

1 GE + 1FE
+ 1FXS



300M WiFi



IEEE802.3ah
CTC2.1, 3.0
DBA

1.25Gbps
GEPON
Fiber WAN
Port

RTL9602C
Processor

Multi-WAN
Route/Bridge

IPv4/IPv6
VLAN, QOS
Firewall, ACL

Datasheet V1.1.5

SON725X Series GEPON ONU:

The SON725X is IEEE802.3ah based GEPON ONU that supports 1.25G downstream and 1.25G upstream bandwidth. It supports full Home Gateway features, such as Multiple WAN connections, VLAN, QOS, etc. It is a cost effective WiFi GEPON ONU for Fiber to the home deployments.

Main Characters

- IEEE802.3ah GEPON standard, compatible with Huawei, ZTE, Fiberhome, CHIMAGEPON OLTs
- Offers 1 GEPON WAN Port, support 1.25G upstream and 1.25G downstream
- LAN Ports can be configured in Route or Bridge mode
- FXS port for high quality Voice over IP deployment
- Offers IEEE802.11n 300Mbps 2T2R WiFi Router features
- Max 1:64 Fiber ratio, max transmission distance can reach 20km
- Multiple WAN connections, offers different services on different LAN ports

- Support AES encrypted data transmission, enhancing transmission security
- Support FEC (Forward Error Correction), ensures high reliable and precise data transmission
- Support Dynamic Bandwidth Allocation (DBA), Smarter bandwidth assignment and usage
- Local and Remote Management, support WEB, FTP/TFTP/HTTP Auto Provisioning, TR069, NMS management
- IPv4 and IPv6, ensuring compatibility and usability in both IP network types

Technical Parameters

GEPON Parameters

IEEE802.3ah GEPON standard, support standard OAM
CTC 2.1, 3.0 China Telecom GEPON standard
Built-in with a bosa or 2*10 SFF packaged GEPON transceiver, SC/PC connector
1310nm wavelength at upstream & 1490nm wavelength at downstream
GEPON transceiver sending power: 0.5-5dbm, 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

300Mbps WiFi Router Features

IEEE802.11b/g/n 300Mbps WiFi Router
2*5dBi external antennas, 2T2R, 2.4GHz frequency
Minimum 16dBm WiFi Power Output
WiFi Transmission Distance: 150m for indoors, 300m for outdoors
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
Automatically choose the best signal channel
STA mutual isolation and ACL table based on MAC Accesses
WiFi Multimedia (WMM), enhanced QOS for multimedia packets

Home Gateway/CPE Features

Support both IPV4 and IPV6 WAN connections
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

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 1 FXS port 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

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

Management Features

Web UI Management
 OAM & NMS Management
 CLI command line management
 FTP/TFTP/HTTP Auto Provision Management
 TR069 ACS management

Hardware Parameters & Interfaces:

Built with Realtek RTL9602C GEPON SOC
 CPU covered with cooling unit, support Hardware NAT
 1*GEPON SC Port, 1.25G downstream, 1.25G Upstream
 10/100/1000Base-Tx Gigabit Ethernet Port
 10/100Base-Tx Fast Ethernet Port
 FXS port, support analog phones
 1*IEEE802.11b/g/n 300Mbps WiFi Router, 2*5dBi external antennas

IEEE802.3x flow control Full duplex and half duplex
 LED Indications: Power, PON, LOS, INTERNET, VOIP, GE, FE, WiFi, WPS
 1*Reset button, 1*WPS button, 1*ON/OFF button
 External Power Supply: DC 12V, 1A
 Desktop design, Plastic housing

Specification Table

Standards	IEEE 802.3, IEEE 802.3u, IEEE 802.3ab, IEEE802.3ah, IEEE802.1Q, IEEE802.1P, IEEE802.1D, IEEE802.11B/G/N
Topology	Star Topology
Uplink Port	1 GEPON SC Uplink port, SC/PC Connector
GEPON Transmission Distance	Up to 20Km
Downlink Port	10/100/1000Base-Tx Gigabit LAN 10/100Base-Tx Fast Ethernet Port FXS port
WiFi	IEEE802.11B/G/N 300Mbps WiFi Router, 2T2R, Max 23dBm WiFi Power Output
LED Indicators	Power, PON, LOS, INTERNET, VOIP, GE, FE, WiFi, 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	AC 96-260V, DC 12V, 1A, External Power Supply		
Temperature Humidity		Temperature	Humidity
	Working	0°C - 45°C	10% - 90%
	Standby	-40°C - 70°C	5% - 90% RH

Order Information

Product Family	Model No.	Product Description & Chipset
	SON7254FVWG1	1GE+1FE+1FXS+300M WiFi GEPON ONU, 2*5dBi external antennas, 2T2R, 16~23dBm WiFi Power output
	SON7253FWG1	1GE+1FE+300M WiFi GEPON ONU, 2*5dBi external antennas, 2T2R, 16~23dBm WiFi Power output
	SON7253VWG1	1GE+1FXS+300M WiFi GEPON ONU, 2*5dBi external antennas, 2T2R, 16~23dBm WiFi Power output

	<p>SON7252WG1</p>	<p>1GE+300M WiFi GEPON ONU, 2*5dBi external antennas, 2T2R, 16~23dBm WiFi Power output</p>
	<p>SON7253FVG1</p>	<p>1GE+1FE+1FXS GEPON ONU</p>
	<p>SON7252VG1</p>	<p>1GE+1FXS GEPON ONU</p>
	<p>SON7252FG1</p>	<p>1GE+1FE GEPON ONU</p>
	<p>SON7251G1</p>	<p>1GE GEPON ONU (Support PPPOE and Router)</p>