4GE Ports
2 FXS Ports

Mesh Wi-Fi
1200Mbps

ANATEL
PRODUTO HOMOLOGADO

WiFi Mesh Controller	2.5G Download 1.25G Upload	Dual Core 900MHz CPU	Multi-WAN Route/Bridge	G/EPON Hybrid

Datasheet V1.1.8

SDN775X-V3 Mesh WiFi XPON ONU family

The SDN775x-V3 is a series of 1200M AC Mesh Wi-Fi supported XPON HYBRID ONUs designed for FTTx applications.
The family of ONUs support both GPON and GEPON features on the same device. It supports 2.5G download speed and 1.25G upload speed. The family of ONUs also support the latest Mesh technology, a Mesh kit at its max capacity can cover an entire area of 1500 Square meters with high density Wi-Fi signals.

Main Characters

- Support both ITU-T G.984.x GPON and IEEE802.3ah GEPON standard,
- Compatible with Huawei, ZTE, Fiberhome, Nokia, CHIMA GPON OLTs.
- IEEE802.11ac 867Mbps + IEEE802.11n 300Mbps Wi-Fi Router
- Mesh controller, support a 1500 square meters of WiFi coverage with multiple Mesh agents
- 1* SC/APC or SC/UPC GPON / GEPON WAN port, 2.5G download and 1.25G upload
- 4 * Gigabit Ethernet LAN ports max, wire-speed data transmission
- Max 2*FXS ports for high quality Voice over IP deployments.

- 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 GEPON, 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.
- Support IPv4 and IPv6, highly applicable in both IP type based networks.
- Support Mesh IEEE802.11 k/v/r, IEEE802.11s protocols
- 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 -30dBm Optical BOSA ,

SC/UPC or SC/APC connector 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

GPON transceiver transmitting power: 0.5-5dbm,

Optical 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 40 Transmission Container (T-Cons)

Support 256 bidirectional GEM port IDs

Support NSR/SR Dynamic Bandwidth Allocation (DBA)

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 Route, 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

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

GEPON Parameters

IEEE802.3ah GEPON standard, support standard OAM

CTC 2.1, 3.0 China Telecom GEPON standard

GEPON BOSA built on board,

SC/APC or SC/UPC connector optional

1310nm wavelength at upstream

1490nm wavelength at downstream

GEPON transceiver sending power: 0-4dBm,

Optical receiving sensitivity: -28dBm

1:64 Fiber 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

Hardware Parameters

Realtek RTL9607C

Dure Core 900Mhz processor for PON

Single Core 500Mhz processor for VoIP

CPU covered with cooling unit.

Support Hardware NAT.

come with a 1Gb 16-bit DDR3 SDRAM

come with a 1Gb Nand Flash

1*GPON SC/APC or SC/UPC port,

2.5G downstream, 1.25G Upstream

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

1*300Mbps Wi-Fi Router,

1*867Mbps Wi-Fi Router

4*5dBi directional external antennas

2* FXS ports, support analog phones

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

LED Lights: PWR,PON,Los,Internet,VoIP1-2,GE1-4, 2.4G Wi-Fi, 5G Wi-Fi, WPS

External power supply, DC 12V,1A- 1.5A.

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 codes

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

1200M Mesh Wi-Fi Router Features

IEEE802.11ac 867M Wi-Fi, 5Ghz

IEEE802.11n 300M Wi-Fi, 2.4Ghz

BandSteering and BeamForming

5GHz and 2.4GHz dual band connections

802.11ac and 802.11n Wi-Fi 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 Wi-Fi throughput

Support WDS Wi-Fi bridge

Wi-Fi Transmission Distance: 100m for indoors,

150m for outdoors

WPS one-key protection over your Wi-Fi network

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

Wi-Fi Multimedia (WMM), enhanced QoS for multimedia packets

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

Mesh Parameters

Can support EasyMesh standards, IEEE802.11 k/v/r , IEEE802.11s

Can use as a Mesh Controller only

Can mesh with Chima Mesh WiFi Routers [serve as Mesh agents] only.

Support mesh up to 6 agents

WiFi coverage up to 1500 square meters

Mesh Backhaul through WiFi or Ethernet cable

Mesh Kits/Capacity:

a.   1*SWR1200AC Mesh Controller+ max 6*SWR1200AC Agents

b.   1*SDN775x-V3 xPON ONT Mesh Controller + max 6*SWR1200AC agents

Interoperable OLTs

GPON OLT Models

CHIMA SGT8000A, SGT8016A, SGT8000B,

SGT8016B, SGT9000B series GPON OLTs

HUAWEI MA5680T, MA5606T, MA5683T GPON OLTs

[Huawei R11/R13/R15/R17/R18 versions interoperable]

ZTE C220, C300, C320 GPON OLTs

[All ZTE OLT firmware versions interoperable]

Fiberhome AN5516-01, AN5516-02 GPON OLTs

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

GEPON OLT Models

CHIMA SNA8800, SNA9000T series

Huawei MA5680T, MA5683T OLTs

Huawei R11/R13/R15/R17/R18 versions interoperable]

ZTE C200, C220, C300 series OLTs

[All ZTE OLT firmware versions interoperable]

Fiberhome AN5506, AN5516 OLTs

[Fiberhome RP700, RP1000 versions interoperable]

Furukawa, Corecess GEPON OLTs

Hardware Interfaces

1*GPON SC/APC or SC/UPC port	4*5dBi directional external antennas
4*10/100/1000Base-Tx GE port	1*Reset button
1*PWR On/Off Switch button	1*USB port
2*FXS VoIP port	1*Wi-Fi on/off button
1*Power Supply Jack	1*WPS button
14 LEDs Indicators	Power, PON, LOS, Internet, VoIP1, VoIP2, GE1-GE4, 2.4G/5GWi-Fi, WPS, USB

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 IEEE802.11 k/v/r , IEEE802.11s
Topology	Star Topology
Uplink port	1*GPON /GEPON WAN port, SC/UPC Connectors or SC/APC connectors optional
Transmission distance	Up to 20Km
Downlink ports	4*10/100/1000Base-Tx Gigabit Ethernet ports
VoIP Ports	2*FXS ports
Wi-Fi	IEEE802.11b/g/n 300Mbps + IEEE802.11ac 867Mbps Wi-Fi
LED Indicators	Power, PON, LOS ,Internet, VoIP1, VoIP2, GE1-GE4, Wi-Fi, WPS
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 and 10µm single mode fiber cable
Power Supply	AC110-240V Input, DC 12V, 1A-1.5A output External Power Supply, 4KV Surge Protection

Temperature & Humidity		Temperature	Humidity
	Working	0 to 45℃	10% - 90%
	Standby	-40 to 70℃	5% - 90% RH

Order Information

Product Pictures	Model No. Product Description & Power Consumption	ANATEL
	SON7754ACG2-v3: 2GE+1200M Mesh Wi-Fi GEPON ONU SGN7754ACG2-v3: 2GE+1200M Mesh Wi-Fi GPON ONT SDN7754ACG2-v3: 2GE+1200M Mesh Wi-Fi XPON HYBRID ONU SC/APC or SC UPC connector optional Power Consumption: 6.5w for GEPON ONU Power Consumption: 6.7w for GPON ONU	**Yes**
	SON7755VACG2-v3: 2GE+1FXS+1200M Mesh Wi-Fi GEPON ONU SGN7755VACG2-v3: 2GE+1FXS+1200M Mesh Wi-Fi GPON ONT SDN7755VACG2-v3: 2GE+1FXS+1200M Mesh Wi-Fi XPON HYBRID ONU	**Yes**

	SC/APC or SC UPC connector optional Power Consumption: 7.7w for GEPON ONU Power Consumption: 7.9w for GPON ONU	
	SON7756ACG4-v3: 4GE+1200M Mesh Wi-Fi GEPON ONU	Yes
	SGN7756ACG4-v3: 4GE+1200M Mesh Wi-Fi GPON ONT	
	SDN7756ACG4-v3: 4GE+1200M Mesh Wi-Fi XPON HYBRID ONU	
	SC/APC or SC UPC connector optional Power Consumption: 10.6w for GEPON ONU Power Consumption: 10.8w for GPON ONU	
	SON7757VACG4-v3: 4GE+1FXS+1200M Mesh Wi-Fi GEPON ONU	Yes
	SGN7757VACG4-v3: 4GE+1FXS+1200M Mesh Wi-Fi GPON ONT	
	SDN7757VACG4-v3: 4GE+1FXS+1200M Mesh Wi-Fi XPON HYBRID ONU	
	SC/APC or SC UPC connector optional Power Consumption: 11.9w for GEPON ONU Power Consumption: 12.1w for GPON ONU	
	SON7758VACG4-v3: 4GE+2FXS+1200M Mesh Wi-Fi GEPON ONU	Yes
	SGN7758VACG4-v3: 4GE+2FXS+1200M Mesh Wi-Fi GPON ONT	
	SDN7758VACG4-v3: 4GE+2FXS+1200M Mesh Wi-Fi XPON HYBRID ONU	
	SC/APC or SC UPC connector optional Power Consumption: 13.1w for GEPON ONU Power Consumption: 13.3w for GPON ONU	