

## Product Datasheet

# 28-port 10G Uplink Managed Core Switch

(ONV58280S-4TFM)



## OVERVIEW

The ONV58280S-4TFM is a high-performance L3 managed Ethernet switch oriented to the next generation of IP metropolitan area networks, large campus networks, and enterprise networks. It has 4\*10/100/1000Base-T RJ45 and 4\*100/1000Base-X SFP fiber combo ports and 20\*100/1000Base-X SFP fiber ports and 4\*1/10G uplink SFP+ fiber ports. Use 1U/19" installation.

The ONV58280S-4TFM has complete L3 management functions with comprehensive protocols and applications. Based on providing high-performance L2/L3/L4 line-speed switching service deployment and management, it further integrates IPv6, network security, traffic analysis, virtualization, and other network services, combined with various data center high-reliability technologies such as uninterrupted upgrades, forwarding, and redundant protection, thereby ensuring the network's longest communication capabilities. The choice for large data transmission is supporting advanced functions such as RIP, OSPF, and DHCP. Fiber optic connections can be flexibly selected according to the transmission distance or speed to effectively expand 1/10G networks. ONV58280S-4TFM

has a switching capacity of up to 598Gbps and 4\*1/10G uplink SFP+ fiber ports, which greatly increases the network bandwidth converged to the core, meeting users' high-bandwidth requirements for voice, video, and data networks, and is suitable for application needs in smart campuses, large smart communities, smart cities, smart transportation, and other fields.

## FEATURE

### ■ Advanced hardware architecture

- ◇ Adopt advanced hardware architecture design, support 4\*10/100/1000Base-T RJ45 and 4\*100/1000Base-X SFP fiber combo ports and 20\*100/1000Base-X SFP fiber ports and 4\*1/10G uplink SFP+ fiber ports. Meet the high performance, high capacity, high density, and scalability of large data transmission expanded requirements.

### ■ Powerful data service guarantee

- ◇ Complete Ethernet OAM mechanism, supporting 802.3ah, 802.1ag, and ITU-Y.1731, enabling rapid detection and location of faults through real-time monitoring of network operating status.
- ◇ Supports STP/RSTP/MSTP, and VRRP protocols, and supports ring network protection, dual uplink primary and secondary link protection, LACP link aggregation, and other simple and efficient redundant protection mechanisms.
- ◇ The ultra-high-precision BFD bidirectional link detection mechanism realizes millisecond-level fault detection and business recovery through linkage with L2/L3 protocols, greatly improving the reliability of the network system.
- ◇ Support NMS platform cluster management, which can centrally configure and manage switches and upgrade switches in batches through the platform, and monitor switch operation status, IP address conflicts, DHCP conflicts, network loops, port negotiation anomalies, port traffic anomalies, and other faults in real time and accurately locate alarms.

### ■ Rich business feature

- ◇ Complete L3 routing protocols and large routing table capacity to meet the needs of various types of network interconnection, and can form super-large data center networks, campus networks, enterprise networks, and industry user networks.
- ◇ Support IPv6-based Ping, Telnet, SSH, ACL, etc. to meet the needs of pure IPv6 network equipment management and business control.
- ◇ Complete L2 and L3 multicast routing protocols to meet the access requirements of IPTV, multi-terminal high-definition video surveillance, and high-definition video conferencing.
- ◇ Support IPv6 multicast features such as MLD and MLD Snooping, supports IPv6 static routing, RIPng, OSPFv3, BGP4+ and other IPv6 L3 routing protocols to provide users with complete IPv6 L2 and L3 solutions.
- ◇ Support a variety of IPv4 to IPv6 transition technologies, including IPv6 manual tunnels, automatic tunnels, 6to4 tunnels, ISATAP tunnels, and other tunnel technologies to ensure a smooth transition from IPv4 networks to IPv6 networks.

#### ■ Security

- ◇ Support IEEE 802.1x, Radius, BDTacacs+, etc. to provide users with a complete security authentication mechanism.
- ◇ Advanced hardware architecture design, hardware-implemented hierarchical scheduling and protection of messages, support prevention of DoS, TCP SYN Flood, UDP Flood, broadcast storm, large traffic, and other attacks on devices. Support command line hierarchical protection, different levels of users have different management permissions.

#### ■ Stable and reliable

- ◇ Support energy-efficient Ethernet function, and complies with IEEE 802.3az to effectively reduce energy consumption.
- ◇ The intelligent fan design supports a flexible selection of front and back/back and front air ducts and supports automatic fan speed regulation to effectively reduce the speed, reduce noise, and extend the use of the fan.

- ◇ The advanced power system architecture design realizes efficient power conversion, unique power monitoring, slow start, other functions, real-time monitoring of the whole machine operation status, and intelligent adjustment for deep energy saving.

#### ■ Easy O&M management

- ◇ Support CPU monitoring, memory monitoring, Ping detection, and cable length detection.
- ◇ Support RMON, system log, and port traffic statistics to facilitate network optimization and transformation.
- ◇ Support HTTPS, SSLV3, SSHV1/V2, and other encryption methods, making management more secure.
- ◇ Support LLDP to facilitate the network management system to query and judge the communication status of the link.
- ◇ Support Web network management, CLI command line (Console, Telnet), SNMP (V1/V2/V3), Telnet, and other management and maintenance methods.

## TECHNICAL SPECIFICATION

Model	ONV58280S-4TFM
<b>Interface Characteristics</b>	
Fixed Port	1*RJ45 Console port 4*1/10G uplink SFP+ fiber ports (Data) 20*100/1000Base-X SFP fiber ports (Data) 4*10/100/1000Base-T RJ45 ports (Data) 4*100/1000Base-X SFP fiber combo ports (Data)
Ethernet Port	Port 1-4 can support 10/100/1000Base-T auto-sensing, full/ half duplex MDI/ MDI-X self-adaption
Twisted Pair Transmission	10BASE-T: Cat3,4,5 UTP (≤100 meters) 100BASE-TX: Cat5 or later UTP (≤100 meters) 1000BASE-T: Cat5e or later UTP (≤100 meters)

Optical Fiber Port	1/10G SFP+ optical fiber interface, default no include optical modules (optional single-mode/ multi-mode, single fiber/ dual fiber optical module. LC)
Optical Cable/ Distance	Multi-mode: 850nm/ 0-550m, Single-mode: 1310nm/ 0-40km, 1550nm/ 0-120km.
<b>Chip Parameter</b>	
Network Management Type	L3
Network Protocol	IEEE 802.3u 100Base-TX, IEEE 802.3ab 1000Base-T, IEEE 802.3z 1000Base-X, IEEE 802.3ae 10Gb/s Ethernet, IEEE 802.3x
Forwarding Mode	Store and Forward (Full Wire Speed)
Switching Capacity	598Gbps (non-blocking)
Forwarding Rate @64byte	222Mpps
MAC	16K
Buffer Memory	12M
Jumbo Frame	9K
LED Indicator	Power: PWR (Green), System: SYS (Green), Fiber port: 1-28 (Green)
<b>Power Supply</b>	
Total PWR/ Input Voltage	72W/ (AC100-240V)
Power Consumption	Standby<35W, Full Load<70W
Power Supply	Built-in power supply, AC100~240V 50-60Hz, 1.0A
<b>Physical Parameter</b>	
Operation Temp/ Humidity	-20°C~+55°C, 5%~90% RH Non condensing
Storage Temp/ Humidity	-40°C~+75°C, 5%~95% RH Non condensing
Dimension (L*W*H)	440*208*45mm

Net /Gross Weight	<5.0kg / <5.3kg
Installation	Desktop, 1U/19" cabinet
<b>Certification &amp; Warranty</b>	
Lightning Protection	Port lightning protection: 6KV 8/20us, Protection level: IP30
Certification	CCC, CE mark, commercial, CE/LVD EN62368-1, FCC Part 15 Class B, RoHS
Warranty	3 years, lifelong maintenance.
<b>Network Management Feature</b>	
Virtualization and Stacking	VRRP virtualization stack, active/ standby switching
Port Properties	802.3X flow control IEEE 802.3az Green Ethernet Limit the rate of ingress/egress ports Backpressure flow control in half-duplex mode Storm suppression based on bandwidth adjustment and storm filtering Storm suppression for unknown unicast, multicast, and broadcast types
VLAN	4K VLAN, Port-based VLAN, 802.1ad (QinQ) fixed
L2 Ring Network Protocol	Standard ERPS ring network Port Fast, Uplink Fast, Backbone Fast BPDU Guard, BPDU Filter, Root Guard Spanning tree ring network: 802.1d STP, 802.1w RSTP, 802.1s MSTP
IPv4	Inter vlan multiple IP, Inter-area route filtering Support multi-domain/multi-domain interoperability Routing COST settings, Plain text/MD5 encryption RIP v1/v2, OSPF, BGP, VRRP, VRRP preemption, BFD and Track Active/standby switchover, Default routing, Policy routing, Static routing
IPv6	IPv6 static routing, RIPng IPv6-Ping, IPv6-Tracert, IPv6-Telnet, IPv6-TFTP, IPv6-ICMP

DHCP	DHCP Snooping, DHCP Relay, DHCP Server
Multicast	IGMP Proxy, IGMP V1/2(Snooping)
Mirroring	CPU image Port mirroring for incoming port packets Mirroring of multiple pairs of 1 destination port Perform port mirroring on outgoing port packets
ACL/QoS	ACL verification of source port Access list based on source mac ACL verification of destination port Access lists that support time periods SP, WRR, SP+WRR scheduling mode ACL verification of source IP address Mac access list based on ethernet type ACL verification of destination IP address 8 queues, 802.1P/DSCP priority mapping DSCP priority remarking, IP access list-standard ACL 802.1P(CoS) priority marking, Qos based on DSCP/COS
Security	ARP Aing/Bnding/Proxy, Radius certification Port security, Port-based MAC address filtering Port isolation, MAC address-based authentication Loop detection (private), Single-group port isolation 802.1X remote authentication, IP source protection Storm suppression for multicast/unknown unicast/broadcast Port-based 802.1X local authentication, Multiple port isolation
Management	Restore factory mode, RMON event history SNMP v1/v2/v3, Console, Telnet, SSH 2.0 TFTP file upload and download management ONV-NMS local platform cluster management NTP, Ping, Tracert, SNMP Alarm/Inform/Traps

	<p>SNMP (Simple Network Management Protocol)</p> <p>Browser-based WEB management (HTTP, HTTPS)</p> <p>User hierarchical management and password protection</p> <p>Hierarchical alarm, System log (operation log and alarm log)</p>
System	<p>Web browser: Mozilla Firefox 2.5 or higher, Google Chrome V42 or higher, Cat5 and above Ethernet cable</p> <p>TCP/IP, network adapter, and network operating system (such as Microsoft Windows, Linux, Mac OS X) installed on each computer in the network Cat5 and above Ethernet cable</p>

## ORDERING INFORMATION

Model	Description	Built-in Power Supply
ONV58280S-4TFM	L3 managed Ethernet switch with 4*1/10G uplink SFP+ fiber ports and 4*10/100/1000Base-T RJ45 and 4*100/1000Base-X SFP fiber combo ports and 20*100/1000Base-X SFP fiber ports. Built-in power supply and supports 1U/19" cabinet installation.	72W

**Note:** The optical module is not included and needs to be purchased.

## PACKING LIST

	Content	Qty	Unit
Packing List	28-port 10G uplink managed core switch	1	Set
	AC Power Cable	1	PC
	Mounting Kit	1	Set
	Warranty Card and Certificate of Conformity	1	PC



## OPTICAL MODULE

Product	Model	Description	Unit
1.25G Optical Module	2630	SFP optical module, 1.25G multi-mode dual fiber 850nm, transmission distance: 550m, LC interface. support DDM function and hot plugging.	PC
	2632	SFP optical module, 1.25G single-mode dual fiber 1310nm, transmission distance: 20km, LC interface. support DDM function and hot plugging.	PC
	2612-T	SFP optical module, 1.25G single-mode single fiber TX1310nm/RX1550nm, transmission distance: 20km, LC interface. support DDM function and hot plugging.	PC
	2613-R	SFP optical module, 1.25G single-mode single fiber TX1550nm/RX1310nm, transmission distance: 20km, LC interface. support DDM function and hot plugging.	PC
	2612-T-SC	SFP optical module, 1.25G single-mode single fiber TX1310nm/RX1550nm, transmission distance: 20km, SC interface. support DDM function and hot plugging.	PC
	2613-R-SC	SFP optical module, 1.25G single-mode single fiber TX1550nm/RX1310nm, transmission distance: 20km, SC interface. support DDM function and hot plugging.	PC
Power Module	2633	1.25G SFP optical module transfers to 10/100/1000M RJ45 port.	PC
10G Optical Module	6630	SFP+ optical module, 10G multi-mode dual fiber 850nm, transmission distance: 300m, LC interface. support DDM function and hot plugging.	PC
	7832	SFP+ optical module, 10G single-mode dual fiber 1310nm, transmission distance: 20km, LC interface. support DDM function and hot plugging.	PC

7832-33	SFP+ optical module, 10G single-mode single fiber TX1330nm/ RX1270nm, transmission distance: 20km, LC interface. support DDM function and hot plugging.	PC
7832-27	SFP+ optical module, 10G single-mode single fiber TX1270nm/ RX13300nm, transmission distance: 20km, LC interface. support DDM function and hot plugging.	PC

## CONTACT US



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