# Product Overview

The H645G is Optical Network Terminal (ONT) compliant with ITU-T G.984 standard. DASAN Networks has developed H645G for all clients on the basis of Gigabit Passive Optical Network (GPON) technology. GPON technology supports upstream 1.25Gbps and downstream 2.5Gbps data transmission rate. With DASAN's leading-edge GPON technology, users can enjoy bandwidth-consuming multimedia services such as real-time video, audio and gaming much easier and faster than ever before.

The H645G is comprised of one GPON uplink and Gigabit Ethernet downlink supporting 10/100/1000Base-T (RJ45). It helps service providers to extend their core optical network all the way to their subscribers, eliminating bandwidth bottlenecks in the last mile. With the GbE service interface, it delivers data at the speed of 1000Mbps to the connected subscriber equipment. The H645G utilizes technology for intelligent IP-based access allowing reliability of network deployment models and management system.

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.
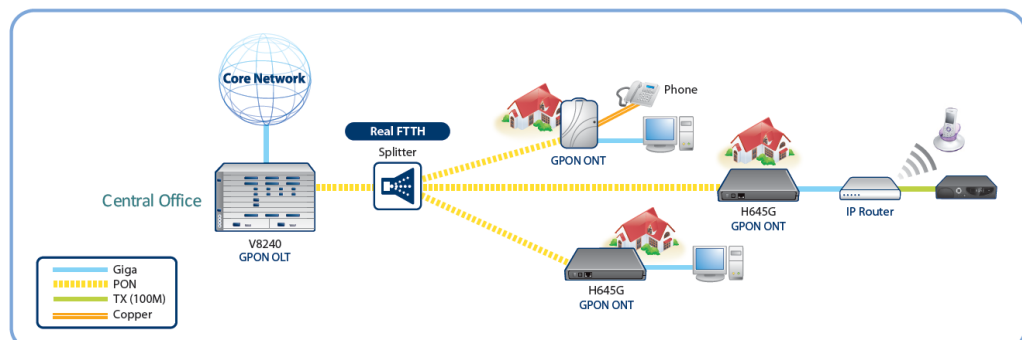
Interface Layout

The following diagram shows the interface layout of the product.
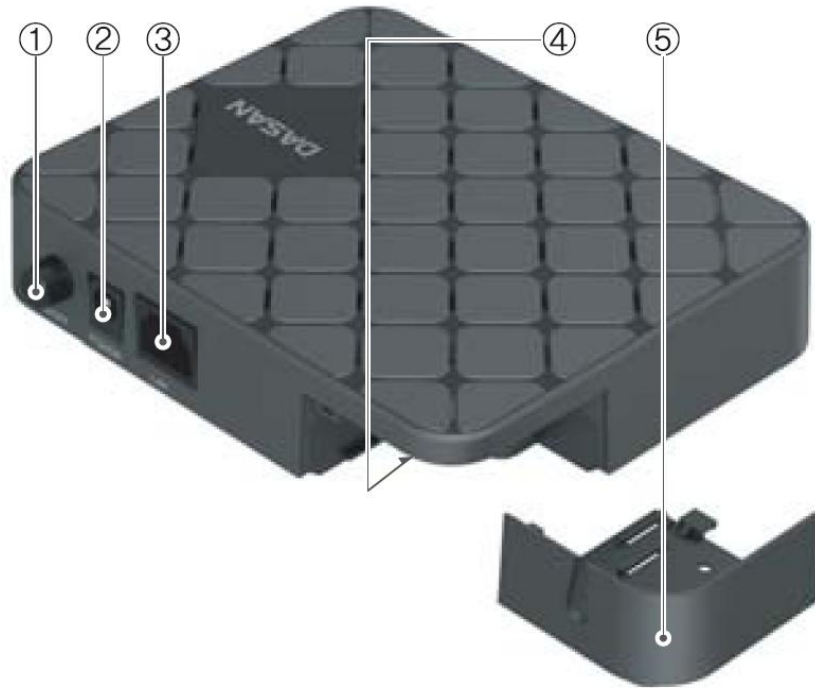
The following table describes each interface as indicated in the diagram above.

Interface Name	Description	Connector Type
① Power ON/OFF Button	To turn on/off the unit	-
② Adapter Jack	To connect the external power supply	-
③ LAN	To connect to the PC or LAN 1 10/100/1000Base-T interface for data communication	RJ45
④ Uplink port	To connect to OLT via a passive optical splitter 1 GPON uplink interface	SC/APC
⑤ Laser Lock Door	To protect optic connection	-

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.
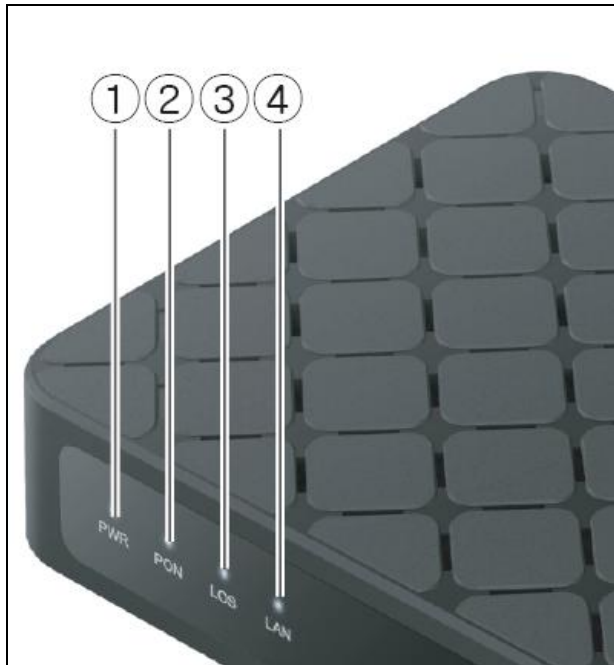
Label	Color	Status	Description
① PWR	Green	On	The system is starting up to boot and operation.
		Off	The system is turned off.
② PON	Green	On	Register OK. The PON port link is up.
		Blinking	Register in progress.
		Off	Not register. The PON port link is down.
③ LOS	Red	On	ONT optical module power off.
		Blinking	ONT receives the low optical power.
		Off	ONT receives the normal optical power.
④ LAN	Green	On	1Gbps link is up.
		Blinking	A transmit or receive activity of 1Gbps is present on the port.
		Off	1Gbps link is down.
	Amber	On	10/100Mbps link is up.
		Blinking	A transmit or receive activity of 10/100Mbps is present on the port.
		Off	10/100Mbps link is down.

Product Specifications

Capabilities

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

L2 Switch

- Untagged port configuration
- IEEE802.1D and IEEE802.1Q bridging
- Standard Ethernet bridging
- Spanning tree protocol
- Address learning with auto aging

Multicast

- IGMP snooping

Quality of Service

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

Management

- ITU_T 984.4 compliant OMCI interface
- IEEE802.3x flow control
- LED indications for maintenance

VLAN

- VLAN port filtering
- Destination address port filtering
- Source MAC address learning

Physical Specifications

Mechanics

- Dimensions (W x H x D)
  4.80 x 1.09 x 3.93 in (122 x 27.9 x 100 mm)

Environmental Conditions

- Operating temperature
  32 to 122°F (0 to 50°C)
- Operating humidity
  0 to 90% (non-condensing)

Power Voltage (Adapter)

- Input: 100-240VAC, 50/60Hz
- Output: 12VDC/0.5A

Interface Parameter

- GPON i/f
  1 GPON (2x10 SC/APC SFF type)
- Gigabit Ethernet i/f
  1 10/100/1000Base-T (RJ45)

Operating Indicators

- PWR: ON / OFF, power
- PON: ON / OFF, ONT registration status
- LOS   ON / Blinking / OFF, optical power status
- LAN   ON / Blinking / OFF LAN port link status activity status

Ordering Information

Base Standard
H645G
1-Port G-PON (Class B+, ITU-T G.984), 1-Port 10/100/1000Base-T, 128MB SDRAM, and 128MB NAND Flash. 12V/1A AC power adapter. (PON MAC Chip: Broadlight, Module : Coretek)
- NOS : Dual OS
- ONT for 20km distance
- SC/APC connector type
- Routed mode (PPPoE/NAT)
- CE Certified

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