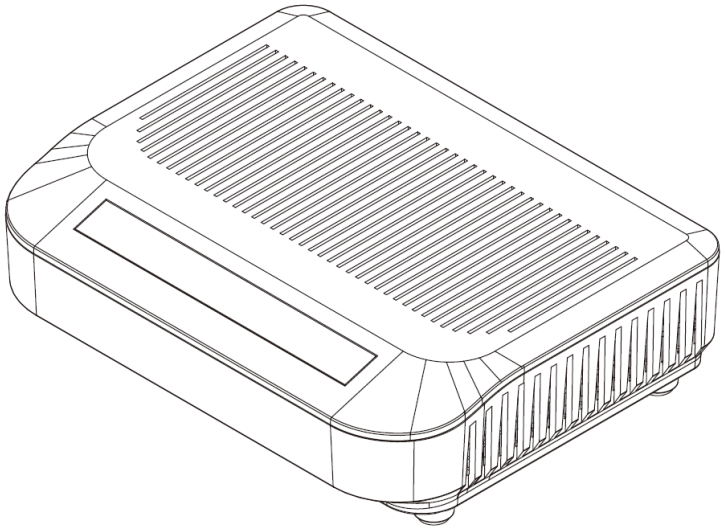


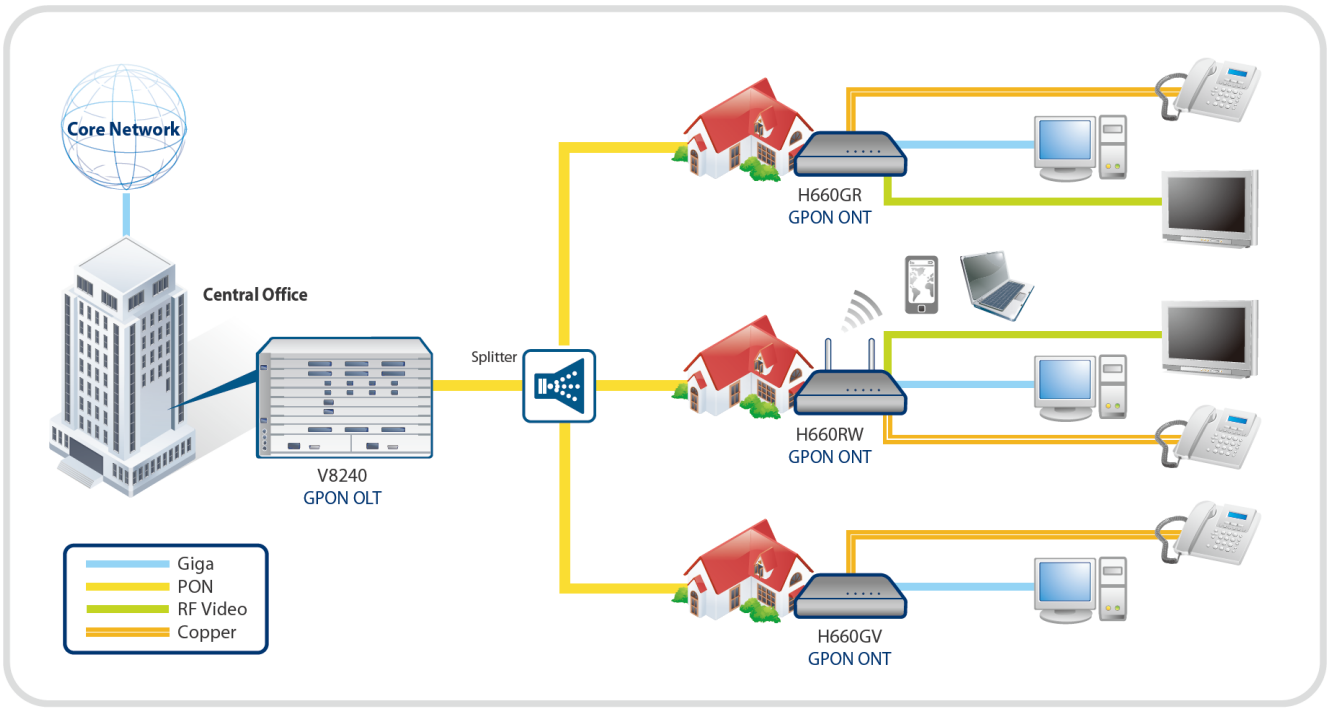
Product Overview

DASAN Networks' H660GV optical network terminal is targeted for all subscribers requiring multiple POTS and high-speed data interfaces in a cost-effective indoor housing. Fully compliant with ITU-T G.984 standards, the H660GV supports data rates of 1.25Gbps upstream and 2.5Gbps downstream. With DASAN's leading-edge GPON technology, users can enjoy bandwidth-intensive multimedia services such as real-time audio, video and gaming much easier and faster than ever before.

The H660GV provides one GPON uplink port, four Gigabit Ethernet (10/100/1000Base-T) ports, and two FXS voice ports that enhance the ability to deliver demanding data/VoIP services. The H660GV uses Session Initiation Protocol (SIP) to terminate VoIP calls so that in-home wiring does not change and standard telephone sets may be used. The H660GV supports the full triple play of services including voice, video and high-speed Internet access services.

The H660GV contains both built-in wire-speed L2 switch and L3 routing gateway with port forwarding, NAT and NAPT address translation, PPPoE client support for high speed Internet service.

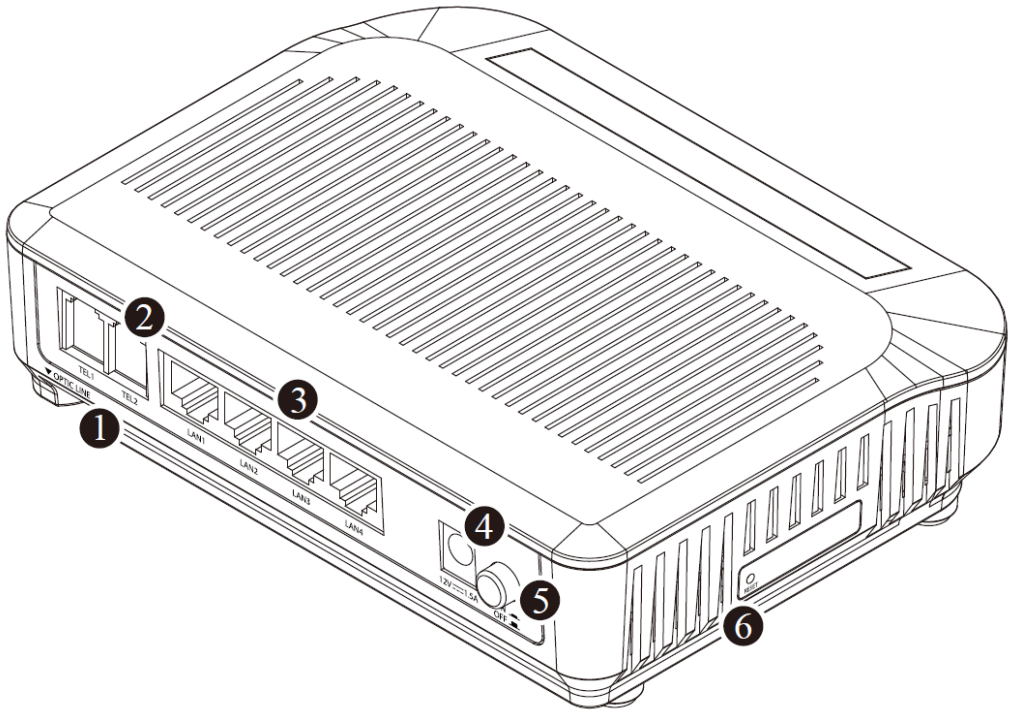
Service Scenario for PON



A PON consists of an Optical Line Termination (OLT) located at the Central Office and a set of Multi Dwelling Units (MDUs) or Optical Network Terminals (ONTs) located at the customer's premises. Between them is the optical distribution network (ODN) comprised of fibers and passive optical splitters or couplers. A splitter is a device that divides an optical signal into two or more signals. The OLT connects the PON to the IP network that controls and manages the PON clients. An MDU (ONT) connects the user-specific network to the PON. The ONT can be utilized by a single subscriber or used as a multi-dwelling gateway for a local network.

Interface Layout

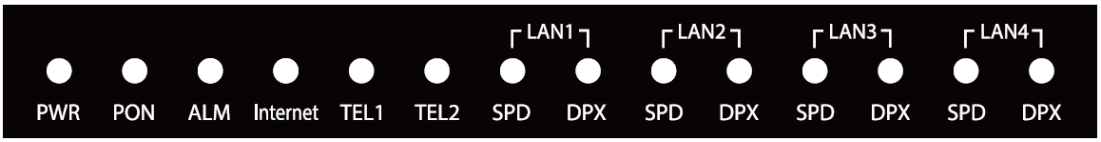
The following drawing shows the interface layout of the product.



Interface Name	Description	Connector Type
① Optical Line	Connect to OLT via a passive optical splitter 1 GPON uplink interface	SC/APC
② TEL 1-2	Connect to VoIP phone 2 FXS interfaces for phone service	RJ11
③ LAN 1-4	Connect to PC or LAN 4 10/100/1000Base-T interfaces for data communication	RJ45
④ Power port	Connect an external power supply	-
⑤ ON/OFF button	Turn on/off the unit	-
⑥ RESET button	Reboot the unit	-

Operating Status LEDs

The status of the ONT is indicated by the LEDs located on the front of unit. LED indicators illuminate to show normal ONT operation, and will blink and/or turn off to indicate the current status or errors. Refer to the following table for details of each LED state.



Label		Color	Status	Description
PWR		Green	On	The system is turned on.
			Off	The system is turned off.
PON		Red	On	No optic signal. And the unit has not been registered.
		Green	On	Optic signal normal. Normally registered.
			Blinking	Firmware being downloaded. Do NOT turn off the unit.
		Orange	On	No optic signal after registered normally.
			Blinking	The unit has not been registered.
ALM		Red	On	No optic signal, firmware update failure or other faults.
			Blinking	Error rate high. Required to check optic cable routing or vending.
		Orange	Blinking	Loopback test being performed.
		Off		ONT normally operating.
Internet		Green	On	Configuration is finished.
			Off	Configuration is not finished.
TEL 1-2		Green	On	Hook off
			Off	Hook on
LAN 1-4	SPD	Green	On	The 1G port link is up.
			Blinking	The 1G transmit or receive activity is present on the service port.
		Orange	On	The 100M port link is up.
			Blinking	The 100M transmit or receive activity is present on the service port.
		Red	On	The 10M port link is up.
			Blinking	The 10M transmit or receive activity is present on the service port.
		Off		The link is down.
	DPX	Green	On	Full duplex
		Orange	On	Half duplex
		Off		The link is down.

Product Specifications

Capabilities

System

- 128MB Flash Memory
- 128MB SDRAM
- GPON Interface Capacity:
  Up 1.25Gbps / Down 2.5Gbps

GPON ONT

- ITU-T G.984.x compliant
- Forward Error Correction (FEC)
- Multiple T-CONTs/GEM ports per device
- Flexible mapping between GEM port and T-CONT
- Priority queues and scheduling on Upstream
- Activation with automatic discovered Serial Number and password
- Dying Gasp

L2 Switch

- Untagged port configuration
- IEEE802.1D and IEEE802.1Q bridging
- Standard Ethernet bridging
- Spanning tree protocol
- MAC address learning with auto aging (Up to 4K MAC addresses)

Multicast

- IGMP snooping

Quality of Service

- HW-based internal IEEE 802.1p (CoS)
- Strict Priority (SP)
- 802.1Q (VLAN tag) QoS mapping, ToS/CoS
- 8 queues per port

Management

- ITU_T 984.4 compliant OMCI interface
- IEEE802.3x flow control
- LED indications for maintenance
- Web-based management
- ONT service provisioning (on the OLT-side)

VLAN

- VLAN port filtering
- Destination address port filtering

VoIP Features

- SIP (RFC3261/3262/3264)
- 5-REN per POTS
- RTP, RTCP (RFC3550/3551)
- DTMF dialing / Pulse dialing
- Multiple codecs: G.711, G.723.1, G729
- T.38 FAX mode
- Echo cancellation

Residential Gateway Unit Features (L3 Routing mode)

- PPPoE client: multiple clients per RG ONT, Automatically initiating the session, Automatically keep alive
- DHCP server / client
- DNS Relay server (DNS relay, DNS transparent)
- NAT and NAPT
- NAT session up to 16K
- Port forwarding
- Integrated stateful packet inspection firewall with ACL

Physical Specifications

Mechanics

- Dimensions (W x H x D)
  6.30 x 1.75 x 4.92 in
  (160 x 44.5 x 125 mm)

Environmental Conditions

- Operating temperature
  23 to 122°F (-5 to 50°C)
- Storage temperature
  -22 to 140°F (-30 to 60°C)
- Operating humidity
  20 to 90% (non-condensing)

Power Voltage (AC/DC Adapter)

- Input: 100-240VAC, 50/60Hz
- Output: 12VDC/1.5A

Interface Parameter

- GPON i/f
  1 GPON port (SC/APC type)
- Gigabit Ethernet i/f
  4 10/100/1000Base-T ports
  (RJ45)
- FXS i/f
  2 FXS ports (RJ11)

Operating Indicators (LED)

- PWR ON / OFF
  Power status
- PON ON / Blinking / OFF
  ONT registration status
- ALM Blinking / OFF
  Optical signal status
- Internet ON / OFF
  Configuration status
- TEL ON / OFF
  Off/On-hook status
- LAN ON / Blinking / OFF
  LAN port link status
  activity status

Ordering Information

Base Standard
H660GV G-PON (Class B+, ITU-T G.984), 4-Port 10/100/1000Base-T, 2-Port POTS - Flash 128 MB and SDRAM 128 MB - SC/APC Connector type - Power Adaptor : Input 100~240VAC, Output 12V/1.5A - CE Certification - Overseas specification

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