Product Datasheet

26-port 10G Core Routing Switch
(ONV68240-2QFM)

OVERVIEW

The ONV68240-2QFM is a high-performance L3 managed Ethernet switch launched by ONV, which is oriented to the next generation of IP metropolitan area networks, large campus networks, and enterprise networks. It has 24*1/10G SFP+ fiber ports and 2*40/100G (QSFP28) fiber ports. Use 1U/19" installation.

To meet the needs of network resource pooling in cloud computing data centers, ONV68240-2QFM supports rich data center features such as BVSS virtualization features. With ONV data center core switches, it can achieve access to more than 15,000 10G servers, providing a complete network solution for ultra-large data centers. Based on giving high-performance L2/L3/L4 line-speed switching services, it further integrates multiple network services such as IPv6, network security, traffic analysis, virtualization, etc., combined with various data center high-reliability technologies such as uninterrupted upgrades, uninterrupted forwarding, graceful restart, and redundant protection, thereby ensuring the network's longest uninterrupted communication capabilities.

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FEATURE

■　**Advanced hardware architecture**

◇　Standard data center switching between front-back mode and back -front mode deign and fan automatic speed regulation.

◇　Equipped with ASIC switching chip and multi-core processor, with switching capacity of 1.28Tbps, meeting the high performance, high capacity, high density, and scalability requirements of the data center.

■　**Data center service feature**

VSS (Virtual Switch System) virtualization cluster switching technology

◇　VSS can virtualize multiple physical devices into a logical device. Its virtual system's performance, reliability, flexibility, and management are superior to independent physical devices.

◇　The distance of the virtual cluster system can be extended to 80km through the virtual cluster function, which is flexible and convenient, breaking the geographical restrictions of traditional cluster technology.

◇　The virtualization system can make full use of each link between physical devices, avoid the blocking of links by the spanning tree protocol of the traditional networking model, double the performance, and protect the original link investment to the greatest extent.

◇　The entire virtual system realizes unified management of a single IP, and the actual physical equipment is transparent to users, which simplifies the management of network equipment and network topology, greatly improves network operation efficiency, and effectively reduces operation and maintenance costs.

◇　Based on advanced distributed processing technology, through efficient cross-physical device link aggregation function, the separation of the logical control plane and the business data plane is realized, providing uninterrupted three-layer routing forwarding, avoiding business interruption caused by single point failure, and greatly improving the reliability of the virtual system.

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■ High reliability of data center

◇ Support ISSU (In-Service Software Upgrade) to ensure uninterrupted forwarding of user data during system upgrades and master control switching.

◇ Complete Ethernet OAM mechanism, supports 802.3ah, and realizes rapid detection and location of faults through real-time monitoring of network operation status.

◇ Based on HPS (Hitless Protection System), the key power supply system adopts a redundant design, modular hot-swappable, and supports seamless switching in case of failure without interrupting business.

◇ Support STP/RSTP/MSTP protocols, VRRP protocols, and simple and efficient redundant protection mechanisms such as ring network protection, dual uplink master-slave link protection, and LACP link aggregation.

◇ Ultra-high-precision BFD bidirectional link detection mechanism, through linkage with L2/L3 protocols, realizes millisecond-level fault detection and service recovery, greatly improving the reliability of the network system.

■ Rich business feature

◇ Complete L2 and L3 multicast routing protocols to meet the access requirements of IPTV, multi-terminal HD video surveillance, and HD video conferencing.

◇ Complete L3 routing protocols and large routing table capacity to meet the needs of various types of network interconnection, and can form ultra-large data center networks, campus networks, enterprise networks, and industry user private networks.

■ Comprehensive IPv6 solution

◇ Support IPv6 protocol family, IPv6 neighbor discovery, ICMPv6, Path MTU discovery, DHCPv6, and other IPv6 features.

◇ Support IPv6-based Ping, Traceroute, Telnet, SSH, ACL, etc. to meet the needs of pure IPv6 network equipment management and business control.

◇ Support IPv6 multicast features such as MLD and MLD Snooping, IPv6 static routing, RIPng, OSPFv3, BGP4+, and other IPv6 L3 routing protocols to provide users with complete IPv6 L2 and L3 solutions.

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■ **Security**

◇ Support IEEE 802.1x, Radius, and Tacacs+, to provide users with a complete security authentication mechanism.

◇ Advanced hardware architecture design, hardware-implemented hierarchical scheduling, and protection of messages, support for preventing DoS, TCP SYN Flood, UDP Flood, broadcast storm, large traffic, and other attacks on the device. support command line hierarchical protection, different levels of users have different management permissions.

◇ Support plain text or MD5 authentication of related routing protocols, support uRPF reverse routing lookup technology, which can effectively control illegal business. Hardware-level message deep detection and filtering technology, supports deep detection of control messages and data messages, to effectively isolate illegal data messages and improve the security of the network system.
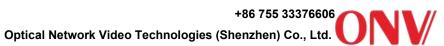
■ **Environmental protection design**

◇ Support energy-efficient Ethernet function and complies with the international standard IEEE 802.3az to effectively reduce energy consumption.

◇ Intelligent fan design supports a flexible selection of front-to-back/back-to-front air ducts and automatic fan speed adjustment, effectively reducing the speed, and noise, and extending the fan life.

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

TECHNICAL SPECIFICATION

Model	ONV68240-2QFM
Fixed Port	24*1/10G SFP+ fiber ports (Data) 2*40G/100G QSFP28 fiber ports (Data)
Power Port	2 ports
Fan	4 (built-in)
Switching Capacity	880Gbps (non-blocking)
Forwarding Rate@64byte	654.72Mpps
MAC	32K
Buffer Memory	32M
Power Supply	AC100~240V 50Hz±10%
Operation Temp/ Humidity	-10°C~+50°C, 5%~90% RH non condensing
Storage Temp/ Humidity	-20°C~+70°C, 5%~95% RH non condensing
Dimension (L*W*H)	442.5*300*44.5mm
Datacenter Feature	Support VSS virtualization technology
MAC Exchange	Configurable MAC address aging time Black hole MAC, Mac address learning quantity limit Static configuration and dynamic learning of MAC addresses View and clear MAC addresses, MAC address filtering function
VLAN	GVRP, Private VLAN, 4K VLAN 1:1 and N:1 VLAN Mapping, Basic QinQ and QinQ functions
STP	802.1D (STP), 802.1W (RSTP), 802.1S (MSTP) BPDU protection, Root protection, Loop protection
Multicast	Multicast traffic cross-VLAN replication Support multicast group policy and multicast group quantity limit IGMP v1/v2/v3, PIM-SM, PIM-DM, IGMP Snooping, IGMP Fast Leave
IPv4	Policy routing, BFD for OSPF, BGP Equal-cost routing to achieve load balancing

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6	Static routing, RIP v1/v2, OSPF, BGP, IS-IS, BEIGRP
IPv6	MLD v1/v2, MLD Snooping ICMPv6, DHCPv6, ACLv6, IPv6 Telnet Manual tunnel, ISATAP tunnel, 6to4 tunnel IPv6 static routing, RIPng, OSPFv3, BGP4+ IPv6 neighbor discovery, Path MTU discovery
QoS	802.1P/DSCP priority remarking CAR traffic limit, Traffic policing and traffic shaping Queue scheduling methods such as SP, WRR, SP+WRR, etc. Congestion avoidance mechanisms such as Tail-Drop and WRED Traffic classification based on each field of the L2/L3/L4 protocol header Ingress and Egress ACL, match L2/L3/L4 and IP quintuple, copy, forward and discard Hash origin and same destination load balancing to ensure session integrity of traffic output
Security	uRPF, IEEE 802.1x certified, Radius, Tacacs+ certified IP+MAC+port binding, DHCP Snooping, DHCP Option 82 Port security, Port isolation, command line hierarchical protection Suppression of multicast, broadcast, and unknown unicast packets Prevent DDoS attacks, TCP SYN Flood attacks, UDP Flood attacks ACL flow identification and filtering security mechanism based on L2/L3/L4
Reliability	Optional power supply 1+1 backup GR for OSPF, BGP, BFD for OSPF, BGP VRRP hot standby protocol, EAPS, ERPS ring network protection Static/LACP link aggregation, support for cross-service card link aggregation
Management	SNMP v1/v2/v3, Browser-based Web management ZTP(Zero Touch Provisioning), RMON event history

	Console, Telnet, SSH 2.0, TFTP file upload and download management
Green Energy Saving	IEEE 802.3az green energy-efficient Ethernet

ORDERING INFORMATION

Model	Description	Power Supply
ONV68240-2QFM	L3 managed Ethernet core routing switch with 24*1/10G SFP+ fiber ports and 2*40/100G QSFP28 fiber ports. Redundant dual AC power supply and support 1U/19" cabinet mount.	75W*2

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

PACKING LIST

	Content	Qty	Unit
Packing List	26-port 10G core routing switch	1	Set
	AC Power Cable	2	PC
	RJ45-DB9 Adapter Cable	1	PC
	Mounting Ear	1	Set
	User Guide	1	PC
	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. supports DDM function and hot plugging.	PC
	2632	SFP optical module, 1.25G single-mode dual fiber 1310nm, transmission distance: 20km, LC interface. supports DDM	PC

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		function and hot plugging.	
	2612-T	SFP optical module, 1.25G single-mode single fiber TX1310nm/ RX1550nm, transmission distance: 20km, LC interface. supports DDM function and hot plugging.	PC
	2613-R	SFP optical module, 1.25G single-mode single fiber TX1550nm/ RX1310nm, transmission distance: 20km, LC interface. supports 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. supports 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. supports 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. supports DDM function and hot plugging.	PC
	7832	SFP+ optical module, 10G single-mode dual fiber 1310nm, transmission distance: 20km, LC interface. supports DDM function and hot plugging.	PC
	7832-33	SFP+ optical module, 10G single-mode single fiber TX1330nm/ RX1270nm, transmission distance: 20km, LC interface. supports DDM function and hot plugging.	PC
	7832-27	SFP+ optical module, 10G single-mode single fiber TX1270nm/ RX1330nm, transmission distance: 20km, LC interface. supports DDM function and hot plugging.	PC

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