Product Overview

DASAN Networks’ H662GR optical network terminal is targeted for all subscribers requiring multiple POTS, RF interface and high-speed data interfaces in a cost-effective indoor housing. Fully compliant with ITU-T G.984 standards, the H662GR 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 H662GR provides one GPON uplink port, two Gigabit Ethernet (10/100/1000Base-T) ports, one RF out interface and one FXS voice port that enhance the ability to deliver demanding data/video/VoIP services. The H662GR 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 H662GR supports the full triple play of services including voice, video and high-speed Internet access services.

The H662GR 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.
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.

<table>
<thead>
<tr>
<th>Interface Name</th>
<th>Description</th>
<th>Connector Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>① RESET button</td>
<td>Reboot the unit</td>
<td>-</td>
</tr>
<tr>
<td>② ON/OFF button</td>
<td>Turn on/off the unit</td>
<td>-</td>
</tr>
<tr>
<td>③ Adaptor Jack</td>
<td>Connect an external power supply</td>
<td>-</td>
</tr>
<tr>
<td>④ OPTIC LINE</td>
<td>Connect to OLT via a passive optical splitter 1 GPON uplink interface</td>
<td>SC/APC</td>
</tr>
<tr>
<td>⑤ LAN 1-2</td>
<td>Connect to PC or LAN 2 10/100/1000Base-T interfaces for data communication</td>
<td>RJ45</td>
</tr>
<tr>
<td>⑥ TEL</td>
<td>Connect to VoIP phone 1 FXS interface for phone service</td>
<td>RJ11</td>
</tr>
<tr>
<td>⑦ CATV</td>
<td>Connect to TV</td>
<td>F-connector</td>
</tr>
</tbody>
</table>
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.

<table>
<thead>
<tr>
<th>Label</th>
<th>Color</th>
<th>Status</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>PWR</td>
<td>Green</td>
<td>On</td>
<td>The device is receiving Power and working properly.</td>
</tr>
<tr>
<td></td>
<td>Red</td>
<td>On</td>
<td>The Power to the device is too low.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Off</td>
<td>The device does not receive Power.</td>
</tr>
<tr>
<td>Boot</td>
<td>Green</td>
<td>On</td>
<td>The device is functioning properly.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Blinking</td>
<td>The device is booting.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Off</td>
<td>The device is not ready or malfunctioned.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Blinking</td>
<td>Firmware being downloaded.</td>
</tr>
<tr>
<td></td>
<td>Red</td>
<td>On</td>
<td>No optic signal, and the unit has not been registered.</td>
</tr>
<tr>
<td>ALM</td>
<td>Red</td>
<td>On</td>
<td>No optic signal, firmware update failure or other faults.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Off</td>
<td>Received optical power is normal.</td>
</tr>
<tr>
<td>Internet</td>
<td>Green</td>
<td>On</td>
<td>The device has a PPPoA/PPPoE connection</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Off</td>
<td>The device does not have connection.</td>
</tr>
<tr>
<td>TEL</td>
<td>Green</td>
<td>On</td>
<td>The device has successful voice connection.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Blinking</td>
<td>The device is using voice service.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Off</td>
<td>The voice connection fail.</td>
</tr>
<tr>
<td>LAN 1-2</td>
<td>Green</td>
<td>On</td>
<td>The port link is up.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Blinking</td>
<td>Port is sending or receiving data.</td>
</tr>
<tr>
<td>CATV</td>
<td>Green</td>
<td>On</td>
<td>The CATV is functioning properly.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Off</td>
<td>The CATV is not ready or malfunctioned.</td>
</tr>
</tbody>
</table>
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/L3
- Untagged port configuration
- IEEE802.1D and IEEE802.1Q bridging
- Standard Ethernet bridging
- MAC address learning with auto aging (Up to 4K MAC addresses)
- 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
- Port forwarding
- Integrated stateful packet inspection firewall with ACL

Multicast
- IGMP snooping
- IGMP proxy

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)

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, G.729
- T.38 FAX mode
- Echo cancellation

Video (RF) Receiver Feature
- Standard F-Type connector
- RF Frequency Range: 47~1,000MHz
- Analog RF video over dedicated 1550nm wavelength
- RF Output Level AGC Adjustment
- RF enabled/disabled by OMCI and NMS
- AGC setting by OMCI and NMS
- Remote monitoring for RF status
Physical Specifications

Mechanics
- Dimensions (W x H x D)
  7.5 x 1.6 x 5.9 in
  (190 x 40 x 150 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/2A

Interface Parameter
- GPON i/f
  1 GPON port (SC/APC type)
- Gigabit Ethernet i/f
  2 10/100/1000Base-T ports
    (RJ45)
- FXS i/f
  1 FXS port (RJ11)
- Video i/f
  1 RF Video port (F-connector, coax)

Operating Indicators (LED)
- PWR ON / OFF
  Power status
- Boot ON / Blinking / OFF
  Booting status
- PON ON / Blinking
  ONT registration status
- ALM ON / 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
- CATV ON / OFF
  RF power status
## Ordering Information

<table>
<thead>
<tr>
<th>Base Standard</th>
</tr>
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<tbody>
<tr>
<td><strong>H662GR</strong></td>
</tr>
<tr>
<td>G-PON (Class B+, ITU-T G.984), 2-Port 10/100/1000Base-T, POTS, CATV</td>
</tr>
<tr>
<td>- PON MAC: Broadcom, Flash 128MB and SDRAM 128MB</td>
</tr>
<tr>
<td>- SC/APC Connector type</td>
</tr>
<tr>
<td>- Power Voltage: Input 100–240VAC, Output 12V/2A</td>
</tr>
<tr>
<td>- CE Certification</td>
</tr>
</tbody>
</table>

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**DASAN Network Solutions, Inc.**

DASAN Tower, 49, Daewangpangyo-ro644Beon-gil, Bundang-gu, Seongnam-si, Gyeonggi-do, 463-400, KOREA
Tel. +82-70-7010-1000  Fax. +82-31-622-6501  www.dasannetworks.com