2. After the above configuration, click "Apply" button to complete the PPPoE broadband Internet access settings:

EC04

	IP Protocol.	IPv4	~	
	Service Type	INTERNET	~	
Status WAN Configuration	VLAN Information			
WAN	Enable Vian			
PON Mode	VLAN ID	(1000	(1~4094)	
	802.1p	0	~	
	1.01		63	
	PPP Configuration			
	PPP TransType	PPPoE	~	
Network Application	Username	Ctest		
System Tool	Password			
Help Information	DMS Name	C		
	Authentication Type	Auto	~	
	Connection Trigger	Always on	~	
	Enable NAT			
	MTU	(1492		
	As default gateway?			

6.1.2 DHCP broadband Internet access in routing mode

1. web login ONU and select **WAN Configuration->WAN->NEW**, and then set the following parameters:

[Connection Name] Enter a qualified name.

[Enable] Check this option, It makes the WAN you configured take effect

[WAN Mode] Select "Route".

[Mode] Select "IPOE".

[IP Protocol] Select 'Ipv4'; If there is Ipv6 in the network, we can select 'Ipv4/Ipv6'.

[Service Type] Check "INTERNET".

[Enable Vlan] Configure this option according to our network plan. If the network plans the vlan of broadband Internet, this item needs to choose ;If the network has no

vlan planning for broadband Internet access, this option is not to choose.

- 【Vlan ID】 This will appear after the selection "tag", and the vlan id of the network plan should be filled in.
- [802.1p] Set the priority of vlan, The same as "enable Vlan", depending on the network vlan planning to configure. The default priority is 0.
- 【IP Acquisition Mode】 Select"DHCP".
- [Enable NAT] Check 'NAT' feature;NAT is mainly used for address translation function of local network and external network. The default is checked enable status. If you do not check this option, maybe you can't surf the internet.
- [MTU] The default is 1500; if we can ping the DNS but not access to the website via WEB broswer,we need to lower the value of MTU, such as 1400.
- [As default gateway] Choose to tick according to your needs

Note: the default port is unbound, and all the LAN ports go through this WAN. When the device has a route WAN at the same time, it needs to bind the port for each WAN (a LAN can only be bound to a WAN, can not bind to multiple WAN connections at the same time.)

					F501	(
	Configure	the WAN Cor	nections		8	
Status	Current Entry Nu	mber: 0		-	New	Dolo
WAN Configuration						Deret
WAN	Enable	Connection Name	VLAN/802.1p	Mode	IP Protocol	Mo
PON Mode						
ONT Authentication						
LAN Configuration						
Routing(IPv4)						
Security Configuration						
Network Application						
System Tool						
Diagnosis						
Help Information						

	ALCOLUMN DIA PAST A COM	Value - Court Marked Court
WAN Configuration	Basic Information	
WAN	Connection Name	(IPoEConnection1)
PON Mode	Enable	
ONT Authentication	WAN Mode	Route
LAN Configuration	Mode	(IPoE V)
Security Configuration	IP Protocol	IPv4
Network Application	Service Type	INTERNET V
System Tool		
Diagnosis	VLAN Information	
Help Information	Enable Vlan	
	VLAN ID	(1~4094)
	802.1p	0 ~
	IPv4 Information	
	IP Acmuisition Mode	
Status	Enable	
Status WAN Configuration	Enable WAN Mode	Route
Status WAN Configuration WAN PON Mode	Enable WAN Mode Mode	Route V IPoE V
Status WAN Configuration WAN PON Mode ONT Authentication	Enable WAN Mode Mode IP Protocol	Route V IPoE V IPv4 V
Status WAN Configuration WAN PON Mode ONT Authentication LAN Configuration	Enable WAN Mode Mode IP Protocol Service Type	Route
Status WAN Configuration WAN PON Mode ONT Authentication LAN Configuration Routing(IPv4)	Enable WAN Mode Mode IP Protocol Service Type VLAN Information	Route V IPoE V IPv4 V INTERNET V
Status WAN Configuration WAN PON Mode ONT Authentication LAN Configuration Routing((Pv4) Security Configuration	Enable WAN Mode Mode IP Protocol Service Type VLAN Information Enable Vian	Route IPoE IPv4 INTERNET
Status WAN Configuration WAN PON Mode ONT Authentication LAN Configuration Routing(IPv4) Security Configuration Network Application System Tool	Enable WAN Mode Mode IP Protocol Service Type VLAN Information Enable Vlan VLAN ID	Route IPoE IPv4 INTERNET 1000 (1~4094)
Status WAN Configuration WAN Configuration PON Mode ONT Authentication LAN Configuration Routing(IPv4) Security Configuration Network Application System Tool Diagnosis	Enable WAN Mode Mode IP Protocol Service Type VLAN Information Enable Vlan VLAN ID 802.1p	Route > IPoE > IPv4 > INTERNET > 1000 (1~4094) 0 >
Status WAN Configuration WAN PON Mode ONT Authentication LAN Configuration Routing(IPv4) Security Configuration Network Application System Tool Diagnosis Help Information	Enable WAN Mode Mode IP Protocol Service Type VLAN Information Enable Vlan VLAN ID 802.1p	Route • IPoE • IPv4 • INTERNET • 1000 (1~4094) 0 •
Status WAN Configuration WAN PON Mode ONT Authentication LAN Configuration Routing(IPV4) Security Configuration Network Application System Tool Diagnosis Help Information	Enable WAN Mode Mode IP Protocol Service Type VLAN Information Enable Vlan VLAN ID 802.1p IPv4 Information	Route IPoE IPv4 INTERNET 1000 (1~4094) 0
Status WAN Configuration WAN PON Mode ONT Authentication LAN Configuration Routing(IPv4) Security Configuration Network Application System Tool Diagnosis Help Information	Enable WAN Mode Mode IP Protocol Service Type VLAN Information Enable Vlan VLAN ID 802.1p IPv4 Information IP Acquisition Mode	Route > IPoE > IPv4 > INTERNET > 1000 (1~4094) 0 >
Status WAN Configuration WAN PON Mode ONT Authentication LAN Configuration Routing(IPv4) Security Configuration Network Application System Tool Diagnosis Help Information	Enable WAN Mode Wode IP Protocol Service Type VLAN Information Enable VIan VLAN ID 802.1p IPv4 Information IP Acquisition Mode Enable NAT	Route > IPoE > IPv4 > INTERNET > 1000 (1~4094) 0 >
Status WAN Configuration WAN PON Mode ONT Authentication LAN Configuration Routing(IPV4) Security Configuration Network Application System Tool Diagnosis Help Information	Enable WAN Mode Wode IP Protocol Service Type VLAN Information Enable Vlan VLAN ID 802.1p IPv4 Information IP Acquisition Mode Enable NAT MTU	Route > IPoE > IPv4 > INTERNET > 1000 (1~4094) 0 >

2..After configuring the parameters of DHCP WAN connection as below, click 'Apply' to finish the setting:

	Louis monaton			
	Connection Name	(IPoEConnectio	n1)	
talus	Enable			
VAN Configuration	WAN Mode	Route	~	
WAN	Mode	IPoE	~	
PON Mode	IP Protocol	IPv4	~	
ONT Authentication	Service Type	INTERNET	~	
AN Configuration		And a state of the		
touting(IPv4)	VLAN Information			
ecurity Configuration	Enable Vian			
letwork Application	VLAN ID	(1000)(1~4094)	
liagnosis	802.1p	0	~	
lelo Information		C		
	IPv4 Information			
	IP Acquisition Mode	DHCP	~	
	Enable NAT			
	MTU	(1500		
	As default gateway?			

6.1.3 Static IP Broadband Internet Access In Routing Mode

1. web login ONU and select **WAN Configuration->WAN->NEW**, and then set the following parameters:

[Connection Name] Enter a qualified name.

[Enable] Check this option, It makes the WAN you configured take effect.

【WAN Mode】 Select "Route".

[Mode] Select "IPOE".

[IP Protocol] Select 'lpv4'; If there is lpv6 in the network, we can select 'lpv4/lpv6'.

[Service Type] Check "INTERNET".

[Enable VIan] Configure this option according to our network plan. If the network plans the vlan of broadband Internet, this item needs to choose ; If the network has no vlan planning for broadband Internet access, this option is not to choose.

[Vlan ID] This will appear after the selection "tag", and the vlan id of the network plan should be filled in.

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【802.1p】 Set the priority of vlan, The same as "enable Vlan", depending on the network vlan planning to configure. The default priority is 0.

【IP Acquisition Mode】 Select"Static".

【IP Address】 Set static IP address;

[Subnet Mask] Set the mask of static IP address;

[Gateway] Set the default gateway of static IP address;

[DNS Service1 IP Address] Set static primary DNS address and secondary DNS address;

[DNS Service3 IP Address] Set static second DNS address and secondary DNS address;

[DNS Service3 IP Address] Set static third DNS address and secondary DNS address;

[Enable NAT] Check 'NAT' feature; NAT is mainly used for address translation function of local network and external network. The default is checked enable status. If you do not check this option, maybe you can't surf the internet.

[MTU] The default is 1500; if we can ping the DNS but not access to the website via WEB broswer, we need to lower the value of MTU, such as 1400.

[As default gateway] Choose to tick according to your needs

Note: the default port is unbound, and all the LAN ports go through this WAN. When the device has a bridge WAN and a route WAN at the same time, it needs to bind the port for each WAN (a LAN can only be bound to a WAN, can not bind to multiple WAN connections at the same time.).





F501

Status						
WAN Configuration	Basic Inform	nation				
WAN	Connection	Name	(IPoEConno	ection1		
PON Mode	Enable					
I AN Configuration	WAN Mode		Route	~		
Routing(IPv4)	Mode		IPoE	~		
Security Configuration	IP Protocol		IPv4	~		
Network Application	Service Typ	e	INTERNET	~		
System Tool	VLAN Infor	mation				
Diagnosis Mala laformation	Enable Via	1				
rep momator	VLAN ID		(1000)(1~	1094)	
	802.1p		0	~		
			. No.			
	IPv4 Inform	ation				
	IP Acquisitio	on Mode	Static	~		
	IP Address		192.168.5.	155		
	Subnet Mas	sk	255.255.25	5.0		
	Gateway		(192.168.5.	1		
	Gateway DNS Serve	r1 IP Address	(192.168.5.		F501	
	Gateway DNS Serve	r1 IP Address Service Type	(192.168.5.	1) 1) NTERNET	F501	
	Gateway DNS Serve	r1 IP Address Service Type VLAN Information	(192.168.5.	1) 1) NTERNET	F501	
> Status > WAN Configuration	Gateway DNS Serve	rt IP Address Service Type VLAN Information Enable Vlan	192.168.5		F501	
> Status > WAN Configuration WAN	Gateway DNS Serve	rt IP Address Service Type VLAN Information Enable Vlan VLAN ID	(192.168.5.	1 1 NTERNET	F501 ▼ (1~4094)	
 Status WAN Configuration WAN PON Mode 	Gateway DNS Serve	rt IP Address Service Type VLAN Information Enable Vian VLAN ID 802.1p	(192.168.5. (192.168.5.	1 1 NTERNET 1 1000	▼ (1~4094)	
Status WAN Configuration WAN PON Mode ONT Authentication I LAN Configuration	Gateway DNS Serve	rt IP Address Service Type VLAN Information Enable Vlan VLAN ID 802.1p	(192.168.5. (192.168.5.	1 1 NTERNET	► 501 ▼ (1~4094)	
 > Status > WAN Configuration WAN PON Mode ONT Authentication > LAN Configuration > LAN Configuration > Routing(IPv4) 	Gateway DNS Serve	I IP Address Service Type VLAN Information Enable Vlan VLAN ID 802.1p IPv4 Information IR Accuration Mode	(192.168.5. (192.168.5.	1	F501 ▼ (1~4094) ▼	
 Status WAN Configuration. WAN PON Mode ONT Authentication LAN Configuration Routing(IPv4) Security Configuration 	Gateway	rt IP Address Service Type VLAN Information Enable Vlan VLAN ID 802.1p IPv4 Information IP Acquisition Mode IP Address	(192.168.5. (192.168.5.	1	F501 ✓ (1~4094) ✓	
 Status WAN Configuration WAN PON Mode ONT Authentication LAN Configuration Routing(IPv4) Security Configuration Network Application 	Gateway	rt IP Address Service Type VLAN Information Enable Vian VLAN ID 802.1p IPv4 Information IP Acquisition Mode IP Address Subnet Mask		1	▼ (1~4094) ▼	
 Status WAN Configuration WAN PON Mode ONT Authentication LAN Configuration Routing(IPv4) Security Configuration Network Application System Tool Disannesis 	Gateway DNS Serve	rt IP Address Service Type VLAN Information Enable Vian VLAN ID 802.1p IPv4 Information IP Acquisition Mode IP Address Subnet Mask Gateway		1	F501 ✓ (1~4094) ✓	
 Status WAN Configuration WAN PON Mode ONT Authentication LAN Configuration Routing(IPv4) Security Configuration Network Application System Tool Diagnosis Help Information 	Gateway DNS Serve	rt IP Address Service Type VLAN Information Enable Vlan VLAN ID 802.1p IPv4 Information IP Acquisition Mode IP Acquisition Mode Subnet Mask Gateway DNS Server1 IP Address		11 11	F501 ▼ (1~4094) ▼	
 Status WAN Configuration WAN PON Mode ONT Authentication LAN Configuration LAN Configuration Routing(iFv4) Security Configuration Network Application System Tool Diagnosis Help Information 	Gateway DNS Serve	rt IP Address Service Type VLAN Information Enable Vlan VLAN ID 802.1p IPv4 Information IP Acquisition Mode IP Address Subnet Mask Gateway DNS Server1 IP Address DNS Server2 IP Address		1	F501 (1~4094) ✓	
 Status WAN Configuration WAN PON Mode ONT Authentication LAN Configuration Routing(IPv4) Security Configuration Network Application System Tool Diagnosis Help Information 	Gateway DNS Serve	FI IP Address Service Type VLAN Information Enable Vlan VLAN ID 802, 1p IPv4 Information IP Address Subnet Mask Gateway DNS Server1 IP Address DNS Server2 IP Address		11 11	F501 (1~4094) ✓	
 Status WAN Configuration WAN PON Mode ONT Authentication LAN Configuration Routing(IPv4) Security Configuration Network Application System Tool Diagnosis Help Information 	Gateway	rt IP Address Service Type VLAN Information Enable Vian VLAN ID 802.1p IPv4 Information IP Address Subnet Mask Gateway DNS Server1 IP Address DNS Server2 IP Address DNS Server3 IP Address DNS Server3 IP Address		1	 ▼ (1~4094) ▼ ▼ ■ 	
 Status WAN Configuration WAN PON Mode ONT Authentication LAN Configuration Routing(IPv4) Security Configuration Network Application System Tool Diagnosis Help Information 	Gateway	rt IP Address Service Type VLAN Information Enable Vian VLAN ID 802.1p IPv4 Information IP Address Subnet Mask Gateway DNS Server1 IP Address DNS Server2 IP Address DNS Server3 IP Address DNS Server3 IP Address		11 1	 ▼ (1~4094) ✓ 	

2.After the above configuration, click "Apply" button to complete the Static IP broadband Internet access settings:

	Service Type	INTERNET V	
Status	VLAN Information		
WAN Configuration	Enable Vlan		
WAN	VLAN ID	(1000)(1~4094)	
PON Mode ONT Authentication	802.1p	0 ~	
LAN Configuration	IPv4 Information		
Routing(IPv4)	IP Acquisition Mode	Static	
Security Configuration	IP Address	(192.168.5.155	
Network Application System Teel	Subnet Mask	(255.255.255.0)	
Diagnosis	Gateway	(192.168.5.1	
Help Information	DNS Server1 IP Address	(192.168.5.1	
	DNS Server2 IP Address	(114.114.114.114	
	DNS Server3 IP Address		
	Enable NAT		
	MTU	(1500	
	As default gateway?		

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6.2 Broadband Internet Access In Bridge Mode

ZTE solution ONU series products factory default mode in the bridge (pure data SFU), ONU bridge mode Internet does not need to do any configuration in the web interface. Just configure the correct ONU port vlan (eg access, trunk, transparent) in the OLT

Note: If ONU was in route mode for Internet. Please disable ONU's DHCP function if need change to bridge mode. It is best to delete route WAN configuration.

6.3 View Broadband WAN Status

web login ONU and select the **Status ->WAN Information**, you can see the status of the WAN connection in the routing mode, check whether the routing WAN has the correct IP address.As follows:





6.4 Delete Internet WAN Connection

web login ONU and select the **WAN Configuration->WAN**, select a WAN connection in the **"Connection Name"**, and then click the **"Delete"** button at the bottom of the page to complete the deletion:

					F	501	Logos
> Status WAN Configuration	Co	Onfigure rent Entry Nurr	the WAN Conn	ections		lew D	4 elete
WAN		Enable	Connection Name	VLAN/802.1p	Mode	IP Protocol	Modify
PON Mode		Enabled	IPoEConnection1	1000/0	IPoE	IPv4	1
		0					
LAN Configuration							
Routing(IPv4)							
Security Configuration							
Network Application							
System Tool							
Help Information							

7 ONU LAN configuration

The LAN side configuration of the ZTE solution ONU is mainly for terminal device when ONU in route mode.

7.1 LAN IP Address Configuration

1.web login ONU and select the **LAN Configuration-> DHCP Configuration**, And then set the following parameters:

- [LAN IP Address]Set the local management IP address of the ONU. The default is 192.168.101.1
- [Subnet Mask] Set the subnet mask corresponding to the local management IP address of the ONU.

[Enable DHCP Server] Enable or disable the DHCP server function on the ONU.

- [DHCP Start IP Address/DHCP End IP Address] The IP address interval allocated to the terminal. The address interval must be on the same network segment as the management IP address of the ONU.
- [Assign IspDNS] Enable or Disable the ONU to allocate the upper ISP's DNS to the terminal.
- [DNS Server1 IP Address/DNS Server2 IP Address/DNS Server3 IP Address] The DNS address to be assigned to the terminal, in default ONU use itself ip 192.168.101.1 work as DNS proxy address, can enter according to network planning.

[Default Gateway] The default gateway address assigned to the terminal.

[Lease Time] Set the DHCP server allocated ip's lease time, the configuration is 86400.

Status WAN Configuration	Configure the LAN Note: After change the LAN IP ad	DHCP dress, the connection will be closed.
AN Configuration	LAN IP Address	(192.168.101.1
DHCP Configuration	Subnet Mask	(255.255.255.0
Port Configuration	Note: The DHCP Start IP and End	IP address should be in the same subnet as the LAN IP.
Routing(IPv4)	Enable DHCP Server	
Security Configuration	DHCP Start IP Address	(192.168.101.2)
Network Application System Tool	DHCP End IP Address	(192.168.101.254
Diagnosis	Assign IspDNS	
Help Information	DNS Server1 IP address	(192.168.101.1
	DNS Server2 IP address	(0.0.0.0)
	DNS Server3 IP address	0.0.0.0
	Default Gateway	(192.168.101.1
	Lease Time	(86400)s

2.After the above configuration, click "Apply" button to complete the LAN ip settings:

8 Multicast / IPTV Service Basic Settings

ZTE solution ONU multicast / IPTV service settings are mainly through the OLT to configure, including multicast vlan, snooping configuration can be configured through the OLT. The specific configuration can refer to each manufacturer's OLT to configure.

9 ONU Device Management

9.1 Restore Default

web login ONU and select the **System Tool->Configuration File**. Click the **"Factory Reset"** button to restore the ONU factory settings:

		F501 Logo
	Configure the Configu	ration File
	Do Factory Reset	Eastern Reset
WAN Configuration	Du l'actory Reser	actory reser
Routing(IPv4)	Note: Click this button to restore the co	onfiguration to factory default settings. The device will reboot
Security Configuration	after operating.	
Network Application		
System Tool		
	the device	Backup Configuration
Reboot		
Configuration File	Lingrada File	Please select a user configuration file
	opgrave i ne	(送 探文件) 未选择文件
		Upgrade
	Note: After do restore Configuration, de	evice will reboot after operation.

9.2 Software Upgrade

web login ONU and select the **System Tool->Firmware Upgrade**. Click the **"Choose File"** button to select an upgrade file, and then click the **"Upgrade**" button to upgrade:

Note: ONU upgrade will automatically restart, do not need to manually restart the ONU, upgrade time is about 3 minutes.

	Lingrade the soft	ware
Status	Eliminara Ella	
Configuration	I minware rue	L TRANK
∿4)		Upgrade
phication		
0		
ut		
Jpgrade 2		
rot		
Information		

9.3 Reboot Device

web login ONU and select the **System Tool->reboot**. Click the **"Reboot"** button to restart the ONU device:



