

**Setup guide for OLT and ONU in default
configuration**

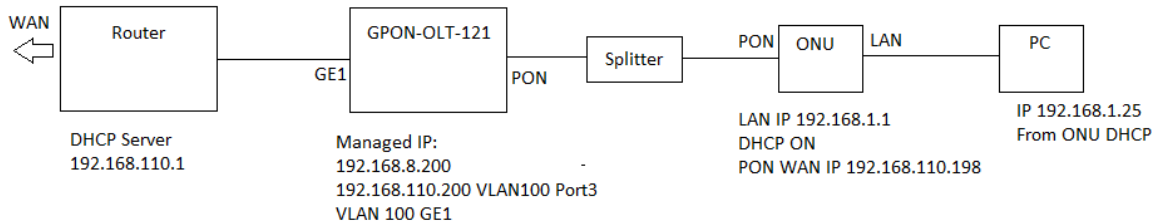
**AirLive GPON OLT-121 with fw 1.1.1 or higher
and XPON ONU**

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How to setup the OLT and ONU in combination with a Router.

For the setup an AirLive GPON OLT-121 with fw 1.1.1 or higher and AirLive 2.5GE XPON ONU was used.

The setup is following the below diagram, please do **not** use VLAN: 0, 1, 2, 9, 8, 10, 4000, 4005, 4012-4017, 4095.



Do **not** use vlan : 0 , 1 , 2 , 9 , 8 , 10 , 4000 , 4005 , 4012-4017 , 4095

Setup Steps:

- 1: Login to the OLT management web interface. The default IP is 192.168.8.200
- 2: If we want to configure ONU access the Internet, we need to create a VLAN in OLT first.
- 3: Create a VLAN 100 (for this example) for Internet.
- 4: VLAN bindings for uplink GE port
please note: If the uplink port is in the untag mode, PVID (default vlan id) needs to be configured (100 in this example).
- 5: Open ONU list page, Select the PON port where ONU is located. Find out what ONU you want to configure. Check the ONU status and ensure the ONU is in Online state.
- 6: Click on the ONU configuration page to configure "tcont", "gemport", "Service", "Service Port" and other parameters.
- 7: On the "port vlan" page, for ONU, the Mode needs to be configured for "transparent", Port Type needs to be configured for "veip" and Port Id needs to be configured for "1".
- 8: Then we need to create an Internet WAN connection for it, click on "WAN" page.
Mode is Route, enable NAT, you can also choose three modes for Internet Wan connection. Here we use the DHCP mode. Then select the VLAN mode and fill in the VLAN information (100 in this example). And choose service mode is "Internet".
Please note: When the configuration is complete, you need to click "Submit" button. At this point, the configuration is added to running-config list. Finally click the "submit" button.
- 9: You can configure ONU DHCP Server on "DHCP server" page, configure the LAN IP and DHCP address pool you need.
- 10: Press "SAVE" in the top bar of the OLT so save the complete configuration.

1: In the OLT Configuration select “VLAN” and make a VLAN ID in this example we make VLAN 100.

New VLAN

VLAN ID: 100 (1-4094, format as X or X-X)
 Description: vlan_100 (max length is 30)

VLAN Table

Maximum: 512 vlans
 Used: 2 vlans

VLAN ID	Description	Edit	Delete
1	vlan_1		
100	vlan_100		

2: Bind the Uplink GE port go the “VLAN” >> “VLAN Port”, in this example all ports were binded to the VLAN100. Make sure the Uplink is in “Untag” mode.

Port VLAN Configuration

VLAN ID: 100

Port ID	Mode	Forbidden	Tag	Untag
GE1	Hybrid	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
GE2	Hybrid	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
GE3	Hybrid	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>

Port VLAN Table

VLAN ID	Tag Ports	Untag Ports
1		GE1 GE2 GE3
100		GE1 GE2 GE3

3: When the Uplink port is in “Untag” mode, the PVID (default VLAN id) needs to be configured. Go to “Uplink Port” >> “ Configuration”. Change the PVID for the uplink to 100 (in this example).

GE Configuration

Port ID	Description	Admin Status	Speed	Flow Control	Isolate	PVID	Storm(0 64-13000kbps)		Rate(0 64-1000000kbps)		MAC Limit(0-16384)
							Broadcast	Unicast	Ingress	Egress	
GE1		<input checked="" type="checkbox"/>	Auto	<input type="checkbox"/>	<input type="checkbox"/>	100	496	1496	0	0	0
GE2		<input checked="" type="checkbox"/>	Auto	<input type="checkbox"/>	<input type="checkbox"/>	1	1496	1496	0	0	0
GE3		<input checked="" type="checkbox"/>	10G Full	<input type="checkbox"/>	<input type="checkbox"/>	1	1496	1496	0	0	0

4: Adding the ONU to the OLT.

Make sure the ONU has been connected to the OLT via its PON ports and a Splitter.

Click on “ONU Configuration” and select “ONU Autofind” when your ONU has been connected correctly. It will show up here. Select the ONU you want to add (when there are several) and click on “Add”.

The screenshot shows the 'Automatic Discovery' page in the AirLive web interface. The left sidebar contains a menu with 'ONU AutoFind' selected. The main content area has a 'Port ID' dropdown set to 'PON1' and a 'Search Info' input field. Below these are 'Refresh' and 'Confirm All' buttons. A table lists discovered ONUs with columns: Index, Sn, SnPw, loid, loidpw, and Action. The first row has Index '1', Sn 'GPON0000004c', SnPw '1234567890', loid 'user', loidpw 'NULL', and an 'Add' button highlighted with a red box.

Index	Sn	SnPw	loid	loidpw	Action
1	GPON0000004c	1234567890	user	NULL	Add

Click on “Submit” on the next page which will automatically appear.

The screenshot shows the 'Add Onu' page in the AirLive web interface. The left sidebar has 'ONU AutoFind' selected. The main content area has a form with fields for 'PON Num' (1), 'ONU Num' (3), 'Auth Mode' (Sn), 'Onu Sn' (GPON0000004c), and 'ONU Profile' (default). Below the form are 'Submit' and 'Back' buttons, with 'Submit' highlighted by a red box.

The ONU will now be shown and when connected correctly will show “Enable”

The screenshot shows the 'ONU Status Information' page in the AirLive web interface. The left sidebar has 'ONU AutoFind' selected. The main content area has a 'Port ID' dropdown set to 'PON1' and a summary: 'total-3, logging-0, offline-0, syncMib-1, configFail-0, working-2'. Below this is a 'Refresh' button and a table with columns: ONU ID, Admin State, OMCC State, Phase State, Description, Last Register Time, Last Deregister Time, Last Deregister Reason, and Alive Time. The table shows three ONUs, all with 'Admin State' set to 'enable'.

ONU ID	Admin State	OMCC State	Phase State	Description	Last Register Time	Last Deregister Time	Last Deregister Reason	Alive Time
GPON0/1:1	enable	enable	working	N/A	1970:01:01 08:01:17	N/A	N/A	02:33:36
GPON0/1:2	enable	enable	working	N/A	1970:01:01 08:01:16	N/A	N/A	02:33:37
GPON0/1:3	enable	enable	syncMib	N/A	N/A	N/A	N/A	N/A

5: Configure the ONU, Click on the "ONU List" in the top right corner of the OLT menu bar.

The active ONU's will now be shown, select the ONU you want to configure (make sure the status is "Online") and click on the "Config" button.

ONU Authentication Information

Port ID: PON1
 Search Mode: All
 Search Info:
 ONU Count: 3/3

[Delete All](#) [Delete Offline](#) [Refresh](#)

ONU ID	Status	Description	Model	Profile	Mode	Info	Action
GPON0/1:1	Online	GPON0/1:1	V802	default	Sn	GPON00dc7aa	Config Deactivate Delete Optical Info Detail Info Reboot
GPON0/1:2	Online	GPON0/1:2	V802	default	Sn	GPON00000124	Config Deactivate Delete Optical Info Detail Info Reboot
GPON0/1:3	Online	GPON0/1:3	V601	default	Sn	GPON0000004c	Config Deactivate Delete Optical Info Detail Info Reboot

6: Setup the "tcont", "gempport", "Service", "Service Port" and other parameters.

Setup the "tcon" default value is 1, in this example for name, the name test was used.

ONU Tcont Information (PON:1 ONU:2)

Tcont ID	Name	DBA Profile	Action
1	test	default1	Delete

Add ONU Tcont

Tcont ID:
 Tcont Name:
 DBA Profile Name:
[Commit](#)

Setup the "gempport" the default value is 1, make sure the TcontID select is 1 (the one previously made). The name used in this example is test.

ONU Gempport Info (PON:1 ONU:2)

Gempport ID	Name	Tcont	Action
1	test	1	Delete

Add ONU Gempport

Gempport ID:
 TcontID:
 Gempport Name:
[Commit](#)

Setup the "Service", make sure to select Gemport ID 1 (the one just made) and for VLAN mode select "Tag" for "VLAN List" enter the value 100, this is the VLAN id made in the OLT previously.

ONU Service Information (PON:1 ONU:2)
pon untagged vlan : -

ServiceName	Gemport	Vlan Mode	Vlan List	Port	Action
ser_1	1	Tag	100	N/A	Delete

Add ONU Service

ServiceName	<input type="text" value="ser_2"/>
Gemport ID	<input type="text" value="1"/>
Vlan Mode	<input type="text" value="Tag"/>
Vlan List	<input type="text" value=""/>
PortType	<input type="text" value="N/A"/>

[Commit](#)

Setup the "PortVlan" On the "PortVlan" page, for HGU the mode needs to be configured for "transparent", the Port Type needs to be configured for "veip" and Port Id needs to be configured for "1".

ONU PortVlan Info (PON:1 ONU:2)

PortName	Mode	Vlan	Vlan Priority(tag)	Default Vlan(hybrid)	Default Priority(hybrid)	CVlan(translate)	CVlan Priority(translate)	SVlan(translate)	SVlan Priority(translate)	Action
veip_1	Transparent	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Delete

Add ONU PortVlan

Mode	<input type="text" value="Transparent"/>
PortType	<input type="text" value="Eth"/>
Port Id	<input type="text" value=""/>

[Commit](#)

7: Setting up the WAN port information, click on the "WAN" page. Mode is Route, enable NAT, you can also choose three modes for Internet WAN connection. Here we use the DHCP mode. Then select the VLAN mode "Tag" in this example and fill in the VLAN information in this example 100. And choose service mode is "Internet".

Please note: When the configuration is complete, you need to click "Submit" button. At this point, the configuration is added to running-config list. Finally click the "submit" button to send the configuration to the ONU. Refresh the OLT page and in a few seconds the configuration will be shown it can take 1 min before it will show "connected" when the configuration has been setup up correctly.

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ONU list | ONU Status | ONU Optical Information | ONU Version Information | ONU Manual Add | ONU Allowlist

Tcont | Gempport | Service | PortVlan | Multicast | Port | Ip Host | IGMP | MAC | **WAN** | DHCP Server | Bir

WAN Connect Table (PON:1 ONU:1)

WAN Connect Parameter Configuration

WAN Index: NEW

Mode: route

IP Version: ipv4/ipv6

Connect Mode: DHCP

DNS: Disable

Master DNS: (A.B.C.D)

Slave DNS: (A.B.C.D)

Nat Enable: Enable

IPv6 DNS: Enable

DNSv6 Master: :: (X::X::X::X)

DNSv6 Slave: :: (X::X::X::X)

slaac: Enable (While disable,Dhcpv6 open automatically)

Client Address: Disable

Client Prefix(DHCP PD): Disable

VLAN Mode: Tag

VLAN ID: 100 (Tag:0-4095;Transparent:1-4095)

VLAN Cos: 0 (0-7)

QinQ Enable: Disable

QinQ TPID: 0 (1-65534)

SVLAN ID: 0 (1-4095)

SVLAN Cos: 0 (0-7)

MTU: 1500 (576-1500)

QoS Enable: Disable

Service Mode: Internet

Port Binding: Lan1 Lan2

Submit

Important after pressing “Submit” your configuration is made but not yet sent to the ONU.

After pressing “Submit” the configuration will be shown as in the below example. Click “Submit” again on the second “Submit” button and the configuration will be sent to the ONU.

MTU: 1500 (576-1500)
 QoS Enable: Disable
 Service Mode: Internet
 Port Binding: Lan1 Lan2
 Submit

WAN Connect running-config
 Submit

Index	onu running-config	Delete
1	Connect Type:route,IP Version:ipv4/ipv6,Service Mode:internet,QoS Enable:disable,MTU:1500,Connect Mode:DHCP, Nat:enable, DNSv6 Master: ::, DNSv6 Slave: ::, SLAAC:enable, Client Address:disable, Client Prefix:disable, VLAN Mode:Tag,VLAN ID:100, VLAN Cos:0, QinQ Enable:disable,	

The configuration will now be sent to the ONU and the ONU will make an Internet connection. When the setup was done correctly the words “Connected” will be shown.

Note it can take 1 or 2 minutes before the correct information is shown, please refresh the page.

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ONU List | ONU Status | ONU Optical Information | ONU Version Information | ONU Manual Add | ONU Allowlist | ONU Statistics

OLT Information | Tcont | Gemport | Service | PortVlan | Multicast | Port | Ip Host | IGMP | MAC | WAN | DHCP Server | Bind Mode | Misc | TR069 | Sec

OLT Configuration

ONU Configuration

ONU AuthList

ONU AutoFind

ONU AutoLearn

ONU Upgrade

Rogue ONU

Profile Configuration

System Configuration

WAN Connect Table (PON:1 ONU:2)

Index	Mode	IP Version	Service Mode	Status	MAC Address	Configuration Information
1	route	ipv4/ipv6	internet	Connected	00:4F:5B:00:01:25	QoS Enable:disable,MTU:1500,Connect Mode:DHCP, Nat:enable, IPv6 addr: ::/0, Gateway: ::, DNSv6 Master: ::, DNSv6 Slave: ::, SLAAC:enable, Client Address:enable, Client Prefix:enable, VLAN Mode:Tag,VLAN ID:100, VLAN Cos:0, QinQ Enable:disable,

WAN Connect Parameter Configuration

WAN Index: NEW
 Mode: bridge
 VLAN Mode: Disable
 QoS Enable: Disable
 Service Mode: Internet
 Port Binding: Lan1 Lan2
 Submit

WAN Connect running-config
 Submit

Index	onu running-config	Delete
1	Connect Type:route,IP Version:ipv4/ipv6,Service Mode:internet,QoS Enable:disable,MTU:1500,Connect Mode:DHCP, Nat:enable, DNSv6 Master: ::, DNSv6 Slave: ::, SLAAC:enable, Client Address:disable, Client Prefix:disable, VLAN Mode:Tag,VLAN ID:100, VLAN Cos:0, QinQ Enable:disable,	

The Setup is now complete, and the ONU is connected to Internet.

To see the settings of the ONU (which the OLT sent to the ONU), please connect to the ONU with a PC, and enter the default IP address of the ONU in a browser. The default IP address is 192.168.1.1

Note: to see and change the WAN port setup please login as Administrator and not as User. Click on “Setup” and Select “WAN” scroll down to the bottom of the page and select your active setup, ones check marked your configuration will be shown, which is the same as which was setup in the OLT.

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Status **Setup** Advanced Service Firewall Maintenance

WAN Configuration
This page is used to configure the parameters for the WAN interface of your ADSL and(or) Ethernet Modem/Router. Note : When connect type of PPPoE and PPPoA only is "Manual", the "Connect" and "Disconnect" button will be enable.

Default Route Selection: Auto Specified

Channel Mode: IPoE Enable NAPT:

Enable IGMP:

VLAN: Disable Enable

VLAN ID(1-4095): 100 VLAN Cos(0-7): 0

Multicast VLAN ID(1-4095): 0

IP Protocol: Ipv4/Ipv6

Application Mode: INTERNET

PPP Settings:

User Name: Password:

Service Name:

Type: Continuous Idle Time (min):

WAN IP Settings:

Type: Fixed IP DHCP

Local IP Address: Gateway:

NetMask:

Request DNS: Enable Disable

DNS Server1: DNS Server2:

Default Route: Disable Enable Auto

Unnumbered:

IPv6 WAN Setting:

Address Mode: Slaac

IPv6 DNS Mode: Auto

DHCPv6 Mode: Auto

Request DHCPv6 PD:

LAN : LAN1 LAN2

Connect Disconnect Add Modify Delete Undo Refresh

WAN Interfaces Table:

Select	Inf	Mode	NAPT	IGMP	DRoute	IP Addr	Gateway	NetMask	User Name	Status	Edit
<input checked="" type="radio"/>	WAN0	IPoE	On	Off	Off	192.168.110.224	192.168.110.1	255.255.255.0	--	up	