



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

SDN7754ACG2-V2 XPON HYBRID ONU:

The SDN7754ACG2-V2 is a series of ITU-T G.984.x based and IEEE802.3ah based XPON HYBRID ONU designed for home and office users. Its uplink interface is a 1*SC/APC G/EPON port that supports 2.5G downstream and 1.25G upstream bandwidth for GPON and supports 1.25G downstream and 1.25G upstream bandwidth for GEPON. It can access GEPON / GPONOLTs. It offers 2 Gigabit Ethernet ports for LAN. The SDN7754AG2 series also offers a 1200Mbps Wi-Fi Router, providing excellent Wi-Fi experience for subscribers. Built for FTTH deployments, it supports powerful home gateway/CPE features, such as Multiple WAN, QoS, VLAN, Firewall, ACL, etc. It is a high-end Internet Data and Wi-Fi all-in-one GEPON / 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, Nokia, CHIMA GPON OLTs.
- IEEE802.11ac 867Mbps + IEEE802.11n 300Mbps Wi-Fi Router for Excellent Wi-Fi experiences
- Offers 1* SC/APC GPON / GEPON WAN port, supports 1.25G upstream and 2.5G / 1.25G downstream
- Offers 2 * Gigabit Ethernet LAN ports, wire-speed data transmission
- 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.
- Supports IPv4 and IPv6, highly applicable in both IP type based networks.

Technical Parameters

GPON Parameters

ITU-T G.984.x GPON, built-in with a -30dBm Optical BOSA ,
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)

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

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

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 connector
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

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

Hardware Parameters

Built on powerful GPON SoC, Realtek RTL9607C ,900Mhz
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 port,
2.5G downstream, 1.25G Upstream
2* 10/100/1000Base-Tx Gigabit Ethernet ports
1*300Mbps Wi-Fi Router,
1*867Mbps Wi-Fi Router
4*5dBi directional external antennas
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.

300Mbps + 867Mbps 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
2 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
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

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

Interoperable 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
[\[Fiberhome RP700, RP1000 versions interoperable\]](#)
 Alcatel Lucent 7342, 7360 ISAM GPON OLTs
 Nokia 7360 ISAM GPON OLT
 LSCABLE LST20016 GPON OLT
 ERICSSON BM1500 GPON OLT
 AURORA Trident7, T7-PIM-8802/COLT GPON OLT
 ZHONG HONG MX-180/280, MXK 319, 819, 823, MXK-F1419,
 MXK-F1421

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

Interoperable 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 port	4*5dBi directional external antennas
2*10/100/1000Base-Tx GE port	1*Reset button
1*PWR On/Off Switch button	1*USB port
1*Power Supply Jack	1*Wi-Fi on/off button
	1*WPS button
10 LEDs Indicators:	Power, PON, LOS, Internet, GE1-GE2, 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		
Topology	Star Topology		
Uplink port	1*XPON WAN port, SC/APC Connector		
Transmission distance	Up to 20Km		
Downlink ports	2*10/100/1000Base-Tx Gigabit Ethernet ports		
Wi-Fi	IEEE802.11b/g/n 300Mbps + IEEE802.11ac 867Mbps Wi-Fi		
LED Indicators	Power, PON, LOS, Internet, GE1-GE2, 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°C	10% - 90%
	Standby	-40 to 70°C	5% - 90% RH

Order Information

Product Family	Model No. Product Description & Chipset	ANATEL
	SDN7754ACG2: 2GE+1200M Wi-Fi XPON HYBRID ONU	
	Realtek RTL9607C 900Mhz CPU Power Supply: DC12V,1A, 4KV Surge protection SC/APC connector Power Consumption: 6.7w for XPON ONU	