### **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

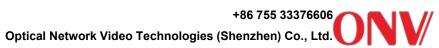
- Support CPU monitoring, memory monitoring, Ping detection, and cable length detection.
- Support RMON, system log, and port traffic statistics to facilitate network optimization and transformation.
- Support HTTPS, SSLV3, SSHV1/V2, and other encryption methods, making management more secure.
- Support 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			
Interface Characteristics				
	1*RJ45 Console port			
	4*1/10G uplink SFP+ fiber ports (Data)			
Fixed Port	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			
Torioto d Dain	10BASE-T: Cat3,4,5 UTP (≤100 meters)			
Twisted Pair	100BASE-TX: Cat5 or later UTP (≤100 meters)			
Transmission	1000BASE-T: Cat5e or later UTP (≤100 meters)			



	1/10G SFP+ optical fiber interface, default no include optical modules
Optical Fiber Port	(optional single-mode/ multi-mode, single fiber/ dual fiber optical module.
	LC)
Ontinal Cable/ Distance	Multi-mode: 850nm/ 0-550m, Single-mode: 1310nm/ 0-40km, 1550nm/
Optical Cable/ Distance	0-120km.
Chip Parameter	
Network Management	L3
Туре	L5
Network Protocol	IEEE 802.3u 100Base-TX, IEEE 802.3ab 1000Base-T, IEEE 802.3z
Network Protocol	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	000Mmma
@64byte	222Mpps
MAC	16K
Buffer Memory	12M
Jumbo Frame	9K
LED Indicator	Power: PWR (Green), System: SYS (Green), Fiber port: 1-28 (Green)
Power Supply	
Total PWR/ Input	70/4// (4.0.4.0.0.0.4.0./)
Voltage	72W/ (AC100-240V)
Power Consumption	Standby<35W, Full Load<70W
Power Supply	Built-in power supply, AC100~240V 50-60Hz, 1.0A
Physical Parameter	
Operation Temp/	0000 .5500 50/ 000/ DILNess condensions
Humidity	-20°C~+55°C, 5%~90% RH Non condensing
Storage Temp/	40°C 175°C 50′ 050′ DI Nan aardanaina
Humidity	-40°C~+75°C, 5%~95% RH Non condensing
Dimension (L*W*H)	440*208*45mm



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Net /Gross Weight	<5.0kg / <5.3kg		
Installation	Desktop, 1U/19" cabinet		
Certification & Warranty			
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		
Warranty	3 years, lifelong maintenance.		
Network Management I	Feature		
Virtualization and Stacking	VRRP virtualization stack, active/ standby switching		
	802.3X flow control		
	IEEE 802.3az Green Ethernet		
	Limit the rate of ingress/egress ports		
Port Properties	Backpressure flow control in half-duplex mode		
	Storm suppression based on bandwidth adjustment and storm filtering		
	Storm suppression for unknown unicast, multicast, multicast, and		
	broadcast types		
VLAN	4K VLAN, Port-based VLAN, 802.1ad (QinQ) fixed		
	Standard ERPS ring network		
L2 Ring Network	Port Fast, Uplink Fast, Backbone Fast		
Protocol	BPDU Guard, BPDU Filter, Root Guard		
	Spanning tree ring network: 802.1d STP, 802.1w RSTP, 802.1s MSTP		
	Inter vlan multiple IP, Inter-area route filtering		
	Support multi-domain/multi-domain interoperability		
IPv4	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		
11 10	IPv6-Ping, IPv6-Tracert, IPv6-Telnet, IPv6-TFTP, IPv6-ICMP		



DHCP	DHCP Snooping, DHCP Relay, DHCP Server	
Multicast	IGMP Proxy, IGMP V1/2(Snooping)	
	CPU image	
Mirroring	Port mirroring for incoming port packets	
	Mirroring of multiple pairs of 1 destination port	
	Perform port mirroring on outgoing port packets	
	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/QoS	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	
	ARP Aing/Bnding/Proxy, Radius certification	
	Port security, Port-based MAC address filtering	
	Port isolation, MAC address-based authentication	
Security	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	
	Restore factory mode, RMON event history	
	SNMP v1/v2/v3, Console, Telnet, SSH 2.0	
Management	TFTP file upload and download management	
	ONV-NMS local platform cluster management	
	NTP, Ping, Tracert, SNMP Alarm/Inform/Traps	



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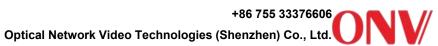
	SNMP (Simple Network Management Protocol)	
	Browser-based WEB management (HTTP, HTTPS)	
	User hierarchical management and password protection	
	Hierarchical alarm, System log (operation log and alarm log)	
	Web browser: Mozilla Firefox 2.5 or higher, Google Chrome V42 or	
	higher, Cat5 and above Ethernet cable	
System	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	

## **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	72W	
	20*100/1000Base-X SFP fiber ports. Built-in power		
	supply and supports 1U/19" cabinet installation.		
Note: The optical module is not included and needs to be purchased.			

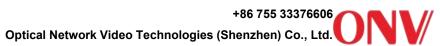
## **PACKING LIST**

Packing List	Content	Qty	Unit
	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			
	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		
1.25G	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		
Optical Module	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		



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

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