



## SPU-GE231AW-H

### 1GE+1FE+CATV+WIFI Dual-Mode ONU



#### Brief Views

SPU-GE231AW-H dual-mode ONU supports EPON and GPON two modes access. The ONU automatically switches into the corresponding PON mode by identifying the local OLT mode to complete GPON or EPON adaptive access.

SPU-GE231AW-H is fiber to the home multiple service access XPON ONT. It's based on the mature, stable, high cost performance XPON technology, gigabit Ethernet switching, WDM and HFC technology. It has a higher bandwidth, higher reliability, easy management and good quality of service (QoS) guarantee. It fully meets the ITU-T and IEEE technical standards and have good compatibility with third party OLT.

It adopts single fiber WDM technology with downlink wavelength 1550nm and 1490nm, uplink wavelength 1310nm . It only needs one-core fiber to transmit data and CATV service.

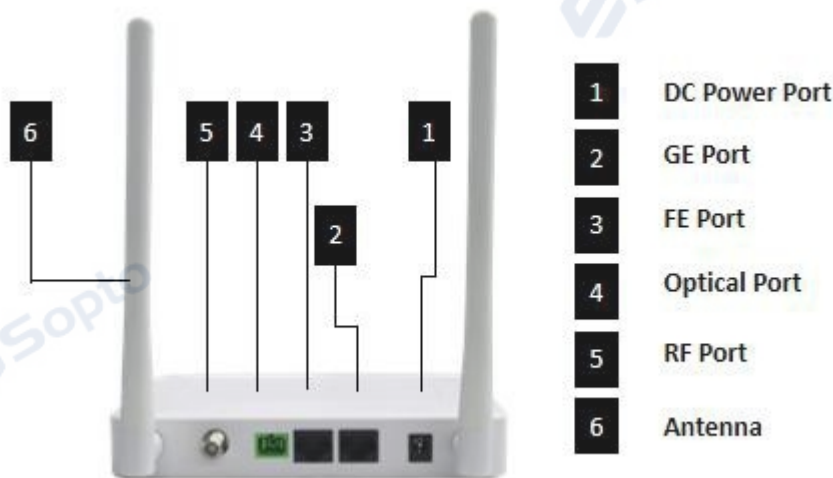
SPU-GE231AW-H integrates wireless function which meets 802.11 b/g/n technical standards. It has two external high gain omnidirectional antennas, the wireless transmission rate up to 300Mbps. It has the characteristics of strong penetrating power and wide coverage. It can provide users with more efficient data transmission security.

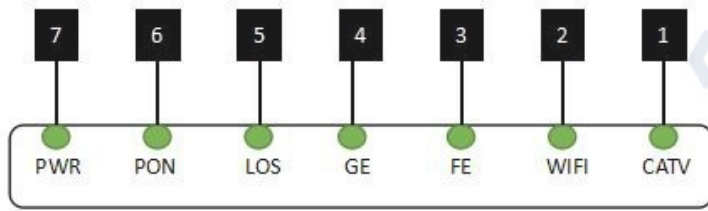
#### Features

- Single-fiber access, provides internet, CATV, WIFI multiple service
- In compliant with IEEE802.3ah and ITU - T G.984 standard

- Support ONU auto-discovery/Link detection/remote upgrade of software
- Meet 802.11 b/g/n technical standards
- Support VLAN transparent, tag configuration
- Support multicast function
- Support DHCP/Static/PPPOE internet mode
- Support port-binding
- Support OAM/OMCI+TR069 remote management
- Support data encryption and decryption function
- Support Dynamic Bandwidth Allocation (DBA)
- Support MAC filter and URL access control
- Support remote CATV port management
- Support power-off alarm function ,easy for link problem detection
- Specialized design for system breakdown prevention to maintain stable system
- EMS network management based on SNMP ,convenient for maintenance

### Product interface and LED definitions





- 1 CATV Status
- 2 WIFI Status
- 3 FE Port Status
- 4 GE Port Status
- 5 Optical Signals Status
- 6 ONU Register Status
- 7 Power Status

Indicator			Description
1	CATV	CATV status	On: CATV optical normal Off: The CATV signals are not received
2	WIFI	WIFI	Blinking: Data is being transmitted On: WIFI function Opens
3	FE	FE port status	On: Ethernet connection is normal Blinking: Data is being transmitted through the Ethernet port Off: Ethernet connection is not set up
4	GE	GE port status	On: Ethernet connection is normal Blinking: Data is being transmitted through the Ethernet port Off: Ethernet connection is not set up
5	LOS	PON optical signals	On: Optical power lower than receiver sensitivity ; Off: Optical in normal
6	PON	ONU Register	On: Success to register to OLT Blinking: In process of registering to OLT Off: Failed to register to OLT;
7	PWR	Power status	On: The ONU is power on Off: The ONU is Power off

### Specification

Item	Parameter
Interface	<p>SC/APC single mode single fiber GPON : FSAN G.984.2 standard, Class B+ EPON : 1000BASE-PX20+ symmetric GPON : 2.488Gbps/1.244Gbps downstream/upstream EPON : 1.25Gbps downstream/upstream</p> <p>Wavelength: Transmit: 1310nm Receiver: 1490nm Receiving sensitivity : GPON : -28dBm EPON : -27dBm Saturated power : GPON : -8dBm EPON : -3dBm Transmitting power : GPON : 0.5 ~ 5dBm EPON: 0 ~ 4dBm</p>

	CATV Interface	1 RF output F-Type Connector
	Ethernet Interface	1*10/100/1000M and 1*10/100M auto-negotiation Full/half duplex mode RJ45 connector Auto MDI/MDI-X 100m distance
	Power Interface	12V DC Power supply
<b>Network Management</b>	Management Mode	OMCI, OAM, TR069, WEB, Telnet
	Management Function	Status monitor, Configuration management, Alarm management, Log management
<b>Physical Features</b>	Power	<8.5W, 12V/1A power supply adapter
	Physical Specifications	Item Dimension: 160mm(L)*139.5mm(W)*28.5mm(H) Item Net Weight: about 231g
	Environmental Specifications	Operating temperature: 0 to 40°C Operating humidity: 10% to 90%(Non-condensing)

## CATV

Item	Parameter
Wavelength	1550nm
Optical return loss	>45dB
Input optical power	-18dBm~0dBm
RF frequency	47MHz~1000MHz
RF output level	78dBuV (@-12~-2dBm@85MHz)
CNR	>41dB (@-10dBm@DS22 Channel)
CSO	>60dBc (@-10dBm@DS22 Channel)
CTB	>60dBc (@-10dBm@DS22 Channel)
RF output return loss	>12dB
RF impedance	75Ω
AGC function	Support

## WIFI Specification

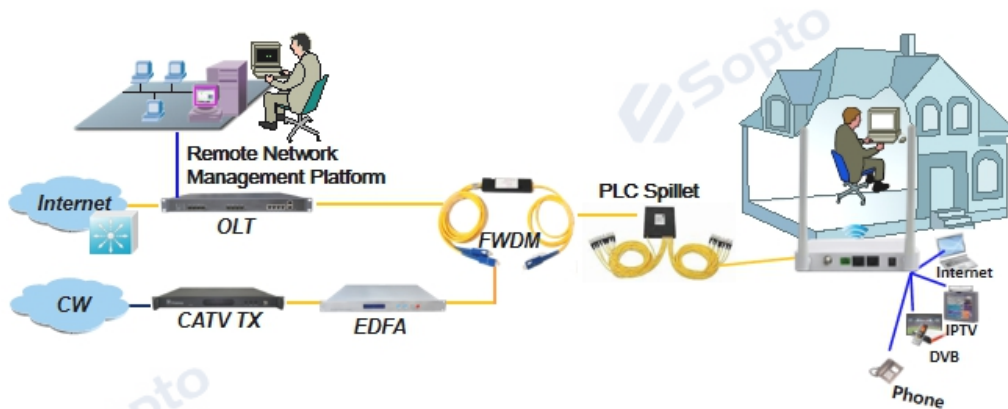
Item	Parameter	
<b>Performance parameters</b>	Operating mode	Router or bridge
	Technical standard	IEEE802.11b/g/n
	Frequency	2.412 ~ 2.472 GHz
	Antenna gain	5dBi



	Support rate	802.11b: 1, 2, 5.5, 11Mbps 802.11g: 6, 9, 12, 24, 36, 48, 54Mbps 802.11n: max rate 300Mbps
	Channel	2.4GHz Channel: 1,2,3,4,5,6,7,8,9,10,11,12,13
	Modulation mode	11b: DSSS: DBPSK(1Mbps),DQPSK(2Mbps),CCK(5.5/11Mbps) 11g: OFDM:BPSK(6/9Mbps), QPSK(12/18Mbps),16QAM(24/36Mbps) Q64QAM(48/54Mbps) 11n: MIMO-OFDM:BPSK,QPSK,16QAM,64QAM
	Receive sensitivity	11Mbps:≤-90dBm 54 Mbps:≤-76dBm HT20 MCS7:≤-73dBm HT40 MCS7:≤-70dBm
	Transmit power	802.11n: 17dBm
	Encryption mode	AES, TKIP, WPA, WPA2, WPA-PSK/WPA2-PSK

### Network application

Typical Solution: FTTH, FTTO  
Typical Business: INTERNET,CATV, WIFI



**Application Diagram**

### Ordering Information

Product Name	Part Number	Product Description
1GE+1FE+CATV+ WIFI Single fiber	SPU-GE231AW-H	G/EPON ONU 1*10/100/1000M and 1*10/100M Ethernet interface , 1 CATV Port, with 2.4GHz WIFI, with AGC

If you need more customized services, please contact us.

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