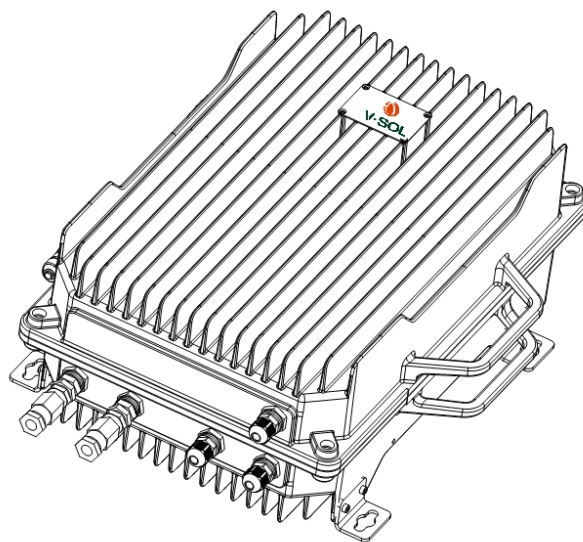


## **Outdoor 8 PON Port GPON OLT with EDFA V1600G1WEO Datasheet V2.0**



- ✓ Modular design, more flexible function expansion
- ✓ Industrial design, and it is cooled through the shell to ensure the stability of field operation
- ✓ One station deployment, quickly configuration on-line, intelligent business configuration

## 1. Introduction

Outdoor GPON OLT V-SOL V1600G1WEO is designed for outdoor using of FTTH solution, which contains 2 EDFA modules, 1 WDM module, 1 GPON OLT module, and 2 power supply modules.

V1600G1WEO is based on a new concept “V-HUB”. With modular headend devices in the outdoor housing, it can provide multi-service access, such as data and CATV. It is the new, quick and low-cost construction model for FTTx solution in bidirectional network transformation.

## 2. Product appearance features & Application topology

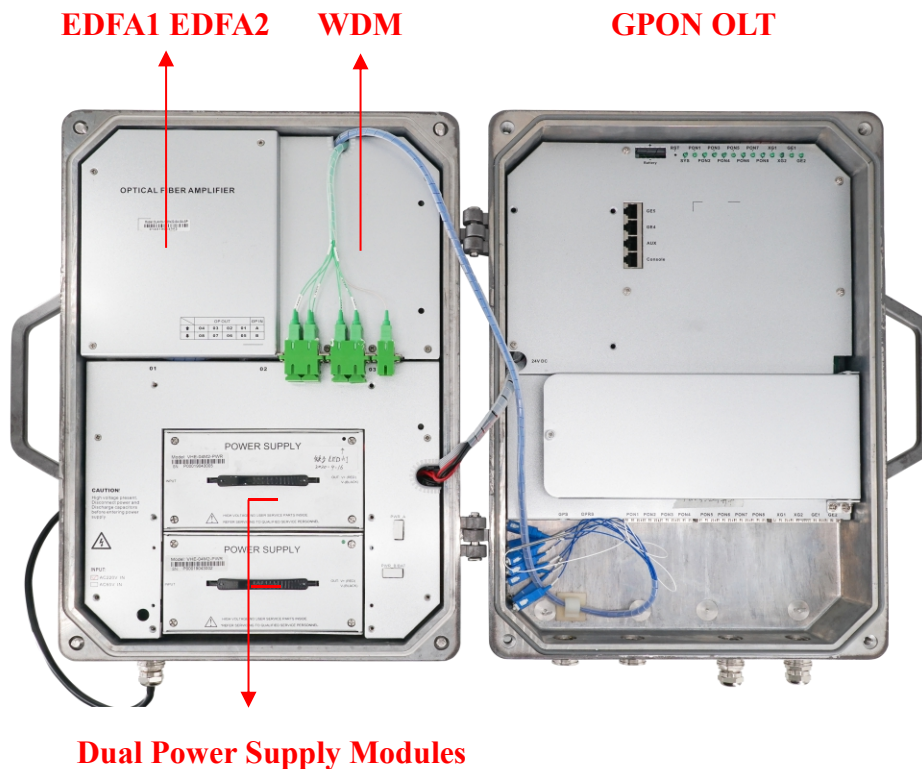


Figure2.1. Modules of V1600G1WEO

The WDM module has 8 output ports. These 8 ports are used for COM output ports.

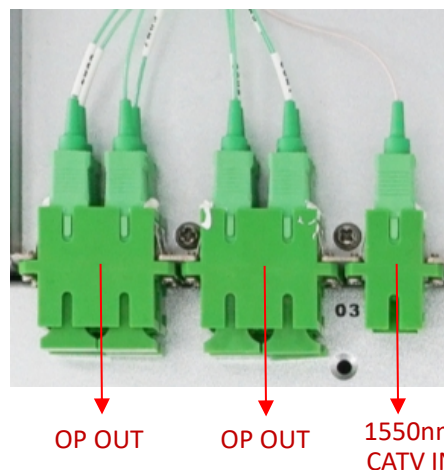


Figure2.2. Definition of the WDM Module

The definition of Output ports of the WDM module:

	OP OUT				OP IN
↑	4	3	2	1	A
↓	8	7	6	5	B

The application topology of V1600G1WEO:

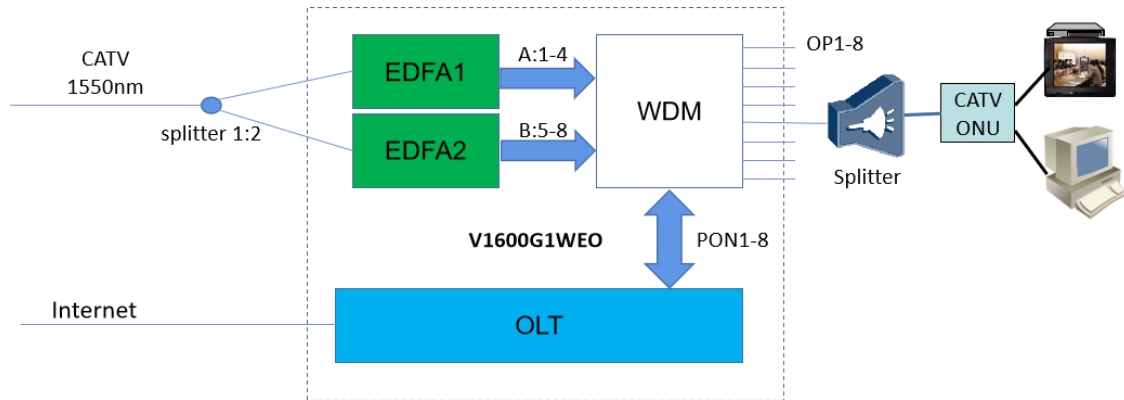


Figure2.3. Application Topology

### 3. Technical Specifications

V1600G1WEO		
GPON Part		
Item		Technical Specifications
Chassis	Rack	Aluminium Waterproof
1000M Uplink Port	QTY	5
	Copper(1GE)	1
	SFP(1GE)	2
	SFP+(10GE)	2
GPON Port	QTY	8
	Physical Interface	SFP Slots
	Connector Type	Class C+
	Max splitting ratio	1:128
Management Ports		1*10/100BASE-T out-band port, 1*CONSOLE port
PON Port Specification	Transmission Distance	20KM
	GPON port speed	Upstream 1.244Gbps Downstream 2.488Gbps
	Wave length	TX 1490nm, RX 1310nm
	Connector	SC/UPC
	Fiber Type	9/125μm SMF
	TX Power	+3~+7dBm
	Rx Sensitivity	-30dBm
	Saturation Optical Power	-12dBm
EDFA Optical amplifier module		
Item		Technical Specifications
Working wavelength		1535nm—1565nm
Input optical power	-3dBm—+10dBm(ACC Mode)	
	-6dBm—+10dBm(APC Mode)	
Output optical power		13 dBm -22dBm ( See below )
Output optical power stability		≤ ±0.25dB
Noise figure		≤5.0dB(@Input optical power is +3dBm)
Input /output reflection loss		≥45dB
Input/output pump light leakage		≤-30dBm
C/CTB		≥63dB
C/CSO		≥62dB
C/N		≥50dB
EDFA input optical power is 3dBm,and the optical link composed of optical transmitter and receiver is tested.		

Other specifications		
Item	Technical Specifications	
V1600G1WEO-PWR	AC:90~264V, 47/63Hz, 24V DC output, With overload protection, overvoltage protection, short circuit protection, overheating protection, delay start and other perfect protection functions Support Redundant Power	
V1600G1WEO-BAT	With charge and discharge management, short circuit, overload, overvoltage, over temperature protection and other perfect protection functions. Provide emergency power supply for equipment in case of external power interruption.	
Power Supply	AC220V	
Power Consumption	≤ 80W	
Operating Environment	Working Temperature	-40~+70℃
	Storage Temperature	-40~+80℃
	Relative Humidity	5~90%(non-conditioning)
Weight	10kg	
Dimension(L*W*H)	450*315*186mm	

Note : The link index test shall not be less than 25km. Optical fiber loss + optical attenuator, optical receiving module - 1dbm input, 59 channels PAL-D TV signal + 300MHz data.

#### GPON OLT Software Function

Item	Specifications
O&M	SNMP,Telnet,CLI,WEB,SSH v1/v2
Management Function	Port Status monitoring and configuration management; Online ONT configuration and management; User management; Alarm management;
Layer2 Switch	16K Mac address; Support 4096 VLANs; Support port VLAN and protocol VLAN; Support VLAN tag/Un-tag ,VLAN transparent transmission; Support VLAN translation and QinQ; Support storm control based on port; Support port isolation; Support port rate limitation; Support 802.1D and 802.1W; Support static LACP,Dynamic LACP; QoS based on port, VID, TOS and MAC address; Access control list; IEEE802.x flow control; Port stability statistic and monitoring;
Multicast	IGMP snooping; 256 IP Multicast Groups;
DHCP	DHCP server,DHCP relay,DHCP snooping;

	DHCP option82;
GPON Function	<p>Tcont DBA;</p> <p>Gemport traffic;</p> <p>In compliant with ITUT984.x standard;</p> <p>Up to 20KM transmission Distance;</p> <p>Support data encryption, multi-cast, port VLAN, separation, RSTP, etc;</p> <p>Support ONT auto-discovery/link detection/remote upgrade of software;</p> <p>Support VLAN division and user separation to avoid broadcast storm;</p> <p>Support power-off alarm function, easy for link problem detection;</p> <p>Support broadcasting storm resistance function;</p> <p>Support port isolation between different ports;</p> <p>Support ACL and SNMP to configure data packet filter flexibly;</p> <p>Specialized design for system breakdown prevention to maintain stable system;</p> <p>Support RSTP,IGMP Proxy;</p>
Layer 3 Route	<p>ARP proxy,1024 hardware Host Routes,512 hardware Subnet Routes;</p> <p>Support 802.1X,Radius,Tacacs+;</p> <p>Support IP source guard;</p> <p>Support static route;</p> <p>Dynamic route RIP v1/v2,RIPng;</p> <p>Support OSPF v2/v3;</p>
Support IPv6	<p>Support NDP;</p> <p>Support IPv6 Ping、IPv6 Telnet、IPv6 routing;</p> <p>Support ACL based on source IPv6 address, destination IPv6 address, L4 port, protocol type, etc;</p> <p>Support MLD v1/v2 snooping(Multicast Listener Discovery snooping);</p>

Software Function		
License Management	ONT limit	Limit the number of ONT registration, 64-1024, step 64. When the number of ONT reach the max number permit, add new ONT to system will be refused.
	Time limit	Limit system used time, 31days. Equipment trial license, after 31days of running time, all ONTs be set offline.
PON mac table	A MAC table of PON, including MAC address, VLAN id, PON id, ONT id, gemport id for easier services checking, troubleshooting.	
ONU management	Profile	Including ONT, DBA, TRAFFIC, LINE, SERVICE, ALARM, PRIVATE profiles. All ONT features can be configured by profiles.
	Auto learn	ONT automatically discovery, register, online.
	Auto configure	All features can be automatically configured by profiles when ONT auto online—plug and play.
	Auto upgrade	The ONT firmware can be auto upgraded. Download ONT firmware to OLT from web/tftp/ftp.
	Remote config	The powerful private OMCI protocol provides remote



		HGU configuration including WAN, WiFi, POTS, etc.
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#### V1600G1WEO: LED information

LED	ON	Blink	OFF
SYS	Device is starting	Device is running normal	Device is running abnormal
PON1~PON8	ONT is registered to the PON system	—	ONT is not registered to the PON system or ONU do not connect to OLT
GE1~GE2(SFP)	The device is connected to the port	The device is ongoing data transmission	The device is not connected to the port
XG1/XG2(SFP+)	The device is connected to the port	The device is ongoing data transmission	The device is not connected to the port
Ethernet (green-ACT)	—	Port is sending or/and receiving data	—
Ethernet (yellow-Link)	The device is connected to the port	—	The device is not connected to the port

## 5.V1600G1WEO system application

