

4 GE ports
2 FXS ports

1200Mbps
Wi-Fi



IEEE802.3ah GE PON
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

SON7758VACG4-V2 EPON ONU:

The SON7758VACG4-V2 is a series of IEEE802.3ah based EPON ONU designed for home and office users. Its uplink interface is a 1*SC/APC or SC/UPC EPON port that supports 1.25G downstream and 1.25G upstream bandwidth for GE PON. It can access GE PON OLTs. It offers 4 Gigabit Ethernet ports for LAN. The SON7758VACG4-V2 series also offers 2* FXS ports and a 1200Mbps Wi-Fi Router, providing high quality voice and 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, Voice and Wi-Fi all-in-one GE PON ONU for ISPs deploying Triple Play networks over single fiber.

Main Characters

- IEEE802.3ah GEPON standard,
- Compatible with Huawei, ZTE, Fiberhome, Nokia, CHIMA GEPON OLTs.
- IEEE802.11ac 867Mbps + IEEE802.11n 300Mbps Wi-Fi Router for Excellent Wi-Fi experiences
- Offers 1* SC/APC or SC/UPC GEPON WAN port, supports 1.25G upstream and downstream
- Offers 4 * Gigabit Ethernet LAN ports, wire-speed data transmission
- Offers 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 1:64 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 OAM and TR069 Management, manage subscribers remotely.
- Supports IPv4 and IPv6, highly applicable in both IP type based networks.

Technical Parameters

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

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

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

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

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

Hardware Parameters

Realtek RTL9607C
Dual core, MIPS interAptiv™ 900MHz CPU
RLX5281 500MHz CPU
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.

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 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		
Topology	Star Topology		
Uplink port	1*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°C	10% - 90%
	Standby	-40 to 70°C	5% - 90% RH

Order Information

Product Family	Model No. Product Description & Chipset	ANATEL
	<p>SON7754G4: 4GE GEPON ONU</p> <p>Realtek RTL9607C</p> <p>Dual core, MIPS interAptiv™ 900MHz CPU</p> <p>RLX5281 500MHz CPU</p> <p>Power Supply: DC12V,1A, 4KV Surge protection</p> <p>SC/APC or SC UPC connector optional</p> <p>Power Consumption: 6.5w for GEPON ONU</p>	
	<p>SON7755VG4: 4GE+1FXS GEPON ONU</p> <p>Realtek RTL9607C</p> <p>Dual core, MIPS interAptiv™ 900MHz CPU</p> <p>RLX5281 500MHz CPU</p> <p>Power Supply: DC12V,1.5A, 4KV Surge protection</p> <p>SC/APC or SC UPC connector optional</p> <p>Power Consumption: 7.7w for GEPON ONU</p>	
	<p>SON7756VG4: 4GE+2FXS GEPON ONU</p> <p>Realtek RTL9607C</p> <p>Dual core, MIPS interAptiv™ 900MHz CPU</p> <p>RLX5281 500MHz CPU</p> <p>Power Supply: DC12V,1.5A, 4KV Surge protection</p> <p>SC/APC or SC UPC connector optional</p> <p>Power Consumption: 8.9w for GEPON ONU</p>	
	<p>SON7755WG4: 4GE+300M Wi-Fi GEPON ONU</p> <p>Realtek RTL9607C</p> <p>Dual core, MIPS interAptiv™ 900MHz CPU</p> <p>RLX5281 500MHz CPU</p> <p>Power Supply: DC12V,1A, 4KV Surge protection</p> <p>SC/APC or SC UPC connector optional</p> <p>Power Consumption: 8.1w for GEPON ONU</p>	

	<p>SON7756VWG4: 4GE+1FXS+300M Wi-Fi GEPON ONU</p> <hr/> <p>Realtek RTL9607C Dual core, MIPS interAptivTM 900MHz CPU RLX5281 500MHz CPU Power Supply: DC12V,1.5A, 4KV Surge protection SC/APC or SC UPC connector optional Power Consumption: 9.4w for GEPON ONU</p>	
	<p>SON7757VWG4: 4GE+2FXS+300M Wi-Fi GEPON ONU</p> <hr/> <p>Realtek RTL9607C Dual core, MIPS interAptivTM 900MHz CPU RLX5281 500MHz CPU Power Supply: DC12V,1.5A, 4KV Surge protection SC/APC or SC UPC connector optional Power Consumption: 10.2w for GEPON ONU</p>	
	<p>SON7754ACG2: 2GE+1200M Wi-Fi GEPON ONU</p> <hr/> <p>Realtek RTL9607C Dual core, MIPS interAptivTM 900MHz CPU RLX5281 500MHz CPU Power Supply: DC12V,1A, 4KV Surge protection SC/APC or SC UPC connector optional Power Consumption: 6.5w for GEPON ONU</p>	
	<p>SON7755VACG2: 2GE+1FXS+1200M Wi-Fi GEPON ONU</p> <hr/> <p>Realtek RTL9607C Dual core, MIPS interAptivTM 900MHz CPU RLX5281 500MHz CPU Power Supply: DC12V,1.5A, 4KV Surge protection SC/APC or SC UPC connector optional Power Consumption: 7.7w for GEPON ONU</p>	
	<p>SON7756ACG4: 4GE+1200M Wi-Fi GEPON ONU</p> <hr/> <p>Realtek RTL9607C Dual core, MIPS interAptivTM 900MHz CPU RLX5281 500MHz CPU Power Supply: DC12V,1A, 4KV Surge protection SC/APC or SC UPC connector optional Power Consumption: 10.6w for GEPON ONU</p>	

	<p>SON7757VACG4: 4GE+1FXS+1200M Wi-Fi GEPON ONU</p> <hr/> <p>Realtek RTL9607C Dual core, MIPS interAptiv™ 900MHz CPU RLX5281 500MHz CPU Power Supply: DC12V,1.5A, 4KV Surge protection SC/APC or SC UPC connector optional Power Consumption: 11.9w for GEPON ONU</p>	
	<p>SON7758VACG4: 4GE+2FXS+1200M Wi-Fi GEPON ONU</p> <hr/> <p>Realtek RTL9607C Dual core, MIPS interAptiv™ 900MHz CPU RLX5281 500MHz CPU Power Supply: DC12V,1.5A, 4KV Surge protection SC/APC or SC UPC connector optional Power Consumption: 13.1w for GEPON ONU</p>	