4 GE Ports
2 FXS Ports

1200Mbps WiFi
1CATV

| ITU-T G.984.x GPON
IEEE802.3ah GEPON
Standard | 1.25G upstream
2.5G/1.25
downstream | RTL9607C
900MHz CPU | Multi-WAN
Route/Bridge | VLAN, QOS
Firewall, ACL
IPv4/IPv6 |

Datasheet V1.1.6

SDN7759VACG4T-V2 Dual Mode ONU:

The SDN7759VACG4T-V2 is a series of ITU-T G.984.x based and IEEE802.3ah based dual mode ONU designed for home and Office users. Its uplink interface is a G/EPON SC port that supports 2.5G downstream and 1.25G upstream bandwidth for GPON and supports 1.25G downstream and 1.25G upstream bandwidth for EPON. It can access EPON / GPON OLTs.

It offers 4 Gigabit Ethernet ports for LAN. The SDN7759VACG4T-V2 series also offers 2 FXS ports and a 1200Mbps WiFi Router,and 1CATV RF interface, providing high quality voice, TV and excellent WiFi experience for Subscribers. Built for FTTx deployments, it supports powerful home gateway/CPE features, such as Multiple WAN, QOS, VLAN, Firewall, ACL, etc. It is a high-end Internet Data, Voice, TV and WiFi all-in-one EPON / GPON ONU for ISPs deploying Triple Play networks over single fiber.

Main Characters

➢ Both ITU-T G.984.x GPON and IEEE802.3ah GEPON standard, compatible with Huawei, ZTE, Fiberhome, CHIMA GPON OLTs.

➢ IEEE802.11AC 867Mbps + IEEE802.11N 300Mbps WiFi Router for Excellent WiFi experiences

➢ Offers 1*GPON / GEPON WAN Port, supports 1.25G upstream and 2.5G / 1.25G downstream

➢ Offers 4 * Gigabit Ethernet LAN ports, wire-speed data transmission

➢ Offers 2*FXS ports for high quality Voice over IP deployments.

➢ Offers 1 CATV RF port, support high quality TV image transmissions over 1550nm Fiber.
➢ AES 128-bit encrypted and key switching, enhancing transmission security
➢ Layer 2 Switching, support 802.1Q VLAN, 802.1P QOS, Bandwidth Control, Spanning Tree, etc
➢ Layer 3 Home Gateway/CPE features with Hardware NAT, support Multiple WAN, Route/Bridge mode, etc
➢ Port Binding, different LAN ports can be assigned with different WAN services
➢ Max 1:128 Fiber ration, max transmission distance can reach 20km
➢ Max 1:64 Fiber ratio for EPON, max transmission distance can reach 20km
➢ Support FEC (Forward Error Correction), ensures high reliable and precise data transmission
➢ Support Dynamic Bandwidth Allocation (DBA), Smarter bandwidth assignment and usage.
➢ Support OMCI and TR069 Management, manage subscribers remotely.
➢ Supports IPv4 and IPv6, highly applicable in both IP type based networks.
➢ Support 253 on LAN cable (DHCP Limit)   but only 64 in each wifi (64 for 2.4G   + 64 for 5G).

Technical Parameters

GPON Parameters

ITU-T G.984.x GPON, built-in with a bosa, 2*10 SFF GPON transceiver, SC/UPC or SC/APC connector
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
GPON transceiver sending power: 0.5-5dbm, receiving sensitivity: -27dbm
Transmission wavelength: Upstream: 1310nm / Downstream: 1490nm
Support 1:128 Fiber Optic 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 40 Transmission Container (T-Cons)
Support 256 bidirectional GEM Port IDs
Support NSR/SR Dynamic Bandwidth Allocation (DBA)
Support Forward Error Correction (FEC), Support Dying Gasp

QOS

IEEE802.1P QOS, DSCP, TOS:
SP, WRR, SP+WRR dispatching Algorithm
Source & DST-MAC based QOS
VLAN ID, Vlan Priority based QOS
Source DST-IP based QOS

Home Gateway/CPE Features

Multi-WAN, support up to 8 WAN connections
Support Route and/or Bridged WAN
Port Binding, Data/VoIP/IPTV services can be bound to different LAN ports
Configurable VLAN ID for each WAN
Configurable QOS queues for each WAN
Multi-services bound to the same WAN

Networking Features

MAC Learning, 2K MAC address table
Bridged or Route network mode
Support RIP v1, v2 for routing
Static Route, Dynamic Rout, DNS Proxy,
IPv4 & IPv6 TCP, UDP, RTP, SNTP, NAT, DHCP,
DNS IEEE802.1Q VLAN, Port VLAN
IEEE802.1x, MAC, IP, or TCP/UDP based ACLs
Port Bandwidth Control, IEEE802.3x flow control
Storm Control: Broadcast/Multicast/unknown unicast, ARP
Port Isolation, Port Mirror, Auto MDI/MDIX
IEEE802.1d STP, Port Loop detection
IGMP v2, v3 & IGMP Snooping for IPv4
MLD v2, v3 & MLD Snooping for IPv6

GEPON Parameters

IEEE802.3ah Gepon standard, support standard OAM

CTC 2.1, 3.0 China Telecom Gepon standard

GEPON Bosa built on board, SC/PC connector

1310nm wavelength at upstream & 1490nm wavelength at downstream

GEPON transceiver sending power: 0-4dBm, receiving sensitivity: -27dBm

1:64 Fiber Optic Ratio at 20km transmission distance.

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

Support 1 LLID (Logical Link Identifier)

Support 1 LOID (Logical ONU Identifier)

Support Triple Churning Encryption algorithm

Support NSR/SR Dynamic Bandwidth Allocation (DBA)

Support Forward Error Correction (FEC)

4 QOS queues & SP Dispatching Algorithm over PON

Maximum 1.25Gbps Downlink / 1.25Gbps Uplink

Support Dying Gasp

VoIP Parameters

Offers 2 FXS ports for Phone connections

2 Calls can be made/received simultaneously

SIP V1, V2 (RFC3261, RFC3262, RFC3264, RFC3265)

SIP & H.248, support registering 2 SIP accounts

G.711, G.723.1, G.729A-8kbps, G.726, G.722, ILBC voice codecs

DTMF Tone Detection, DTMF Tone Relay,

Multiple Calling Tone, FSK Caller ID

Calling line Identification Presentation

Calling line Identification Restriction

Call forwarding, call transfer, call hold, three-way conference, etc

QOS and TOS to ensure voice packets pass through in priority

Support RFC62 Echo protocol,

Support Digital Map configuration

Management Features

Serial interface maintenance using UART

Web UI Management

OAM & NMS Management

CLI command line management

FTP/TFTP/HTTP Auto Provision Management

TR069 ACS management

Hardware Parameters

Realtek RTL9607C

Dual core, MIPS interAptivTM 900MHz CPU

RLX5281 500MHz CPU

CPU covered with cooling unit.

Support Hardware NAT.

16-bit DDR3 SDRAM, come with a 1Gb DDR3 SDRAM

Nand Flash, come with a 1Gb Nand Flash

1*G/EPON SC Port, 2.5G / 1.25G Downstream, 1.25G Upstream

4* 10/100/1000Base-Tx Gigabit Ethernet Ports

1*300Mbps WiFi Router,

1*867Mbps WiFi Router

4*5dBi directional external antennas

2 FXS ports, support analog phones

1*CATV RF port

IEEE802.3x flow control Full duplex and half duplex,

LED Lights: PWR,PON,Los,Internet,VoIP1-2,GE1-4, 2.4G WiFi, 5G WiFI, WPS,USB

External power supply, DC 12V, 1.5A.

300Mbps + 867Mbps WiFi Router Features

IEEE802.11AC 867M WiFi, 5Ghz

IEEE802.11N 300M WiFi, 2.4Ghz

5GHz and 2.4GHz dual band connections

802.11AC and 802.11n WiFi Clients

2*5dBi directional External antennas for 802.11ac

2*5dBi directional External antennas for 802.11n

4 Gigabit Ethernet Ports, wired speed transmission

Support 4-IN-4-OUT, Max 1200Mbps WiFi throughput

Support WDS WiFi bridge

WiFi Transmission Distance: 100m for indoors, 150m for outdoors

WPS one-key protection over your wifi network

Support DHCP, Static IP and PPPOE

DHCP Server, DHCP Relay, DHCP Client, Static IP assignation

Static Routing from source IP to destination IP

Firewall, NAT, NAPT, UPnP

DDNS, DMZ Host, Port Forwarding

64/128 bit WEP, IEEE802.1x, WPA and WPA2 authentications

Max 4 SSID broadcasting, Hidden SSID

Automatically choose the best signal channel

STA mutual isolation and ACL table based on MAC Accesses

Wifi Multimedia (WMM), enhanced QOS for multimedia packets

CHIMA TECHNOLOGIES CO.,LIMITED/ 5/F, Building NO.1, TongXin

Telephone: +85 755 89362606 Fax: +86 755 89352612 Url: www. Chimacn.com Email: Support@chimacn.com

CATV Parameters

CATV Frequency range: 40~1000Mhz

RF 75ohm Coaxial Cable TX port: Metric F or England F

RF output power: 68~ 72dBuV at input optical power 1 dBm

CNR ≥46dB, CSO≤-61dBC,

Support Enable or Disable CATV service remotely

Interoperable GPON OLT Models

CHIMA SGT8000A, SGT8016A series GPON OLTs

HUAWEI MA5680T, MA5606T, MA5683T GPON OLT

ZTE C220, C300 GPON OLT

Fiberhome AN5516-01, AN5516-02 GPON OLT

ERICSSON BM1500 GPON OLT

ZHONE MX-180/280,MXK 319, 819, 823, MXK-F1419,MXK-F1421

ZYXEL GPON OLT V4.02(AAVA.7)C0_210108 | 2021-01-08

Interoperable Gepon OLT Models

CHIMA SNA8800, SNA9000T series

Huawei MA5680T, MA5683T OLTs

ZTE C200, C220, C300 series OLTs

Fiberhome AN5506, AN5516 OLTs

Furukawa, Corecess GEPON OLTs

Hardware Interfaces

1*G/EPON PON Ports	4*5dBi directional external antennas
4*10/100/1000Base-Tx GE Ports	1*USB port
2*FXS VoIP Ports	1*WPS Button
1*CATV port	1*PWR Port
Power Supply: DC 12V, 1.5A	1*Reset button
LED Indications: Power, PON, LOS, Internet, VoIP1, VoIP2, GE1, GE2, GE3, GE4, 2.4 WIFI, 5G WiFi, WPS, USB, CATV	

Specification Table

Standards	IEEE 802.3,IEEE 802.3u, IEEE802.3ab. IEEE 802.3x, IEEE802.1Q, IEEE802.1P, IEEE802.1D, IEEE802.11b/g/n, IEEE802.11AC, ITU-T G.984.1, ITU-T G.984.2, ITU-T G.984.3, ITU-T G.984.4		
WAN Port	1*EPON / GPON WAN Port, SC/UPC Connectors (SC/APC connectors optional)		
LAN Ports	4*10/100/1000Base-Tx Gigabit Ethernet Ports		
VoIP Ports	2*FXS Port		
WiFi	IEEE802.11b/g/n 300Mbps + IEEE802.11AC 867Mbps WiFi		
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		
CATV Interface	1*CATV RF Port		
Fiber Cable	8.3μm, 8.7μm, 9μm and 10μm single mode fiber cable		
Power Supply	AC110-240V Input, DC 12V, 1.5A output		
Temperature & Humidity		Temperature	Humidity
	Working	0 to 50℃	10% - 90%
	Standby	-20 to 70℃	5% - 90% RH

Order Information

Product family	Model NO	Product description & chipset
	SDN7755G4T V2	**4 GE+1CATV GPON/EPON HYBRID ONU** Realtek RTL9607C Dual core, MIPS interAptivTM 900MHz CPU RLX5281 500MHz CPU BoB Hardware
	SDN7757VG4T V2	**4GE+2FXS+1CATV GPON/EPON HYBRID ONU** Realtek RTL9607C Dual core, MIPS interAptivTM 900MHz CPU RLX5281 500MHz CPU BoB Hardware

	SDN7756WG4T V2	**4GE+WiFi+1CATV GPON/EPON HYBRID ONU, 2*5dBi external antennas, 2T2R, 23dBm WiFI Power output** Realtek RTL9607C Dual core, MIPS interAptivTM 900MHz CPU RLX5281 500MHz CPU BoB Hardware
	SDN7757ACG4T V2	**4GE+11N+11AC WiF+1CATV GPON/EPON HYBRID ONU, 4*5dBi external antennas, 4T4R, 25dBm WiFI Power output** Realtek RTL9607C Dual core, MIPS interAptivTM 900MHz CPU RLX5281 500MHz CPU BoB Hardware
	SDN7758VWG4T V2	**4GE+2FXS+WiFi +1CATV GPON/EPON HYBRID ONU, 2*5dBi external antennas, 2T2R, 23dBm WiFI Power output** Realtek RTL9607C Dual core, MIPS interAptivTM 900MHz CPU RLX5281 500MHz CPU BoB Hardware
	SDN7759VACG4T V2	**4GE+2FXS+11N+11AC WiF +1CATV GPON/EPON HYBRID ONU, 4*5dBi external antennas, 4T4R, 25dBm WiFI Power output** Realtek RTL9607C Dual core, MIPS interAptivTM 900MHz CPU RLX5281 500MHz CPU BoB Hardware