

## AF530-TV

GEPON / ONU

### AF530-TV Series Installation Guide



JM-FIBRE AF530-TV

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## GEPON P2MP ONU

### 1 Precautions

#### **WARNING!**

**This equipment is intended for indoor applications. To prevent fire or electrical shock, or damage to the equipment, do not expose units to water or moisture.**

- Ensure adequate cooling and ventilation as specified.
- The product user manual should be read and understood before units are put into use.
- Always replace protective caps on optical connectors when not in use.
- The typical connector fitted is SC/APC 8°. **Note:** An 8° angle polished connector must be used. Blue connectors indicate SC/PC and green connectors indicate SC/APC.
- Dangerous voltages are present within the AC power adapter at all times.  
**Mains power kills.**
- Do not operate the unit without all covers and panels properly installed.

#### **Cleaning**

Use only a damp cloth for cleaning the front panel. Use a soft dry cloth to clean the top of the unit. Do not use spray cleaner of any kind.

#### **Overloading**

Overloading wall outlets and extension cords can result in a risk of fire or electric shock. Use the recommended AC power adapter with the correct power cord and plug for the region of operation.

#### **Damage requiring service**

Unplug the unit and refer servicing to JM-FIBRE qualified service personnel only.

#### **Servicing**

Do not attempt to service this unit yourself. Refer all servicing to JM-FIBRE qualified service personnel only.

#### **WARNING!**

**Exposure to class 1M laser radiation is possible. Access should be restricted to trained personnel only. Do not view exposed fiber or connector ends when handling optical equipment.**

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## 2 Installation

### 2.1 Power and Cooling Requirements

The AF530-TV requires an input of 12 Vdc, 2 A using the separately ordered AC power adapter (which is then included in the AF530-TV packaging). Ensure that the power adapter plug is correct for the region of operation.

The AF530-TV consumes < 16 W.

The AF530-TV should be located in an environment not exceeding a temperature range from -10 °C to +50 °C. If the temperature exceeds the above limits, the AF530-TV should be relocated where the ambient temperature will be less than +50 °C. Select a location with no direct sunlight or moisture ingress.

### 2.2 ONU Top Panel



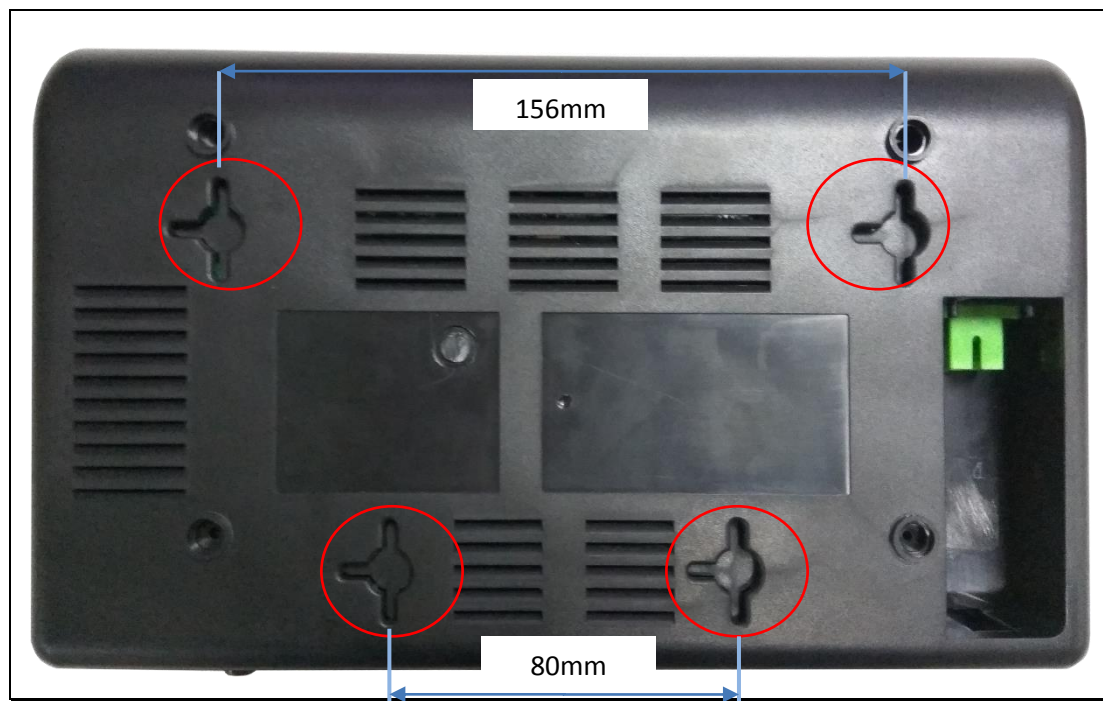
LED	Function	
Power	OFF	Power is not being supplied to the ONU
	ON	Power is being supplied to the ONU
Fiber Link	OFF	The ONU is not registered with the EPON OLT
	ON	The ONU has been registered with the EPON OLT
Los	Blinking	The ONU is not correctly registered with the EPON OLT
	OFF	The ONU is receiving optical signals
CATV	Blinking	The ONU is not receiving optical signals
	Orange	The 1550 nm optical power is less than -8 dBm
	Green	The 1550 nm optical power is within the range -8 to +2 dBm
LAN 1-4	Red	The 1550 nm optical power is greater than +2 dBm
	OFF	An Ethernet link has not been established
	ON	Green = 1000 Mbps; Orange = 100 Mbps; Yellow = 10 Mbps
Phone2	Blinking	Data transmission is in progress (at any speed)
	OFF	Phone 2 is not registered to the SIP softswitch or server
	ON	Phone 2 is registered to the SIP softswitch or server
Phone1	Blinking	Phone 2 is currently off hook or in use
	OFF	Phone 1 is not registered to the SIP softswitch or server
	ON	Phone 1 is registered to the SIP softswitch or server



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System	Blinking	Phone 1 is currently off hook or in use
	OFF	Central CPU down
	ON	System not working
WPS	Blinking	System ready
	OFF	WiFi Protected Setup not active
	Blinking	WiFi Protected Setup in progress
WiFi	OFF	WiFi not active
	ON	WiFi configured and active
	Blinking	WiFi activity detected

## 2.3 ONU Installation



### Wall-mounting the fiber tray

Remove the two securing screws and detach the fiber tray from the ONU.

You can install the fiber tray on a vertical surface by using the four mounting holes (see above) and four suitable screws. Ensure that the fiber-entry points are facing downwards, and that the tray is level.

Guide the optical fiber through the fiber tray, making use of the molded fiber holders. Leave an adequate length of fiber in the tray to enable connection to the ONU without any tight bends.

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## Connecting the optical fiber to the ONU

### Note:

The standard optical connector is SC/APC (an SC/PC connector is used only for models without CATV).

1. Remove the protective cap of the fiber.
2. Clean the end of the fiber with a specialized fiber-end cleaner.
3. Measure the power level of the optical input at 1550 nm and 1490 nm, ensuring that the level is between -8 dBm and +2 dBm for 1550 nm, and -24 dBm and -6 dBm for 1490 nm.  
**The unit can be damaged if these power levels are exceeded.**
4. Remove the protective cap from the ONU's optical (EPON) interface. See page 4.
5. Connect the fiber to the optical interface.

### When connecting, please note:

- Keep the optical connectors and the optical fiber clean.
- Ensure that there are no tight bends in the fiber and that the bending diameter is not less than **3 cm**, otherwise the optical signal loss may be increased to the extent that some signals may be unavailable.
- Cover all optical ports and connectors with protective caps to guard against dust and moisture when the fiber is not in use.



Optical Interface

### Fitting the ONU to the fiber tray

Fit the ONU onto the fiber tray, connectors facing downwards, so that the mounting lugs on the tray engage with the slots in the ONU. Take care not to damage the optical fiber when fitting the ONU.

Fit the two securing screws through the uppermost mounting lugs, to fasten the ONU to the fiber tray.

### Bench-mounting the ONU

Place the ONU on a clean, flat, sturdy bench top. Allow **10 cm** clearance around all sides of the ONU for heat dissipation.



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## Wall-mounting the ONU (without the fiber tray)

You can install the ONU on a vertical surface by using the two molded mounting holes on the underside of the ONU (see above) and two flat-headed wood screws.

- Insert the screws into the wall. The screw positions must be in the same horizontal line and at the same center distance as the mounting holes. Leave at least **6 mm** between the screw heads and the wall.
- Hang the ONU on the screws, through the mounting holes.



## Telephone connections

Connect telephone cables to RJ11 ports Phone1 and/or Phone2 as required.

## LAN connections

Connect CAT5 cables to RJ45 ports 1-4 as required.

## CATV connection

If required, connect an RF cable from the set-top box / cable TV to the CATV output, using a female F-type connector.

## Power connection

Plug the DC connector from the AC power adapter into the power socket.

Plug the AC power adapter into a nearby wall socket and switch on the ONU using the power button.

## Power-on checks

After switching on the ONU, the LED indicators should light according to the table below the ONU top panel illustration in **Section 2.2**.

In particular, check the **Fiber Link** indicator LED, which should be continuously lit. If not, check the physical optical connection and the optical levels at either end. The problem may be either too much or too little attenuation over the optical fiber.

Check all signal levels and services on all the ONU communication ports. Refer to the ONU specifications for minimum and maximum ranges.