CHIMA
赤马

1.25Gbps
Upstream

2.5Gbps
Downstream

PWR PON LOS GE

PON GE RST PWR ON

| ITU-T G.984.X GPON ONT | 1* GPON SC/APC or SC/UPC Uplink port   optional | 1*GE High Speed LAN Port | 1:128 Fiber Splitting Ratio | 802.1Q VLAN,802.1P QoS DBA |

Datasheet V1.1.6

SGN8601GR1B-V2 GPON ONT Description:

The SGN8601GR1B-V2 is an ITU-T G.984.x based GPON ONT that supports 2.5G downstream and 1.25G upstream bandwidth. It offers 1*GPON SC/APC or SC/UPC port and 1*Gigabit Ethernet LAN port for internet outputs. The SGN8601GR1B-V2 is a single family ONU, It also supports router functions, such as PPPoE, Static IP, Firewall, etc. It is a 1GE GPON ONT for ISPs integrating high speed Internet services over single fiber.

Main Features:

- Complies with ITU-T G.984.x GPON standard, interoperable with Huawei, ZTE, Fiberhome, Nokia, CHIMA GPON OLTs.
- Offers 1 GPON SC/APC or SC/UPC WAN port, support 1.25G upstream and 2.5G downstream
- Built with the Realtek RTL9601D chipset, supports router functions, e.g. PPPoE, static IP, firewall, etc.
- Offers 1*10/100/1000Base-Tx Gigabit LAN port, support network bridge
- Max 1:128 Fiber ration, max transmission distance can reach 20km
- Support AES 128-bit encrypted and key switching, enhancing transmission security
- Support 8 Tconts and 32 GEM Port IDs, enabling multiple services on a single subscriber CPE.
- Support FEC (Forward Error Correction), ensures high reliable and precise data transmission
- Support Rich layer 2 Management features, applicable to the biggest ISP networks
- Support FBA (Flexible Bandwidth Assignation), dynamic assign bandwidth automatically
- Support Dynamic Bandwidth Allocation (DBA), smarter bandwidth assignment and usage
- High security, data encrypted at upstream and downstream directions
- Support L2 Switching features, such as IEEE802.1Q VLAN, 802.1P QoS, etc
- Support OMCI and TR069 Management, manage subscribers remotely
- Supports IPv4 and IPv6, highly applicable in both IP type based networks

GPON Parameters

ITU-T G.984.x GPON, -30dBm BOSA inside, SC/APC or SC/UPC connectors optional

1310nm upstream & 1490nm downstream

Support G.984.1 General Characteristics

Support G.984.2 Physical Media Dependent (PMD) layer specification

Support G.984.3 Transmission convergence layer specification

Support G.988 OMCI protocol

GPON transceiver transmitting power: 0.5-5dBm, receiving sensitivity: -30dBm

Transmission wavelength: Upstream: 1310nm / Downstream: 1490nm

Support 1:128 Fiber Ratio at 20km transmission distance.

Fiber Transmission cable: G.652 single mode optical fiber cable

Configurable AES decryption on downstream payload.

Configurable FEC on both upstream and downstream payloads.

Multi-Application Processor queues for dedicated connections for in-band.

Enhanced GPON debug and diagnostic functions.

Support up to 8 Transmission Container (T-Cons), 32 GEM Port IDs

Support NSR/SR Dynamic Bandwidth Allocation (DBA)

Support Forward Error Correction (FEC)

Maximum 2.5 Gbps Downlink/1.25 Gbps uplink

Support Dying Gasp

Hardware Features:

- ITU-T G.984.x GPON standard,
- Realtek RTL9601D single Core 300MHz processor
- Come with 64Mbits Flash, 512Mbits RAM
- Offers 1*GPON SC/APC or SC/UPC port, support 2.5G at downstream and 1.25G at upstream
- Offers 1*10/100/1000Base-Tx Gigabit Ethernet LAN port
- Support 2Gbps Backplane bandwidth
- LED Indicators for Power, PON, LOS, GE
- Desktop and wall mount design, plastic housing,
- Plug and play operation
- External Power Supply
  - Power Supply, AC 110V-240V input, DC 12V, 0.5A output, 4KV surge protection
  - Support Asia, Europe, U.S, U.K, AU standard power plugs

Software Features:

- Support IEEE802.1Q VLAN, Port Based VLAN
- Support IEEE802.1P QoS, Tos, Cos
- Support IEEE802.1d Spanning Tree
- Support IEEE802.1W Rapid Spanning Tree
- Support MAC address translation and MAC addresses limitation
- Support IGMP V1, V2 and IGMP Snooping for multicast
- Support IEEE802.3X full duplex, half duplex backpressure flow control

- Support MAC, IP, or TCP/UDP protocol based ACLs (Access Control protocol)
- Support Bandwidth Control
- Support CLI management, SNMP based NMS management and Monitor
- Support TR069 ACS management
- Support 4k VLAN
- Support MAC Learning, 1k MAC address table

Interoperable GPON OLT Models

- **CHIMA** SGT8000A, SGT8016A, SGT8000B, SGT8016B, SGT9000B series GPON OLTs
- **HUAWEI** MA5680T, MA5606T, MA5683T GPON OLT

  [Huawei R11/R13/R15/R17/R18 versions interoperable]
- **ZTE** C220, C300 GPON OLT

  [All ZTE OLT firmware versions interoperable]
- **Alcatel Lucent** 7342, 7360 ISAM GPON OLT
- **Nokia** 7360 ISAM GPON OLT
- **Fiberhome** AN5516-01, AN5516-02 GPON OLT

  [Fiberhome RP700, RP1000 versions interoperable]
- **Ericsson** BM1500 GPON OLT
- **Aurora** Trident7, T7-PIM-8802/COLT GPON OLT
- **Dlink** DPN-3012-E GPON OLT
- **Ubiquoss** C9500, C9516, C9016, C9264 GPON OLT
- **Raisecom** ISCOM5508, ISCOM5800E, ISCOM6800 GPON OLT
- **H3C** S3600-2P-OLT, S7502E, S7503E, S7506E, S7510E, S7506E-V GPON OLT

Specifications:

Standards	ITU-T G.984.1, 984.2, 984.3, 984.4 GPON, ITU-T G.988 OMCI,IEEE 802.3,IEEE 802.3u, IEEE802.3ab, IEEE 802.3x,IEEE 802.3z,IEEE802.1d,IEEE802.1P,IEEE 802.1Q, IEEE 802.1X		
Topology	Star Topology		
Uplink Ports	1 GPON port, SC/APC or SC/UPC connectors optional		
Downlink Ports	1*10/100/1000Base-Tx Gigabit LAN Port		
Transmission Rate	1.25Gbps at upstream, 2.5Gbps at downstream		
Transmission Distance	Maximum 20Km		
LED Indicators	Power, PON, LOS, GE		
Ethernet Cable	10Base-Tx: UTP category 3, 4, 5, up to 100m 100Base-Tx: UTP category 5, up to 100m 1000Base-Tx: UTP category 5, 5E, 6, up to 100m		
Fiber Cable	8.3μm, 8.7μm, 9μm and10μm single mode fiber cable		
Power Supply	AC 110-240V, DC 12V, 0.5A, External Power Supply, 4KV Surge protection		
Temperature Humidity		Temperature	Humidity
	Working	0℃ - 45℃	10% - 90%
	Standby	-40℃ - 70℃	5% - 90% RH

Order Information

Product Family	Model No.	Product Description
	SGN8601GR1B-V2	1GE GPON ONT Realtek RTL9601D 300MHz CPU Power Supply: DC12V, 0.5A, 4KV Surge Protection Power Consumption: 2.1W SC/APC or SC/UPC connector optional