

## Quick Installation Guide

# XPON ONU 1200Mbps Wireless Router with 1 PON, 2 LAN (Gigabit) and with / without 1 FXS Port

DG-GR6821AC and DG-GR6821AC-NV

INDIA  
ER NO. : TEC14762301  
MODEL NO. : DG-GR6821AC  
ASSOCIATED MODEL : DG-GR6821AC-NV  
CERTIFICATE NO. : 147600341  
ISSUED DATE : 18-NOV-2024  
VALIDITY UPTO : 17-NOV-2026  
COUNTRY OF ORIGIN : INDIA  
COUNTRY OF MANUFACTURING : INDIA



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# ***Introduction***

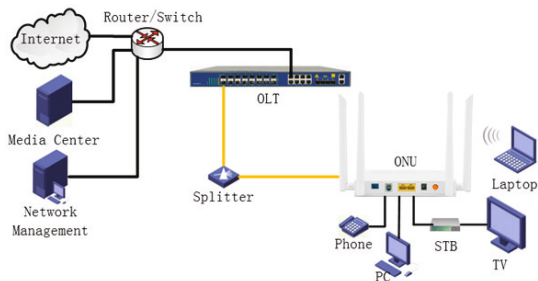
## **1:1 Product Description**

DG-GR6821AC ( 2LAN + 1 POTS + Wi-Fi) and DG-GR6821AC-NV ( 2LAN + Wi-Fi) are dual mode HGU designed for FTTH networks. These devices support both GPON and EPON technology and can switch between the two technologies automatically. It is a dual band ONU thus facilitating faster wireless performance.



**Figure 1 DG-GR6821AC and DG-GR6821AC-NV**

## **1.2 Application Chart**



**Figure 2 Application Chart**

### 1.3 Technical Parameters

Technical item	DG-GR6821AC and DG-GR6821AC-NV
PON interface	1 SC/PC GPON/EPON interface, SC single-mode/single-fiber, GPON : uplink 1.25Gbps, downlink 2.5 Gbps, EPON : symmetric : 1.25 Gbps
Wavelength	Tx1310nm,Rx 1490nm
Optical interface	SC/UPC connector
LAN interface	2 *10/100/1000Mbps auto adaptive Ethernet interfaces full/half duplex RJ45 connectors.
POTS interface	1 FXS Port (Not applicable for DG-GR6821AC-NV)
Wireless	Compliant with IEEE 802.11b/g/n (2T2R) and IEEE 802.11ac (2T2R), support MU-MIMO, 5dBi external antenna and connection speed is upto 1200Mbps.
LED indicators	9, For Status of Power, PON, LOS, WAN, LAN1, LAN2, 2.4G, 5G, Phone. (PHONE LED Not applicable for DG-GR6821AC-NV)
Operating condition	Operating Temperature : -10°C ~ 55°C Humidity : 5% to 95% (non condensing)
Storing condition	Temperature: -40°C ~ 70°C Humidity : 5% to 95% (non condensing)
Power supply	DG-GR6821AC : 12V / 1.5A external AC-DC power adaptor DG-GR6821AC-NV : 12V / 1A external AC-DC power adaptor
Dimension	178mm × 120mm × 30mm (L×W×H)
Net weight	0.32Kg

## 1.4 Package Content

Contents	Quantity
ONU	1 pc
Quick Installation Guide	1 pc
Power Adaptor	1 pc

## ***Installation***

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### **Installation Environment Requirements**

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

- Confirmation at the ONU installation at sufficient space to facilitate cooling machine.
- ONU suitable operating temperature is  $-10^{\circ}\text{C} \sim 55^{\circ}\text{C}$  and humidity of 5% to 95%
- Device workplace should avoid radio transmitters, radar stations, and high-frequency interference from power equipment.

### **Equipment Installation**

#### **1. Installed on the desktop**

Place the ONU on a clean bench, this installation is relatively simple, you can observe the following operation:

- Ensure the smooth workbench.
- Around the device enough space for heat dissipation.
- Do not place objects on the device.

#### **2. Mounted on the wall**

- Observation ONU equipment chassis two cruciform recess, in accordance with the position of the groove, installed two screws in the wall.
- The original selected two mounting screws gently snap into recesses aligned.
- Slowly let go, so that the device under the support of the screw hanging on the wall.

3. Connect fiber, network cable and power adapter to the corresponding interfaces, and turn on the power of product.

## **2.2 Panel lights**

PWR	PON	LOS		WAN	LAN1	LAN2	2.4G	5G	PHONE
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**Figure 3 Panel Lights**

LED	Mark	Status	Description
Power	PWR	On	The device is powered up.
		Off	The device is powered down.
Registration	PON	On	The device is registered to PON system.
		Off	Device is not registered to PON system.
		Blink	Device is registering.
Optical signal	LOS	Blink	Device does not receive optical signal.
		Off	Device has received optical signal.
WAN	WAN	On	WAN connection is up.
		Blink	Data passing WAN connection.
		Off	WAN connection is down.
Ethernet	LAN1 LAN2	On	Port is connected properly.
		Off	Port connection exception or not connected.
		Blink	Port is sending or/and receiving data.
Wireless	2.4G 5G	On	Wi-Fi is turned on.
		Off	Device is power off or Wi-Fi is turned off.
		Blink	Wi-Fi turned on and with ongoing data transmission.
Pots	PHONE	On	Device has registered to soft-switch, but without ongoing data transmission.
		off	Device is power off or not registered to soft-switch.
		Blink	The port is with ongoing data transmission.

**Table 1 Panel Lights**



**Figure 4 Interface/Button Panel**

Name	DG-GR6821AC
PON	Connect to OLT by SC type fiber connector, single mode optical fiber cable.
FXS	Connect the telephone with FXS port by telephone wire.
LAN1/2	Connect PC or other devices with Ethernet port by Cat5 cable, RJ-45 connector.
DC 12V	Connect with power adapter. DC 12V, 1.5A.
ON/OFF	Power supply switch.
RST	<ol style="list-style-type: none"> <li>1. Press RST button for 10 seconds, ONU restores to factory default .</li> <li>2. Press RST button for a shorter time , ONU reboots.</li> </ol>
Pair	Press down Wi-Fi pair button to begin pairing.
Wi-Fi	Press down Wi-Fi button to enable/disable Wi-Fi function.

**Table 2 Interface/ button Panel**

## Web Management

### 3.1 Default Configuration

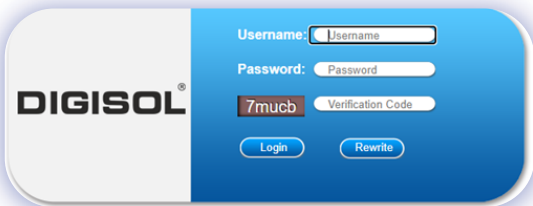
The following is default configuration information for web management.

Local ( LAN access) Username: **user**, Password: **user**

LAN port management IP address: 192.168.1.1/24

### 3.2 Basic Configuration

Fig 5. Web Login



Username:

Password:

Web Login Default username: **user**, password: **user**

Figure 6 Status

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Logout

Status

Status

Network

Security

Management

Help

Device Info

WAN Info

User Info

Voip Info

Device Basic Info

Device Info

Device model	DG-GR8821AC
Device SN	12345006D61D896AE
Hardware Version	A1
Firmware Version	V2.0.22.210706
PON S/N	GPCN00D896AE

Status page displays status of device, PON and some configuration such as WAN, LAN, WLAN, VOIP and so on.

Figure 7 LAN settings

The screenshot displays the DIGISOL web management interface. At the top, there is a navigation bar with tabs for Network, Status, Network, Security, Management, and Help. The 'Network' tab is active, and within it, the 'LAN' sub-tab is selected. On the left side, there is a sidebar menu with options for IPv4, IPv6, and IPv6 DHCP. The main content area is titled 'LAN Settings' and includes a sub-header 'Config LAN IP address and subnet mask. Click Apply Changes to take effect'. The settings are organized into a table-like structure with labels and input fields:

IP Address:	<input type="text" value="192.168.1.1"/>
Subnet Mask:	<input type="text" value="255.255.255.0"/>
Disable DHCP Server	<input type="radio"/>
Enable DHCP Server	<input checked="" type="radio"/>
Start IP Address:	<input type="text" value="192.168.1.33"/>
End IP Address:	<input type="text" value="192.168.1.254"/>
DHCP Mask:	<input type="text" value="255.255.255.0"/>
Lease Time:	<input type="text" value="One Day"/>
LAN DNS Mode	<input type="text" value="FromSP"/>
Primary IP DNS:	<input type="text" value="0.0.0.0"/>
Secondary IP DNS:	<input type="text" value="0.0.0.0"/>
Enable DHCP Server Relay	<input type="radio"/>
DHCP ServerIP :	<input type="text" value="172.19.31.4"/>

At the bottom left of the settings area, there is a link 'Web for Mobile'. At the bottom center, there is a button labeled 'Edit Reserved IP Address'.

**IP Address and Subnet Mask:** LAN port IP address and mask.

**DHCP option:** Enable or disable DHCP server and configure IP address pool , DNS, etc

Figure 8 WLAN settings

**DIGISOL®** Logout

Network Status Network Security Management Help

LAN 5G 2.4G

WLAN Basic  
WLAN Advanced  
WLAN Security  
WPS Settings

**WLAN Basic**

This page is used to configure the parameters for WLAN clients which may connect to your Access Point. Here you may change wireless encryption settings as well as wireless network parameters.

Disable WLAN Interface	<input type="checkbox"/>
Band:	5 GHz (A+N+AC) ▼
Mode:	AP ▼ <a href="#">Multiple AP</a>
SSID:	DIGISOL-5G
Cancel Broadcast:	<input type="checkbox"/>
Block Relay	<input type="checkbox"/>
WMM:	<input checked="" type="checkbox"/>
Power Enhancing:	<input type="checkbox"/>
Power Saving:	<input type="checkbox"/>
Channel Width:	80MHz ▼
Control Sideband:	Auto ▼
Channel Number:	Auto(Without DFS) ▼
Radio Power (%):	100% ▼
Associated Clients:	<a href="#">Show Active WLAN Clients</a>
Regdomain:	(14) Global ▼

[Apply Changes](#)

WLAN settings include 5G and 2.4G Wi-Fi Settings.

**WLAN Basic** displays the current configuration information. Modify these parameters to change WiFi basic features.

**Security** is used to set up encryption for each SSID

Figure 9 User Manage

The screenshot shows the DIGISOL web interface. At the top is the 'DIGISOL' logo and a 'Logout' link. Below is a navigation bar with tabs: Management, Status, Network, Security, Management, and Help. Under the 'Management' tab, there are sub-tabs for 'User Manage' and 'Device Manage'. The 'User Manage' sub-tab is active, showing a sidebar with 'User Manage' and a main content area titled 'Access Control -- Password'. The main content area contains instructions: 'The password must contain at least 6 characters.', 'The password must input Max 16 characters.', and 'The password must contain at least two of the following combinations: 0-9, a-z, A-Z, Special characters ( \_ / @ ! ~ # \$ % ^ \* ( ) = + ? )'. Below the instructions is a form with four input fields: 'Username:' (containing 'user'), 'Old Password:', 'New Password:', and 'Confirm Password:'. At the bottom of the form is an 'Apply Changes' button.

**User manage** is used to modify the password of current login user account.

Fig 10. Device Manage

The screenshot shows the DIGISOL web interface. At the top is the 'DIGISOL' logo and a 'Logout' link. Below is a navigation bar with tabs: Management, Status, Network, Security, Management, and Help. Under the 'Management' tab, there are sub-tabs for 'User Manage' and 'Device Manage'. The 'Device Manage' sub-tab is active, showing a sidebar with 'Commit/Reboot' and 'Timely Reboot'. The 'Commit/Reboot' sub-tab is active, showing a main content area titled 'Commit and Reboot'. The main content area contains the text: 'This page is used to commit changes to system memory and reboot your system.' Below the text is a form with a single input field labeled 'Commit and Reboot:' and a 'Commit and Reboot' button.

**Device Manage** is used to save configurations and reboot device.

## ***Troubleshooting***

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### **1. After powered on, all the lights are not lit?**

#### **Reasons:**

- 1) Power connection errors
- 2) Power is not normal.

#### **Solution:**

- 1) Make sure that the power cable is connected properly.
- 2) Make sure the power supply switch is turned on.

### **2. GE / FE indicators are not lit?**

#### **Reasons:**

- 1) Network cable is damaged or loose connection
- 2) Cable type error;
- 3) Long lines outside the allowable range.

#### **Solution:**

- 1) Replace the network cable, and pay attention to the standard Ethernet cable must be parallel or crossing lines.

### **3. Device stops working after a time period?**

#### **Reasons:**

- 1) Power supply is not working properly.
- 2) Equipment might be overheating.

#### **Solution:**

- 1) Check for abnormal voltage issues, too high or too low;
- 2) Check the ambient conditions, vents are normal ventilation.

#### 4. LOS LED flashes?

**Reasons:**

- 1) Fiber failure;
- 2) Central office equipment failure.

**Solution:**

- 1) Inspect fiber is connected properly, check whether connected to the proper connector or not , check whether optical power is normal.
- 2) Contact your operator.

#### 5. PON LED flashes?

**Reasons:**

- 1) Fiber optic connector is loose;
- 2) Central office equipment failure;
- 3) Fiber optic connectors are dusty.

**Solution:**

- 1) Inspect fiber is connected properly;
- 2) Clean the ferrule with Cotton ball dipped in alcohol;
- 3) Contact your operator.

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# WARRANTY

This Product is covered under DIGISOL Warranty program backed by DIGISOL Service Center. To avail this Warranty offer, customer needs to contact DIGISOL's Technical Assistance Center for the same. You may be asked to provide proof of purchase of product for warranty claim of defective product. Please refer website [www.digisol.com](http://www.digisol.com) for the detailed support terms & conditions and support process.

## Warranty Policy

1. **Hardware Warranty :** Hardware warranty period shall be limited up to Three years. External Power Adapter shall carry One year warranty only against manufacturing defects. Any repair or replacement will be rendered by DIGISOL at its Service Center only.
2. **Software Warranty :** DIGISOL issues this Limited Software Warranty that the software portion of the product ("Software") will substantially confirm to DIGISOL's then current functional specifications for the software, as set forth in the applicable documentation, from the date of original retail purchase of the Software for a period of one year ("Software Warranty period"), provided that the Software is properly installed on approved hardware and operated as contemplated in its documentation.
3. **Governing Law:** This warranty shall be governed by Indian Laws.
4. **Warranty shall subject to the terms & conditions specified in the DIGISOL Product Warranty policy displayed on [www.digisol.com](http://www.digisol.com)**
5. **To avail and activate warranty for your product.**  
Kindly register your product by calling us @1800 209 3444

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