



## OP-K0421W Triple-play EPON ONU



Triple-play EPON ONU OPTOSTAR ONU OP-K0421W (4GE+2POTS+RF+Wi-Fi) series is a FTTH bandwidth access equipment. Based on mature and stable EPON technology, triple-play epon onu has powerful functions with high stability ,sound QoS guarantee ,comprehensive management and flexible networking construction, etc . ONU OP-K0421W series is technology standard fully complies with ITU-T, IEEE and telecommunication technology standard.

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Triple-play epon onu adopts single fiber WDM technology with downlink wavelength 1490nm, uplink wavelength 1310nm .It only needs one-core fiber to transmit data service.

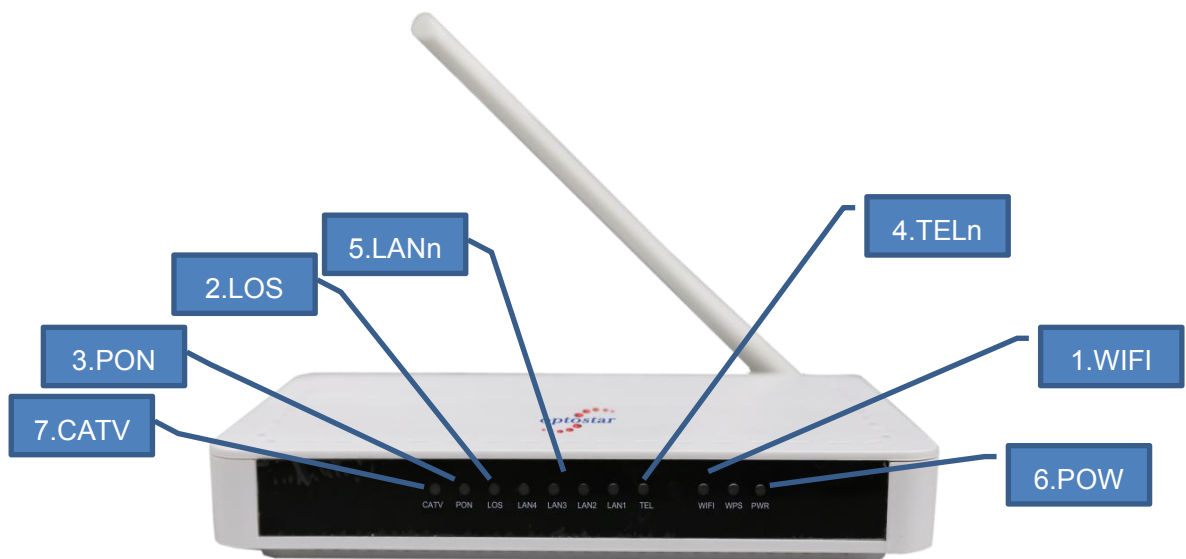
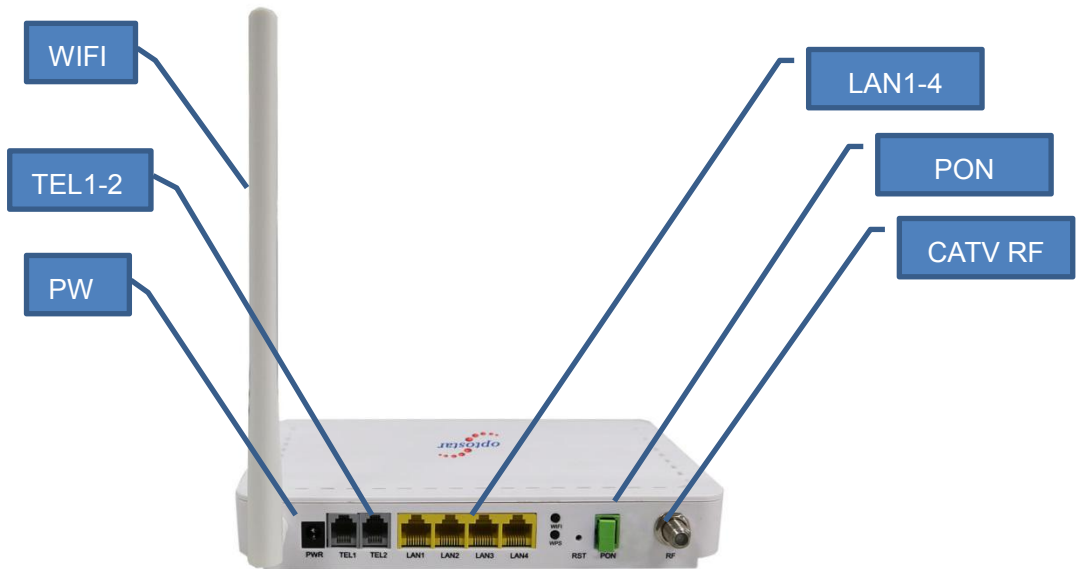
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## Features

- In compliant with IEEE802.3ah Standard and CTC2.1
- Up to 20KM transmission Distance
- Support VLAN and IGMP
- Support port isolation between different ports
- Integrated OAM remote configuration and maintenance function
- Plug and play, integrated auto detecting, auto configuration, and auto firmware upgrade technology
- EMS network management based on SNMP ,convenient for maintenance
- Full speed non-blocking switching.
- Support QinQ VLAN, 1:1 VLAN, VLAN reusing, VLAN trunk, etc.
- Integrated port monitoring, port mirroring, port rate limiting, etc.
- Support auto polarity detection of Ethernet ports (AUTO MDIX).
- Integrated IEEE802.1p QoS with four level priority queues.
- Support IPv4 IGMP snooping and IPv6 MLD snooping.
- Support SIP (compatible with IMS), H.248, MGCP three VoIP protocol, and the soft switch platform the mainstream can be good intercommunication;
- With the heartbeat function, support the main producing soft exchange platform;
- Support ITU-T G.711, G.723.1, G.729 and other three kinds of compression algorithm; echo cancellation conforming to ITU-T G.168-2002, an echo canceller for the longest 128ms;
- Support high / low speed mode transparent transmission, T38 two fax;
- Support high-speed Modem (56Kbps) dial access; support RFC2833 and redundant RFC2833, ringing, MD5 certification, call forwarding, call waiting, the hotline, alarm clock, abbreviated dialing and other value-added services;
- Support 2 POTS interface and the three party call, three party support local mixing;
- Support POTS port GR909 line test function;
- Support dynamic PPPoE, DHCP and static IP;
- 7 \* 24 hour call loss is less than or equal to 0.01%;

Interface introduction



Indicator		Description	
1	WIFI	WIFI	Blinking : Data is being transmitted On : Wi-Fi function Opens
2	LOS	EPON 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: In process of registering to OLT;
4	TELn	Telephone port status	On : The connection between the TEL port and the voice server has been set up Blinking : The voice service of the TEL port is established; Off : The connection between the TEL port and the voice server is not set up.

5	LANn	LAN port status	On: Ethernet connection is normal; Blinking: Data is being transmitted through the Ethernet port; Off: Ethernet connection is not set up;
6	PWR	Power status	On: The ONT is power on; Off: The ONT is Power off;
7	CATV	CATV status	On : CATV optical normal Off : The CATV signals are not received

**Parameter**

Item		Parameter
<b>Interface</b>	Uplink Interface	PON Interface: 1 EPON optical interface Meet 1000BASE-PX20+ standard Symmetric 1.25Gbps upstream/downstream SC single-mode fiber split ratio: 1:64 Transmission distance 20KM
	POTS Port	2*RJ11 with 3REN Max 1km distance Balanced Ring, 55V RMS
	CATV Interface	1 RF output Female F-Type Connector
	Ethernet Interface	4*10/100/1000M auto-negotiation Full/half duplex mode RJ45 connector Auto MDI/MDI-X 100m distance
	Power Interface	12V DC Power supply
<b>Performance Parameters</b>	PON Optical Parameter	Wavelength: Tx 1310nm, Rx 1490nm Tx Optical Power: 0~4dBm Rx Sensitivity: -27dBm Saturation Optical Power: -3dBm Connector Type: SC Optical Fiber: 9/125µm single-mode fiber

	Data Transmission Parameter	<p>PON Throughput: Downstream 950Mbps; Upstream 930Mbps</p> <p>Ethernet: 1000Mbps</p> <p>Packet Loss Ratio: &lt;math&gt;1 \times 10^{-12}&lt;/math&gt; latency: &lt;math&gt;&lt;1.5\text{ms}&lt;/math&gt;</p>
	Business Capability	<p>Layer 2 wire speed switching</p> <p>Support VLAN TAG/UNTAG, VLAN conversion</p> <p>Support Port-based speed limitation</p> <p>Support Priority classification</p> <p>Support storm control of broadcast</p> <p>Support link detection</p>
<b>Network Management</b>	Management Mode	<p>Support IEEE802.3 QAM, ONU can be remotely managed by OLT</p> <p>Support Remote management through SNMP and Telnet</p> <p>Local management</p>
	Management Function	<p>Status monitor, Configuration management, Alarm management, Log management</p>
<b>Physical Features</b>	Shell	<p>Plastic casing</p>
	Power	<p>External 12VDC/1A power supply adapter</p> <p>Power consumption: &lt;math&gt;&lt;9\text{W}&lt;/math&gt;</p>
	Dimension and Weight	<p>Item Dimension: 200mm(L) x 140mm(W) x 33mm (H)</p> <p>Item weight: 0.6kg</p>
	Environmental Specifications	<p>Operating temperature: 0 to 50°C</p> <p>Storage temperature: -40 to 85°C</p> <p>Operating humidity: 10% to 90%(Non-condensing)</p> <p>Storage humidity: 5% to 95%(Non-condensing)</p>

**CATV**

Item	Model		
	OP-K0421W	OP-K0421WL	OP-K0421WA
Wavelength	1100-1600nm		
Optical return loss	>45dB		
Input optical power	-15dBm~0dBm	-18dBm~-9dBm	-18dBm~0dBm
RF frequency	47MHz~1000MHz		
RF output lever	84dBuV (@-5dBm@85MHz)	81dBuV (@-10dBm@85MHz )	78dBuV (@-12~-2dBm@85MHz)
CNR	>47dB(@-5dBm@ DS22 Channel)	>41dB (@-10dBm@DS22 Channel)	
CSO	>60dBc(@-5dBm@ DS22 Channel)	>60dBc (@-10dBm@DS22 Channel)	
CTB	>60dBc(@-5dBm@ DS22 Channel)	>60dBc(@-10dBm@DS22 Channel)	
RF output return loss	>14dB	>12dB	
RF impedance	75Ohm		
AGC function	/	/	Support

**WIFI Features**

- IEEE 802.11n compliant, 2.4 GHz
- Full IEEE 802.11b/g legacy compatibility with enhanced performance
- Two-stream spatial multiplexing up to 300 Mbps PHY data rates
- Support multi-SSID (Maximum 4 SSID)
- Support automatic channel selection
- Support hide SSID
- Support wireless security of 64/128 bit WEP、802.1x、WPA and WPA2。

Item		Parameter
Performance parameters	Operating Mode	Router or bridge
	Throughput	IEEE 802.11b: 11Mbps IEEE 802.11g: 54 Mbps IEEE 802.11n: 135Mbps
	Frequency	2.412 ~ 2.472 GHz
	Channel	13*Channel, configurable to meet the standard of USA, Canada, Japan and China
	Modulation	DSSS , CCK and OFDM
	Coding	BPSK, QPSK, 16QAM and 64QAM
	RF receive sensitivity	802.11b: -82dBm @ 1 Mbps; -80dBm @ 2 Mbps; -78dBm @ 5.5 Mbps; -76dBm @ 11 Mbps 802.11g: -82dBm @ 6 Mbps; -81dBm @ 9 Mbps; -79dBm @ 12 Mbps; -77dBm @ 18 Mbps; -74dBm @ 24 Mbps; -70dBm @ 36 Mbps; -66dBm @ 48 Mbps; -65dBm @ 54 Mbps
	RF output lever	802.11b: 16.5 ±1dBm 802.11g: 13 ± 1dBm @ 54 Mbps; 14 ± 1dBm @ 48 Mbps; 15 ± 1dBm @ 6 ~ 36 Mbps 802.11n: 13 ± 1dBm @ 54 Mbps; 14 ± 1dBm @ 48 Mbps; 15 ± 1dBm @ 6 ~ 36 Mbps
Encryption Mode	802.11i security: WEP-64/128, TKIP (WPA-PSK) and AES (WPA2-PSK)	

## Application

- ✧ Solution: FTTH、FTTB、FTTO、PON+EOC
- ✧ Business: Broadband Internet、Voice、IPTV、VOD、IP Camera、WIFI

## Network Construction

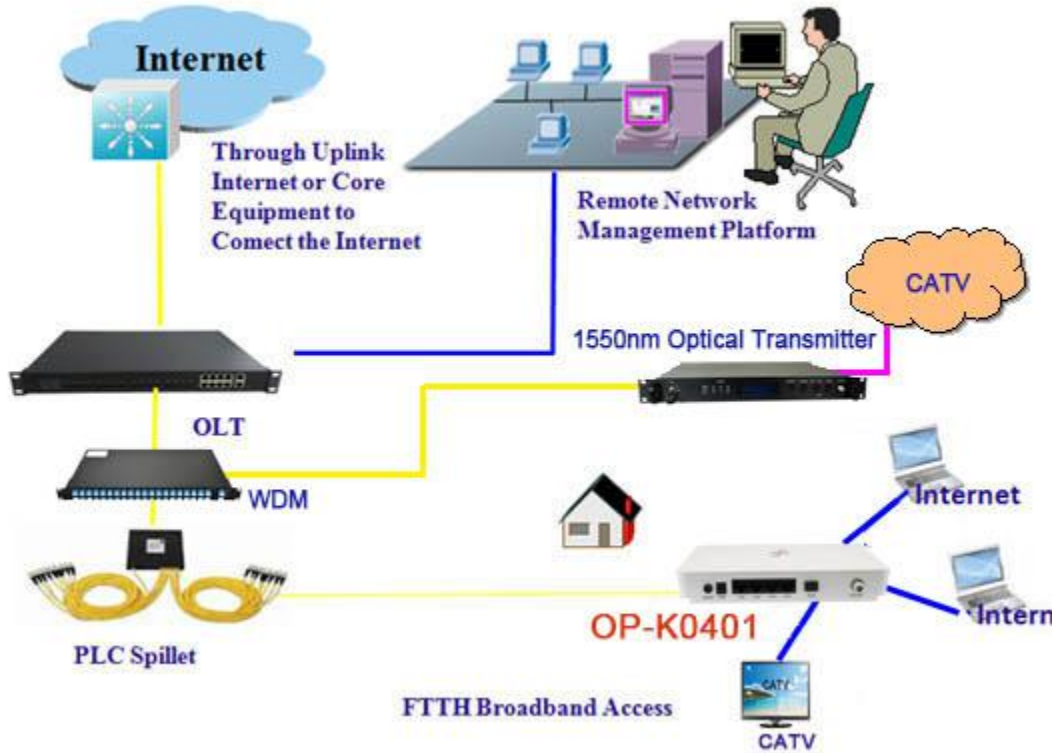


Figure: OP-K0421W Application Diagram

## Ordering Information

Product Name	Product Model	Descriptions
Triple-play EPON ONU	OP-K0421W	4*GE Ethernet interface, 2*POTS interface, 1*RF interface, 1 EPON interface, plastic casing, external power supply adapter

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