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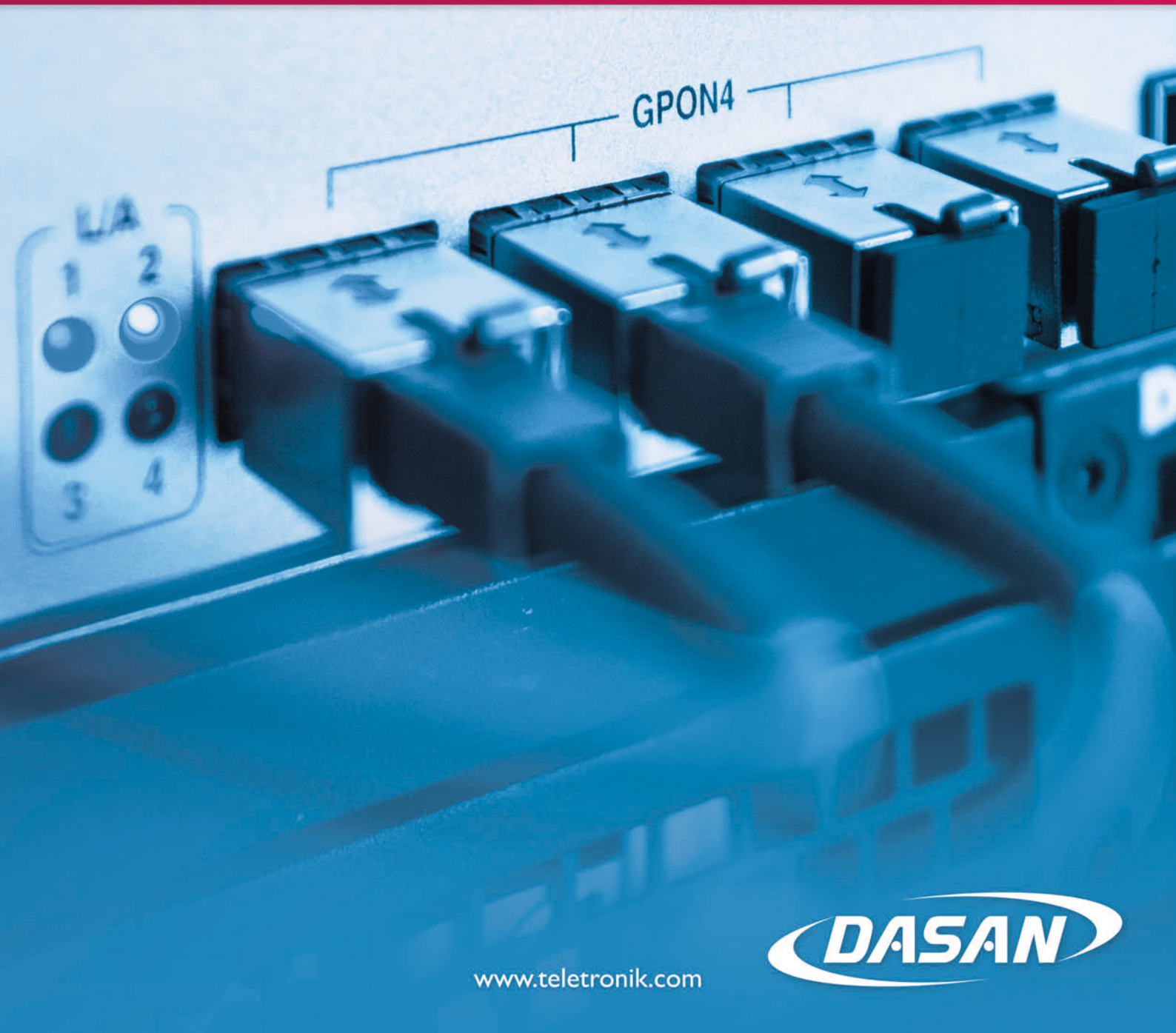
## GPON EQUIPMENT

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DASAN

Connecting with the wonders,

# FTTH Solution

- FTTH: Top 10 Player in the World
- G/E-PON : No. 1 Player in Korea

DASAN Networks FTTH solution is designed for service providers to deliver ideal solution to fulfill the customers' growing demand. Our Passive Optical Network (PON) products can be used for different possible FTTH deployments to simplify network structure and reduce costs. G/E-PON solution introduces a point-to-multipoint technology that Optical Line Terminal (OLT) locates at the central office connecting several Optical Network Terminals (ONTs) or Multi Dwelling Units (MDUs) at the customer's premises via the passive optical splitter.

GPON Optical Network Terminal is a subscriber unit with optical port (usually with SC/APC connector) and several interfaces (such as Gigabit Ethernet, FXS, WiFi, „F" for CATV), depending on model. ONT is the last device in GPON network, installed in subscriber's apartment. This is an active device (requires power supply), usually to use inside buildings and is fed from subscriber's socket.

| H66X | H665 | H665GR | H662GR | H660G | H660GM | H660RW | H660RM |
|---|---|---|---|---|---|---|---|
| **LAN Port** | 1x10/100/1000 | 1x10/100/1000 | 2x10/100/1000 | 4x10/100/1000 | 4x10/100/1000 | 4x10/100/1000 | 4x10/100/1000 |
| **POTS VoIP Port** | N/A | N/A | 1xFXS | N/A | 1xFXS | 2xFXS | 2xFXS |
| **WiFi 2.4 Ghz** | N/A | N/A | N/A | N/A | 2x2 b/g/n 300Mb/s | 2x2 b/g/n 300Mb/s | 2x2 b/g/n 300Mb/s |
| **WiFi 5 Ghz** | N/A | N/A | N/A | N/A | 2x2 MIMO 867Mbps w 802.11ac | N/A | 2x2 802.11ac |
| **"F" port CATV** | N/A | ✓ | ✓ | N/A | N/A | ✓ | ✓ |
| **USB** | N/A | N/A | N/A | N/A | ✓ | N/A | N/A |
| **Router/NAT** | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |

# V5808

GPON OLT

## Overview

As the number of services using internet communication such as broadband internet, internet phone, and IPTV is increasing, the need for high performance network equipment is increasing. This is not an exception in areas where population density is low and where there are few subscribers. You can plan more effectively in terms of the cost of network deployment.

The V5808 is a compact GPON OLT system with eight GPON ports, four 1G / 10GBase-R ports for uplinks, and four 1000Base-T ports, making it suitable for low-density and FTTx services at low cost. It

The V5808 supports Gigabit ports and can be used in a variety of network environments. In addition, the redundant configuration of the power supply is realized, and the network system is not interrupted, ensuring stable service.

## Features

- 118 Gbps switching capacity
- 8 GPON ports, 10GE 4 ports and GE (Electric) 4 ports
- High Capacity Uplink / Service Interface
  2.5Gbps (down) / 1.25Gbps (up)
- Reliable FTTx service with power redundancy system
- Enhanced QoS services
- IGMP support for IPTV
- Fully Managed via Dasan's INAS Element Manager
- Increased reliability through power redundancy
- Comfortable network management
  with SNMPv2 / v3 and RMON



## Specifications

| | |
|---|---|
| Service | 8 GPON (SFP, SC/PC type) |
| Uplink Ports | 4 GE Electric Port [100/1000Base-T (RJ45)]<br>4 1G/10GBase-R (SFP+) ports |
| MGMT Ports | 1 100/1000Base-TX (RJ45) |
| Console Port | 1 Console (RS232) |
| Layer 2 | Standard Ethernet bridging<br>Port/Subnet/Protocol-based VLAN<br>Spanning Tree: STP, RSTP, MSTP<br>802.3ad Link aggregation based on MAC |
| Layer 3 | L3 Host(IPv4/IPv6) 1.5K/768<br>Static routing<br>1K L2 Multicast<br>1p mapper service profile on U/S<br>Mapping of GEM Ports into a T-CONT<br>with priority queues based scheduling<br>Support for Multicast GEM Port |
| Multicast | IGMPv1/v2/v3<br>IGMP snooping<br>IGMP filtering and throttling<br>Multicast VLAN Registration (MVR) |

| | |
|---|---|
| GPON | ITU-T G.984 compliant<br>Supports ITU-T G.984.4 ONT<br>Management & Control Interface (OMCI)<br>Remote ONT/ONU management<br>Automatic ONT ranging<br>4k port-ID and 1k alloc-ID |
| Management Interface | Serial / Telnet (CLI)<br>SNMPv1/v2/v3<br>DHCP server, relay agent with option82<br>Remote Monitoring (RMON) |
| Operating Requirements | Operating Temperature: -20~60°C<br>Humidity: 0~90% (non-condensing) |
| Dimensions | Size (W x H x D): 440 x 44 x 300mm |
| Input Power | AC type : 100-240VAC, 50/60Hz<br>DC type : -48/60VDC |

# V5816

GPON OLT

## Overview

As the number of services using internet communication such as broadband internet, internet phone, and IPTV is increasing, the need for high performance network equipment is increasing. This is not an exception in areas where population density is low and where there are few subscribers. You can plan more effectively in terms of the cost of network deployment.

The V5816 is a compact GPON OLT system with 16 GPON ports, four 1G / 10GBase-R ports for uplinks, and four 1000Base-T ports, making it suitable for low-density and FTTx services at low cost.

The V5816 supports Gigabit ports and is applicable to a variety of network environments. In addition, the redundant configuration of the power supply is realized, and the network system is not interrupted, ensuring stable service.

## Features

- 168 Gbps switching capacity
- 16 GPON ports, 4 10GE ports and 4 GE (Electric) ports
- Reliable FTTx service with power redundancy system
- Enhanced QoS services
- IGMP support for IPTV
- Fully Managed via Dasan's INAS Element Manager
- Increased reliability through power redundancy
- Comfortable network management with SNMPv2 / v3 and RMON



## Specifications

| | |
|---|---|
| Service | 16 GPON (SFP, SC/PC type) |
| Uplink Ports | 4 GE Electric Port [100/1000Base-T (RJ45)]<br>4 1G/10GBase-R (SFP+) ports |
| MGMT Ports | 1x 100/1000Base-TX (RJ45) |
| Console Port | 1x Console (RS232) |
| External Port | 1x USB2.0 |
| Layer 2 | Standard Ethernet bridging<br>Port/Subnet/Protocol-based VLAN<br>Spanning Tree: STP, RSTP, MSTP<br>802.3ad Link aggregation based on MAC<br>Flow Control |
| Layer 3 | L3 Host(IPv4/IPv6) 1.5K/768<br>Static routing<br>1K L2 Multicast |
| Multicast | IGMPv1/v2/v3<br>IGMP snooping<br>IGMP filtering and throttling<br>Multicast VLAN Registration (MVR) |

| | |
|---|---|
| GPON | ITU-T G.984 compliant<br>Supports ITU-T G.984.4 ONT Management & Control Interface (OMCI)<br>Remote ONT/ONU management<br>Automatic ONT ranging<br>4k port-ID and 1k alloc-ID |
| Security | Secure Shell (SSH) v1/v2<br>802.1x RADIUS, TACACS+ authentication<br>Storm Control |
| Management | Serial / Telnet (CLI)<br>SNMPv1/v2/v3<br>DHCP server, relay agent with option82<br>Remote Monitoring (RMON)<br>Syslog, Port Mirroring |
| Operating Requirements | Operating Temperature: -20~60°C<br>Humidity: 0~90% (non-condensing) |
| Dimensions | Size (W x H x D): 440 x 44 x 300mm |
| Input Power | AC type : 100-240VAC, 50/60Hz<br>DC type : -48/60VDC |

# V8102

GPON OLT



## Overview

The V8102 is a 2RU height chassis-based GPON OLT system with four slots for two service module units and two switching fabric units with uplink modules, providing a wide range of high-performance features for FTTx applications. A high-density chassis system that supports up to 4,096 residential and business subscribers with 32 GPON ports (1: 128 split ratio).

The most compact type of GPON OLT Chassis system that supports GPON Protection worldwide. The V8102 provides high capacity GPON access and 10GbE uplink with a 320Gbps non-blocking switch fabric. The V8102 is a fully redundant design concept for SFU / Power / GPON devices to ensure the reliability of the equipment. PON technology adds new features to improve performance and interoperability and seeks support for new applications, services, and installation environments.

## Features

- 32 GPON ports per chassis(16 Port per Unit)
- Ready for 16 XG-PON ports per chassis(8 Port per Unit)
- 4 x 10GE/GE Uplink(Selectable)
- Multi-service chassis for FTTx deployments
- Full redundancy
- Support and delivery of various service types VoIP, IP-TV, high-speed internet, mobile, etc.
- Non-stop forwarding, Non-stop routing features based on distributed architecture
- Selective service/uplink modular units for flexible network
- High capacity GPON access and 10GbE uplink and line rate performance
- Realtime network traffic monitoring and analyzing
- Common & familiar CLI via console/telnet
- SNMPv2/v3 with RMON, Alarms
- L2/L3/L4 classification / Priority management

## Specifications

| | |
|---|---|
| Flash Memory | 8MB(Boot)+64MB(NOS) |
| SDRAM | 2GB(DDR3) |
| Service Port | 2 Slot for SIU(Service Interface Unit)<br>- SIU_GPON16 : 16 GPON (SFP, SC/PC) |
| Uplink Port | 2 Slots for SFU(Switching Fabric Unit)<br>- SFU : 4 10GE Ports(SFP+) or 4 GE Port(SFP) |
| Management | Management Interface - 1 Port RS-232 for Console(RJ45)<br>1 Port Tx for MGMT(RJ45)<br>1 Port Alarm Interface(RJ45)<br>1 Port microSD Interface |
| MAC Table | 176K(UFT) |
| Routing Table | 8K(IPv4)/6K(IPv6) |
| VLAN | 4K |
| Switching Capacity | 320Gbps |
| Operating Temp. | -15~55°C |
| Operating Humidity | 0~90% (non-condensing) |
| Power Voltage | Input : -48VDC (redundancy) |
| Dimensions | 443.8 x 88.5 x 280 mm (W x H x D) |

## Capabilities

| | |
|---|---|
| Layer 2 | Standard Ethernet bridging<br>Port/subnet/protocol-based VLAN<br>Spanning tree: STP, RSTP, MSTP<br>802.3ad link aggregation |
| Layer 3 | IPv4 routing / IPv6 routing<br>RIPv1/v2, OSPFv2, BGPv4<br>Virtual Router Redundancy Protocol (VRRP) |
| Multicast | IGMPv1/v2/v3, PIM-SM/SSM<br>IGMP snooping<br>Multicast VLAN Registration (MVR) |
| GPON | GPON OLT compliant with ITU-T G.984<br>Remote ONT/MDU management<br>Automatic ONT ranging<br>Multiple T-CONTs per MDU (ONT)<br>Supports up to 64 (max.128) connections over a single fiber |
| Management | Serial / Telnet (CLI)<br>SNMPv1/v2/v3, RMON |
| MPLS(*Plan) | RSVP-TE and path protection and local repair(Head-end role)<br>EXP-based QoS<br>Clock sync: BITS, IEEE 1588v2, SyncE |
| QoS | Traffic scheduling (SP, WRR, DRR)<br>8 queues per port<br>Advanced traffic management - metering, egress shaping |

# V8106

GPON
OLT



## Overview

DASAN Networks' V8106 is a 6RU height chassis based GPON OLT system which is comprised of 10 slots for 6 service modular slots, 2 switching fabric slot and 2 uplink slots for delivering a wide range of full-featured and high-performance over FTTx applications. It is a high-density chassis system that supports up to 12,288 residential and business subscribers with 96 GPON ports(1:128 split ratio). The most compact type GPON OLT Chassis system as supporting GPON Protection in worldwide. V8106 features high capacity GPON access and 10GbE uplink and line rate performance with a 640Gbps non-blocked switch fabric. Moreover V8106 is ready for XG-PON service, the service line support the fully 8 ports of XG-PON signal as same chassis. V8106 guarantees equipment-level reliability with full redundancy design concept of SFU/Power/GPON units. The PON technology adds new features and functionality targeted at improving performance and inter-operability, and adds support for new applications, services, and deployment scenarios.

## Features

- 96 GPON ports per chassis(16 Port per Unit)
- Ready for 48 XG-PON ports per chassis (8 Port per Unit)
- 4 x 10GE/GE Uplink(Selectable) per slot
- Multi-service chassis for FTTx deployments Full redundancy
- Support and delivery of various service types
  VoIP, IP-TV, high-speed internet, mobile, etc.
- Non-stop forwarding, Non-stop routing features
  based on distributed architecture
- Selective service/uplink modular units for flexible network
- High capacity GPON access and 10GbE uplink
  and line rate performance
- Realtime network traffic monitoring and analyzing
- Common & familiar CLI via console/telnet
- SNMPv2/v3 with RMON, Alarms
- L2/L3/L4 classification / Priority management

## Specifications

| | |
|---|---|
| Flash Memory | 8MB(Boot)+128MB(NOS) |
| SDRAM | 2GB(DDR3) |
| Service Port | 6 Slot for SIU(Service Interface Unit)<br>SIU_GPON16 : 16 GPON (SFP, SC/PC)<br>SIU_GPON16T* : 16 GPON (SFP, SC/PC)<br>SIU_XGPON8* : 8 XG-PON1 (XFP, SC/PC) |
| Uplink Port | 2 Slots for NIU(Network Interface Unit)<br>- NIU_10GE4 : 4 10GE Ports(SFP+) |
| Management | Management Interface<br>1 Port RS-232 for Console(RJ45)<br>1 Port Tx for MGMT(RJ45)<br>1 Port microSD Interface |
| MAC Table | 32K(Max.288K) |
| Routing Table | 16K(IPv4)/8K(IPv6), Max120K(IPv4)/60K(IPv6) |
| VLAN | 4K |
| Switching Capacity | 640Gbps |
| Operating Temp. | -25~55°C |
| Operating Humidity | 0~90% (non-condensing) |
| Power Voltage | Input : -48VDC (redundancy) |
| Dimensions | 482.6 x 265.9 x 280.0mm (W x H x D) |

## Capabilities

| | |
|---|---|
| Layer 2 | Standard Ethernet bridging<br>Port/subnet/protocol-based VLAN<br>Spanning tree: STP, RSTP, MSTP<br>802.3ad link aggregation |
| Layer 3 | IPv4 routing / IPv6 routing<br>RIPv1/v2, OSPFv2, BGPv4<br>Virtual Router Redundancy Protocol (VRRP) |
| Multicast | IGMPv1/v2/v3, PIM-SM/SSM<br>IGMP snooping<br>Multicast VLAN Registration (MVR) |
| GPON | GPON OLT compliant with ITU-T G.984<br>Remote ONT/MDU management<br>Automatic ONT ranging<br>Multiple T-CONTs per MDU (ONT)<br>Supports up to 64 (max.128) connections over a single fiber |
| Management | Serial / Telnet (CLI)<br>SNMPv1/v2/v3, RMON |
| MPLS(*Plan) | RSVP-TE and path protection and local repair(Head-end role)<br>EXP-based QoS<br>Clock sync*: BITS, IEEE 1588v2, SyncE |
| QoS | Traffic scheduling (SP, WRR, DWRR)<br>8 queues per port<br>Advanced traffic management - metering, egress shaping |


# H665

FTTH/GPON ONT

## Overview

The H665 is Optical Network Terminal (ONT) compliant with ITU-T G.984 standard. DASAN Networks has developed H665 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 H665 is comprised of one GPON uplink port and one Gigabit Ethernet downlink port supporting 10/100/1000Base-T (RJ45).
The H665 supports high speed internet access service. The H665 contains both built-in wire-speed L2 switch and L3 routing gateway with port forwarding, NAT and NAPT address translation, multiple PPPoE clients support for high speed internet service.

## Features

GPON Interface

- ITU-T G.984.3 compliant GPON ONT
- Data rate of 1.25Gbps (Up)/2.5Gbps(Down)
- Wavelength : TX 1310nm, RX 1490nm

Advanced QoS & Network Management

- Protection of delay-sensitive traffic based on SLA
- Multi-Layer Filtering
- Remote Fault monitoring
- IEEE 802.1D and IEEE 802.1Q bridging
- Dying Gasp support



## Specifications

| | |
|---|---|
| Flash Memory | 128MB |
| SDRAM | 128MB |
| Uplink Port | 1 GPON port (SC/APC, BOSA) |
| Service Port | 1 10/100/1000BASE-T port (RJ45) |
| LED | POWER, PON, ALARM, LAN |
| Operating Temp. | 23 to 113°F (-5 to 45°C) |
| Operating Humidity | 5 to 95% (non-condensing) |
| Power Voltage (Adapter) | Input: 100-240VAC, 50/60Hz<br>Output: 12VDC/0.5A |
| Dimensions | 4.50 x 1.26 x 3.74 in<br>(114 x 32 x 95 mm) (W x H x D) |
| Miscellaneous Interface | On/Off power switch |
| GPON | ITU-T G.984 compliant<br>Forward Error Correction (FEC)<br>Multiple T-CONTs/GEM ports per device<br>Flexible mapping as GEM and T-CONT<br>Dying gasp |
| Layer 2 | Untagged port configuration<br>IEEE802.1D and IEEE802.1Q bridging<br>Standard Ethernet bridging<br>MAC address learning with auto aging |
| VLAN | VLAN port filtering<br>Destination address port filtering<br>Source MAC address learning |
| Multicast | IGMP snooping |
| QoS | HW-based internal IEEE 802.1p (CoS)<br>Strict Priority (SP)<br>802.1Q QoS mapping, ToS/CoS<br>8 queues per port |
| Management | ITU-T 984.4 compliant OMCI interface<br>IEEE 802.3x flow control<br>LED indications for maintenance<br>Web-based management |
| Residential Gateway Unit | PPPoE client: multiple clients per RGONT<br>Automatically initiating the session<br>Automatically keep alive<br>DHCP server / client<br>NAT and NAPT<br>NAT session up to 16K<br>DNS Relay server (DNS relay,<br>DNS transparent)<br>Port forwarding<br>Integrated stateful packet inspection firewall with ACL |

# H665GR

FTTH/GPON

ONT

## Overview

DASAN Networks has developed H665GR 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 H665GR provides one GPON uplink port plus one Gigabit Ethernet(10/100/1000Base-T) port and one RF video port.

The H665GR supports the multiple services including video, and high speed internet access. The H665GR utilizes technology for intelligent IP-based access allowing reliability of network deployment models and management system.

## Features

GPON Interface

- ITU-T G.984.x compliant GPON ONT
- Interface capacity: 1.2Gbps/2.5Gbps (US/DS)
- Wavelength: TX 1310nm, RX 1490nm

RF Video Interface

- Analog RF video over 1550nm wavelength
- 18dBmV output level, 47MHz~1000MHz passband

Advanced QoS & Network Management

- Priority queues and scheduling on Upstream
- 802.1p mapper service profile on US
- Remote Fault Monitoring
- IEEE 802.1D and IEEE 802.1Q bridging



## Specifications

| | |
|---|---|
| Flash Memory | 128MB NAND |
| SDRAM | 128MB DDR2 |
| Uplink Port | 1 GPON port (SC/APC, BOSA) |
| Service Port | 1 10/100/1000BASE-T port (RJ45) |
| Video Interface | 1 RF Video port (F-connector) |
| LED | PWR, PON, ALM, SPD, DPX, CATV |
| Operating Temp. | 23 to 122°F (-5 to 50°C) |
| Operating Humidity | 5 to 90% (non-condensing) |
| Power Voltage (adapter) | Input: 100-240VAC, 50/60Hz<br>Output: 12VDC/0.5A |
| Dimensions | 160 × 40 x 124.5 mm (W x H x D) |
| Miscellaneous Interface | On/Off power switch |
| GPON | ITU-T G.984.x compliant<br>Forward Error Correction (FEC)<br>Multiple T-CONTs/GEM ports per device<br>Flexible mapping between GEM port and T-CONT<br>Dying gasp |

| | |
|---|---|
| Layer 2 | Untagged port configuration<br>IEEE802.1D and IEEE802.1Q bridging<br>Standard Ethernet bridging<br>MAC address learning with auto aging (Up to 4K MAC addresses) |
| VLAN | VLAN port filtering<br>Destination address port filtering |
| Multicast | IGMP snooping |
| QoS | HW-based internal IEEE 802.1p (CoS)<br>Strict Priority (SP)<br>8 queues per port |
| RGU<br>(L3 Routing mode) | PPPoE client : one client per RG ONT<br>DHCP server / client<br>DNS Relay server (DNS relay, DNS transparent)<br>NAT and NAPT: 16K session (US 8K, DS 8K)<br>Port forwarding<br>Stateful packet inspection firewall with ACL |

# H662GR

## Broadband Access
## FTTx/GPON ONT

## Overview

To deliver triple-play services to the subscriber in Fiber-to-the-Home or Fiber-to-the-Premises application, the GPON ONT H662GR incorporates interoperability, key customers' specific requirements and cost-efficiency.

The H662GR provides one GPON uplink port plus two Gigabit Ethernet (10/100/1000Base-T) ports,one FXS and one RF video interface ports that enhance the ability to deliver demanding VoIP services. The device has networking with triple-play capability that simplifies/integrates the home equipment. Equipped with ITU-T G.984 compliant 2.5G Downstream and 1.25G Upstream GPON interface, the H662GR supports the full Triple Play of services including voice, video, and high speed internet access.

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.

## Features

GPON Interface
- ITU-T G.984.x compliant GPON ONT
- Data rate of 1.2Gbps/2.5Gbps(US/DS)
- Wavelength: TX 1310nm, RX 1490nm

VoIP Service
- SIP RFC3261/3262/3264
- DTMF dialing / Pulse dialing
- Multiple codecs: G.711, G.723.1, G.729
- T.38 FAX mode
- Echo cancellation

Residential Gateway Unit Feature
- L3 routing gateway with NAT/NAPT and firewall
- PPPoE client, DHCP/DNS server support
- Port forwarding

RF Video Interface
- Analog RF video over 1550nm wavelength
- 18dBmV output level, 42MHz~1000MHz passband

## Specifications

| | |
|---|---|
| Flash Memory | 128MB NAND |
| SDRAM | 128MB DDR |
| Uplink Port | 1 GPON port (SC/APC, BOSA) |
| Service Port | 2 10/100/1000BASE-T ports (RJ45) |
| FXS Interface | 1 FXS ports (RJ11) |
| LED | PWR, PON, ALARM, VoIP, TEL, LAN1-2 |
| Operating Temp. | 23 to 122°F (-5 to 50°C) |
| Operating Humidity | 20 to 90% (non-condensing) |
| Power Voltage (adapter) | Input: 100-240VAC, 50/60Hz<br>Output: 12VDC/1.5A |
| Dimensions | Antennas folded (160 x 31 x 130 mm) |
| Miscellaneous Interface | On/Off power switch,<br>Reset button (system reboot) |
| GPON | ITU-T G.984 compliant<br>Forward Error Correction (FEC)<br>Multiple T-CONTs/GEM ports per device<br>Flexible mapping between GEM port and T-CONT<br>Dying gasp |
| Layer 2 | Untagged port configuration<br>Standard Ethernet bridging<br>MAC address learning with auto aging<br>(Up to 4K MAC addresses) |



| | |
|---|---|
| VLAN | VLAN port filtering<br>Destination address port filtering |
| Multicast | IGMP snooping |
| QoS | HW-based internal IEEE 802.1p (CoS)<br>Strict Priority (SP)<br>8 queues per port |
| VoIP | SIP (RFC3261/3262/3264)<br>5-REN per FXS<br>RTP, RTCP (RFC3550/3551)<br>DTMF dialing / Pulse dialing<br>Multiple codecs: G.711, G.723.1, G729<br>T.38 FAX mode<br>Echo cancellation |
| RGU<br>(L3 Routing mode) | PPPoE client : multi client per RG ONT<br>DHCP server / client<br>DNS Relay server (DNS relay,<br>DNS transparent)<br>NAT and NAPT: 16K session (US 8K, DS 8K)<br>Port forwarding<br>Stateful packet inspection firewall with ACL |

# H660G

FTTH/GPON ONT

## Overview

DASAN Networks H660G optical network terminal is targeted for all subscribers high-speed data interfaces in a cost effective indoor housing. Fully compliant with ITU-T G.984 standards, the H660G supports data rates of 1.25Gbps upstream and 2.5Gbps downstream.

With DASAN's leading-edge G-PON technology, users can enjoy bandwidth-intensive multimedia services such as real-time video, audio and gaming much easier and faster than ever before. The H660G supports one G-PON uplink port and four 10/100/1000Base-T Gigabit Ethernet ports.

The H660G utilizes technology for intelligent IP-based access resulting in reliable network deployment models and management.

## Features

G-PON Interface

- ITU-T G.984.x compliant GPON ONT
- Data rate of 1.25Gbps /2.5Gbps (US/DS)
- Wavelength : TX 1310nm, RX 1490nm

Advanced QoS & Network Management

- Priority queues and scheduling on Upstream
- 802.1p mapper service profile on US
- Remote Fault Monitoring
- IEEE 802.1D and IEEE 802.1Q bridging

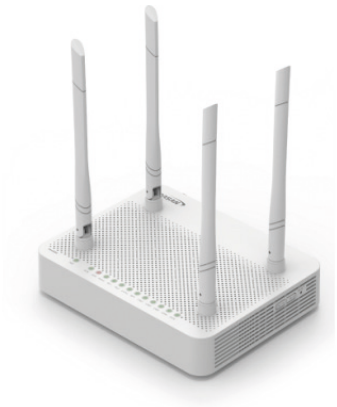


## Specifications

| | |
|---|---|
| Flash Memory | 128MB NAND |
| SDRAM | 128MB DDR3 |
| Uplink Port | 1 GPON port (SC/APC, BOSA) |
| Service Port | 4 10/100/1000BASE-T ports (RJ45) |
| Operating Temp. | 23 to 122°F (-5 to 50°C) |
| Operating Humidity | 20 to 90% (non-condensing) |
| Power Voltage (adapter) | Input: 100-240VAC, 50/60Hz<br>Output: 12VDC/0.5A |
| Dimensions | (160 × 40 x 124.5 mm) (W x H x D) |
| Miscellaneous Interface | On/Off power switch,<br>Reset button (system reboot) |
| GPON | ITU-T G.984.x compliant<br>Forward Error Correction (FEC)<br>Multiple T-CONTs/GEM ports per device<br>Flexible mapping between GEM port and T-CONT<br>Dying gasp |

## Capabilities

| | |
|---|---|
| Layer 2 | Untagged port configuration<br>IEEE802.1D and IEEE802.1Q bridging<br>Standard Ethernet bridging<br>MAC address learning with auto aging (Up to 4K MAC addresses) |
| VLAN | VLAN port filtering<br>Destination address port filtering |
| Multicast | IGMP snooping |
| QoS | HW-based internal IEEE 802.1p (CoS)<br>Strict Priority (SP)<br>8 queues per port |
| RGU (L3 Routing mode) | PPPoE client : one client per RG ONT<br>DHCP server / client<br>DNS Relay server<br>(DNS relay, DNS transparent)<br>NAT and NAPT: 16K session (US 8K, DS 8K)<br>Port forwarding<br>Stateful packet inspection firewall with ACL |



# H660GM

FTTH/GPON ONT

## Overview

The H660GM provides one GPON uplink port plus four Gigabit Ethernet (10/100/1000Base-T) ports, 11b/g/n, 11ac wireless interface, one USB port and one FXS voice ports that enhance the ability to deliver demanding VoIP/Wi-Fi services.

The device has built-in concurrent dual-band Wi-Fi 802.11 a/b/g/n and 802.11ac networking with triple-play capability that simplifies/integrates the home equipment. Equipped with ITU-T G.984 compliant 2.5G Downstream and 1.25G Upstream GPON interface, the H660GM supports the full Triple Play of services including voice, video, and high speed internet access.

The H660GM 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.

## Features

- Triple Play Services – IP Video, VoIP, High Speed Internet Access
- GPON
- 2 Voice Ports
- 4 Gigabit Ethernet Ports
- 1 RF Video Overlay
- VoIP service
- Multicast Video
- Management – Web GUI
- L3 Routing gateway, NAT,NAPT

## Specifications

| | |
|---|---|
| Dimensions | Size (W x H x D) 190 x 63.7 x 150mm (Antennas Folded) |
| Power | Input Power: 12V/2A |
| Uplink Ports | SC/APC connector for GPON |
| Service Ports | 2 x FXS<br>4 x RJ45 10/100/1000Base-T<br>1 x RF Overlay<br>2×2 11n and 2×2 11ac WiFi |
| GPON | ITU-T G.984 compliant<br>Forward Error Correction (FEC)<br>Multiple T-CONTs/GEM ports per device<br>Flexible mapping between GEM port and T-CONT<br>Dying gasp |
| Layer 2 | Untagged port configuration<br>Standard Ethernet bridging<br>MAC address learning with auto aging(Up to 4K MAC addresses) |
| RGU (L3,Routing mode) | PPPoE client : one client per RG ONT<br>DHCP server / client<br>DNS Relay server (DNS relay, DNS transparent)<br>NAT and NAPT: 16K session (US 8K, DS 8K)<br>Port forwarding<br>Stateful packet inspection firewall with ACL |
| VLAN | VLAN port filtering<br>Destination address port filtering |
| Multicast | IGMP snooping |
| Wi-Fi | IEEE802.11a/b/g/n/ac compliant<br>Multiple SSIDs<br>64/128bit wireless encryption protocol(WEP) |
| VoIP | SIP<br>Codec Support: G.711, G.723.1, G.729<br>5 REN per port<br>T.38 FAX mode<br>Echo Cancallation |
| Management | Web GUI<br>CLI |
| Operating Requirements | Operating Temperature: -5~50°C<br>Humidity: 20~90% (non-condensing) |

# H660RW

FTTH/GPON ONT

## Overview

To deliver triple-play services to the subscriber in Fiber-to-the-Home or Fiber-to-the-Premises application, the GPON ONT H660RW incorporates interoperability, key customers' specific requirements and cost-efficiency.

The H660RW provides one GPON uplink port plus four Gigabit Ethernet (10/100/1000Base-T) ports, one RF video interface, wireless interface and two FXS voice ports that enhance the ability to deliver demanding VoIP/Wi-Fi services.

The H660RW supports the full Triple Play of services including voice, video, and high speed internet access. The H660RW 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.

## Features

GPON Interface

- ITU-T G.984.x compliant GPON ONT
- Interface capacity: 1.2Gbps/2.5Gbps (US/DS)
- Wavelength: TX 1310nm, RX 1490nm

Wireless LAN

- IEEE802.11b/g/n wireless interface, dual antenna
- Multiple SSIDs
- Security: WEP, WPA-PSK (TKIP) & WPA2-PSK (AES)

VoIP Service

- SIP RFC3261/3262/3264
- DTMF dialing / Pulse dialing
- Multiple codecs: G.711, G.723.1, G729
- T.38 FAX mode, Echo cancellation

RF Video Interface

- Analog RF video over 1550nm wavelength
- 18dBmV output level, 47MHz~1000MHz passband

## Specifications

| | |
|---|---|
| Uplink Ports | SC/APC connector for GPON |
| Service Ports | 2 x FXS<br>4 x RJ45 10/100/1000Base-T<br>1 x RF Overlay<br>2×2 11n and 2×2 11ac WiFi |
| GPON | ITU-T G.984 compliant<br>Forward Error Correction (FEC)<br>Multiple T-CONTs/GEM ports per device<br>Flexible mapping between GEM port and T-CONT<br>Dying gasp |
| Layer 2 | Untagged port configuration<br>Standard Ethernet bridging<br>MAC address learning with auto aging(Up to 4K MAC addresses) |
| RGU<br>(L3,Routing mode) | PPPoE client : one client per RG ONT<br>DHCP server / client<br>DNS Relay server (DNS relay, DNS transparent)<br>NAT and NAPT: 16K session (US 8K, DS 8K)<br>Port forwarding<br>Stateful packet inspection firewall with ACL |
| VLAN | VLAN port filtering<br>Destination address port filtering |
| Multicast | IGMP snooping |



| | |
|---|---|
| Wi-Fi | IEEE802.11a/b/g/n/ac compliant<br>Multiple SSIDs<br>64/128bit wireless encryption protocol(WEP) |
| VoIP | SIP<br>Codec Support: G.711, G.723.1, G.729<br>5 REN per port<br>T.38 FAX mode<br>Echo Cancallation |
| Management | Web GUI<br>CLI |
| Operation | Operating Temperature: -5~50°C<br>Humidity: 20~90% (non-condensing) |
| Dimensions | Size (W x H x D) 190 x 63.7 x 150mm<br>(Antennas Folded) |
| Power | Input Power: 12V/2A |

# H660RM

FTTH/GPON ONT

## Overview

he H660RM provides one GPON uplink port plus four Gigabit Ethernet (10/100/1000Base-T) ports, 11b/g/n, 11ac wireless interface and two FXS voice ports that enhance the ability to deliver demanding VoIP/Wi-Fi services.

The device has built-in concurrent dual-band Wi-Fi 802.11 a/b/g/n and 802.11ac networking with triple-play capability that simplifies/ integrates the home equipment. Equipped with ITU-T G.984 compliant 2.5G Downstream and 1.25G Upstream GPON interface, the H660RM supports the full Triple Play of services including voice, video, and high speed internet access.

The H660RM 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.

## Features

- Triple Play Services
- IP Video, VoIP, High Speed Internet Access
- GPON
- 2 Voice Ports
- 4 Gigabit Ethernet Ports
- 1 RF Video Overlay
- VoIP service
- Multicast Video
- Management – Web GUI
- L3 Routing gateway, NAT,NAPT



## Specifications

| | |
|---|---|
| Uplink Ports | SC/APC connector for GPON |
| Service Ports | 2 x FXS<br>4 x RJ45 10/100/1000Base-T<br>1 x RF Overlay<br>2×2 11n and 2×2 11ac WiFi |
| GPON | ITU-T G.984 compliant<br>Forward Error Correction (FEC)<br>Multiple T-CONTs/GEM ports per device<br>Flexible mapping between GEM port and T-CONT<br>Dying gasp |
| Layer 2 | Untagged port configuration<br>Standard Ethernet bridging<br>MAC address learning with auto aging(Up to 4K MAC addresses) |
| RGU (L3,Routing mode) | PPPoE client : one client per RG ONT<br>DHCP server / client<br>DNS Relay server (DNS relay, DNS transparent)<br>NAT and NAPT: 16K session (US 8K, DS 8K)<br>Port forwarding<br>Stateful packet inspection firewall with ACL |

| | |
|---|---|
| VLAN | VLAN port filtering<br>Destination address port filtering |
| Multicast | IGMP snooping |
| Wi-Fi | IEEE802.11a/b/g/n/ac compliant<br>Multiple SSIDs<br>64/128bit wireless encryption protocol(WEP) |
| VoIP | SIP<br>Codec Support: G.711, G.723.1, G.729<br>5 REN per port<br>T.38 FAX mode<br>Echo Cancallation |
| Management | Web GUI<br>CLI |
| Dimensions | Size (W x H x D): 190 x 63.7 x 150mm<br>(Antennas Folded) |
| Power | Input Power: 12V/2A |
| Operating Requirements | Operating Temperature: -5~50°C<br>Humidity: 20~90% (non-condensing) |

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## Content

PHONE

INTERNET

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ANALOG / DVB-C

IP

RF

## Transmission

Teletronik EDFA

1490 / 1310

DASAN GPON OLT

Teletronik Optical Transmitter

1550

## Distribution Network

Measuring instruments

Optical Closures

Optical Cables

1550 / 1490 / 1310

## Drop Network

Drop Cable

Ethernet Cable

Coax Cable

PLC Splitter

1490 / 1310

DASAN SFP

RF mini node

## Home Devices

Wall mountable patch panel

FTTH wall outlet

DASAN GPON ONT

For in depth information please visit our webpage

Für mehr Information bitte besuchen Sie unsere Webseite

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