

DATACOM



DM-S400

CLOUD MANAGED L3 10 GIGABIT ETHERNET

DATASHEET

DM-S400

CLOUD MANAGED L3 10 GIGABIT ETHERNET SWITCHES

10 GIGABIT ETHERNET MANAGED SWITCH

DM-S400 Switch is a high-performance and secure 10/25/40 Gigabit Ethernet solution designed to meet the growing demands of enterprise networks and cloud applications. With advanced hardware architecture and system, the equipment ensures accelerated processing and enhanced operational experience, forming the basis for high-performance networks that support services for LAN networks, ISPs and Data Centers.

The DM-S400 offers flexible connectivity with 10GE optical interfaces, enabling multi-speed access (10GE/2.5GE/1GE) and high-capacity uplinks through 10GE/25GE/40GE ports, fully meeting aggregation and high-density requirements. With robust switching capability and advanced functionality, the switch is ideal for the aggregation layer in large networks or for the core of medium and small networks, ensuring high speed, security, and intelligence.

DM-S400 switches support several advanced functionalities, such as VLAN configuration, QinQ, Link Aggregation, and Spanning Tree network protection and redundancy protocol (STP, RSTP, MSTP, and ERPS). For Multicast, IGMPv1/v2/v3, PIM-DM/ SM/SSM, and MLDv1/v2 features are supported.

The equipment supports features such as Virtual Switch Unit (VSU) for easy management, advanced Layer 3 routing (OSPF, BGP, IS-IS, ECMP), comprehensive QoS policies, real-time monitoring and multiple security mechanisms.

In addition, it offers simplified management via CLI, Web, and SNMP. The switches are managed by the DmCloud platform, which allows the management of the network in an easy way with ZTP functionality.

For network optimization, the switches have 8 CoS queues per port with traffic classification by IEEE802.1p and multiple matches using ACLs, allowing for bandwidth throttling and traffic conformation.

The Switch has redundant and Hot-Swappable FANs as well as AC Power Supplies operating in redundancy and with Hot-Swapp.

- Cloud Managed L3 Switch
- 20 x 1G/2.5G/10G SFP+ interfaces
- 4 x 10G/25G SFP28 interfaces
- 2x 40G QSFP+ interfaces
- 912Gbps switching capacity
- MAC table with 32K addresses
- VLAN, QinQ, QoS, STP, ERPS
- Static Routing, RIP, OSFP, BGP, IS-IS, ECMP
- IGMPv1/v2/v3, PIM-DM/SM/SSM, MLDv1/v2
- VSU virtual stacking for up to 2 switches
- Hot-Swap redundant power supply

DM-S400 TECHNICAL SPECIFICATIONS

Item	DM-S400 20XS4VS2QX
INTERFACES	20x 1G/2.5G/10G SFP+
	4 x 10G/25G SFP28
	2 x 40G QSFP+
MANAGEMENT INTERFACES	1x MGMT, 1x Console and 1x USB 2.0
SWITCHING CAPACITY	912Gbps
TAXA PACKET FORWARDING	678Mpps
CPU	1.25 GHz ARM
FLASH MEMORY	1GB
RAM MEMORY	1GB
DIMENSIONS [W x D x H]	442 x 330 x 43.6 mm
WEIGHT	5.7kg
ENVIRONMENTAL CONDITIONS	Operating temperature: -5°C to +50°C Storage temperature: -40 to + 70°C Humidity: 10% to 90% non-condensing Altitude: 5,000m
VENTILATION	2x Hot-Swap FAN Modules (Forward to Back Flow)
POWER SUPPLY	2x Redundant Hot-Swap Power Supply Slots AC SUPPLY: 100~240VAC
NOISE	<78dB
POWER CONSUMPTION (W)	<85W
MTBF	>200,000h
SWITCHING	Store-and-forward
PACKET BUFFER	4MB
MAC ADDRESS LEARNING	32.768
JUMBO FRAME (MTU)	9.216 Bytes
ARP TABLE	16k
NEIGHBOR DISCOVERY TABLE	4k
IPv4 UNICAST ROUTES	16k
IPv6 UNICAST ROUTES	16k
IPv4 MULTICAST ROUTES	4k
IPv6 MULTICAST ROUTES	2k
VRFs	100
IGMP GROUPS	4k
MLD GROUPS	1024

DM-S400 – SOFTWARE FEATURES

GROUP	FEATURES
SWITCHING	4k VLAN support (802.1q) Voice VLAN Super-VLAN Private VLAN VLAN Assignment: MAC address-based, port-based, protocol-based, IP subnet-based VLAN GVRP QinQ and Selective QinQ STP (IEEE 802.1d), RSTP (IEEE 802.1w) and MSTP (IEEE 802.1s) ERPS (G.8032) LACP (IEEE 802.3ad) LLDP/LLDP-MED
IP SERVICES	Static and Dynamic ARP DHCP server, DHCP client, DHCP relay and DHCP snooping DNS DHCPv6 Client, DHCPv6 relay and DHCPv6 snooping Neighbor Discovery (ND) and ND snooping
ROUTING	Static Routing RIP / RIPng OSPFv2 / OSPFv3 Graceful Restart IS-IS BGP4 / BGP4+ BGP4 / MP-BGP ECMP IPv4 / IPv6 VRF IPv4 / IPv6 PBR
MULTICAST	IGMPv1/v2/v3 and IGMP proxy IGMPv1/v2/v3 snooping IGMP filtering AND IGMP fast leave PIM-DM, PIM-SM and PIM-SSM PIM-SSM IPv4 / IPv6 MLDv1/v2 MLDv1/v2 snooping MSDP PIM-SMv6 Multicast source IP address check Multicast source port check IGMP packets validity check Multicast querier
ACLs and QoS	Standard IP ACLs (Hardware IP Address-Based ACLs) Extended IP ACLs (hardware ACLs based on IP addresses or TCP/UDP ports) Extended MAC ACLs (Hardware ACLs based on source MAC addresses, destination MAC addresses, and Ethernet type) Expert-level ACLs (hardware ACLs based on flexible combinations of VLAN ID, Ethernet type, MAC address, IP address, TCP/UDP port, protocol type, and time range) Time-based ACLs ACL80 and IPv6 ACL Global ACL enforcement (hardware ACLs based on flexible combinations of VLAN ID, Ethernet type, MAC address, IP address, TCP/UDP port number, protocol type, and time range) ACL redirection Port traffic identification Port traffic rate limiting 802.1p/DSCP/ToS traffic classification Traffic classification based on 802.1p, DSCP, and IP priorities precedences ToS-based traffic classification


	<p>Congestion management: SP, WRR, DRR, WFQ, SP+WRR, SP+DRR and SP+WFQ</p> <p>Congestion avoidance: tail drop, RED and WRED</p> <p>8 rows per door</p> <p>Rate limit per queue</p>
SAFETY	<p>AAA</p> <p>RADIUS and TACACS+</p> <p>Invalid MAC address filter</p> <p>Broadcast storm suppression</p> <p>Hierarchical management of administrators and passwords</p> <p>BPDU guard</p> <p>RADIUS authentication and authorization</p> <p>Port- and MAC address-based 802.1x authentication</p> <p>IEEE802.1X authentication, MAC address bypass (MAB) authentication, interface-based and MAC address-based 802.1X authentication</p> <p>Web authentication</p> <p>Hypertext Transfer Protocol Secure (HTTPS)</p> <p>SSHv1/v2</p> <p>ICMPv6</p> <p>IPv6 addressing and Path MTU Discovery</p> <p>Port security</p> <p>IP source guard</p> <p>SAVI</p> <p>ARP spoofing prevention</p> <p>CPP and NFPP</p> <p>Various attack defense functions, including NFPP, ARP anti-spoofing, DHCP/DHCPv6 attack defense, ICMP attack defense, ND attack defense, IP scan attack defense, and customization of attack defense packet types</p> <p>Loose and strict RPF</p> <p>uRPF ignoring default routes</p>
CONVERGENCE	<p>REUP</p> <p>Rapid Link Detection Protocol (RLDP), Layer 2 link connectivity detection, unidirectional link detection and VLAN-based loop control</p> <p>Data Link Detection Protocol (DLDP)</p> <p>IPv4 VRRP v2/v3 and IPv6 VRRP</p> <p>BFD</p> <p>Graceful Restart for RIP, OSPF, BGP, and other routing protocols</p>
STACKING VIRTUAL	<p>Virtual Switching Unit (VSU): Support stacking up to 2 switches</p>
MANAGEMENT	<p>SPAN, RSPAN, and ERSPAN</p> <p>sFlow</p> <p>NTP, SNTP and NTP for IPv6</p> <p>FTP/TFTP v4, FTP/TFTP v6</p> <p>SNMP v1/v2/v3 / SNMP over IPv6</p> <p>RMON (1, 2, 3, 9)</p> <p>NETCONF</p> <p>Flow-based mirroring, N:1 and 1:N port mirroring</p> <p>CWMP</p> <p>gRPC</p> <p>Open Flow Special 1.3: Analysis of the flow table defined by all protocols, Transmission of specified packets to the controller, Configuration of the IP address and port of the controller, Notification of changes in the status of the port to the controller</p> <p>CLI (Telnet/console)</p> <p>Syslog</p> <p>IPv6 MIB for SNMP</p> <p>Telnet v6</p> <p>Traceroute v6</p> <p>DNS v6</p> <p>Managed by the DmCloud Platform</p>

DM-S400 – NORMS AND STANDARDS

Group	DESCRIPTION
IETF	<p>RFC 1157 A Simple Network Management Protocol (SNMP) RFC 1305 Network Time Protocol Version 3 (NTP) RFC 1349 Internet Protocol (IP) RFC 1350 TFTP Protocol (revision 2) RFC 1519 CIDR RFC 1591 Domain Name System Structure and Delegation RFC 1643 Ethernet Interface MIB RFC 1757 Remote Network Monitoring (RMON) RFC 1812 Requirements for IP Version 4 Router RFC 1901 Introduction to Community-based SNMPv2 RFC 1902-1907 SNMP v2 RFC 1918 Address Allocation for Private Internet RFC 2131 Dynamic Host Configuration Protocol (DHCP) RFC 2132 DHCP Options and BOOTP Vendor Extensions RFC 2571 SNMP Management Frameworks RFC 2863 The Interfaces Group MIB RFC 2865 Remote Authentication Dial In User Service (RADIUS) RFC 2925 Definitions of Managed Objects for Remote Ping, Traceroute, and Lookup Operations (Ping only) RFC 3046 DHCP Option82 RFC 3417 (SNMP Transport Mappings) RFC 3418 Management Information Base (MIB) for the Simple Network Management Protocol (SNMP) RFC 3575 IANA Considerations for RADIUS RFC 3579 RADIUS Support For EAP RFC 4022 MIB for TCP RFC 768 User Datagram Protocol (UDP) RFC 783 TFTP Protocol (revision 2) RFC 792 Internet Control Message Protocol (ICMP) RFC 793 Transmission Control Protocol (TCP) RFC 813 Window and Acknowledgement Strategy in TCP RFC 815 IP datagram reassembly algorithms RFC 826 Ethernet Address Resolution Protocol (ARP) RFC 854 Telnet Protocol RFC 959 File Transfer Protocol (FTP) RFC 1058 Routing Information Protocol (RIP) RFC 1583 OSPF Version 2 RFC 1981 Path MTU Discovery for IP version 6 RFC 1997 BGP Communities Attribute RFC 2236 IGMP RFC 2328 OSPF Version 2 RFC 2385 Protection of BGP Sessions via the TCP MD5 Signature Option RFC 2439 BGP Route Flap Damping RFC 2460 Internet Protocol, Version 6 (IPv6) RFC 2461 Neighbor Discovery for IP Version 6 (IPv6) RFC 2462 IPv6 Stateless Address Auto configuration RFC 2463 Internet Control Message Protocol for IPv6 (ICMPv6) RFC 2545 Use of BGP 4 Multiprotocol Extensions for IPv6 Inter Domain Routing RFC 2711 IPv6 Router Alert Option RFC 2787 Definitions of Managed Objects for the Virtual Router Redundancy Protocol RFC 2918 Route Refresh Capability for BGP 4 RFC 2934 Protocol Independent Multicast MIB for IPv4 RFC 3065 Autonomous System Confederation for BGP RFC 3101 OSPF Not so stubby area option RFC 3137 OSPF Stub Router Advertisement sFlow</p>

	<p>RFC 3509 Alternative Implementations of OSPF Area Border Routers RFC 3513 IP Version 6 Addressing Architecture RFC 3623 Graceful OSPF Restart RFC 3768 VRRP RFC 3810 Multicast Listener Discovery Version 2 (MLDv2) for IPv6 RFC 3973 PIM Dense Mode RFC 4271 A Border Gateway Protocol 4 (BGP 4) RFC 4273 Definitions of Managed Objects for BGP 4 RFC 4360 BGP Extended Communities Attribute RFC 4456 BGP Route Reflection: An Alternative to Full Mesh Internal BGP (IBGP) RFC 4486 Subcodes for BGP Cease Notification Message RFC 4552 Authentication/Confidentiality for OSPFv3 RFC 4724 Graceful Restart Mechanism for BGP RFC 4750 OSPFv2 MIB partial support no SetMIB RFC 4760 Multiprotocol Extensions for BGP 4 RFC 4940 IANA Considerations for OSPF RFC 5065 Autonomous System Confederation for BGP RFC 5187 OSPFv3 Graceful Restart RFC 5340 OSPFv3 for IPv6 RFC 5492 Capabilities Advertisement with BGP 4 RFC 6620 FCFS SAVI</p>
IEEE	<p>IEEE 802.2 Logical Link Control IEEE 802.1ab Link Layer Discovery Protocol IEEE 802.1ad Provider Bridges IEEE 802.1ax/IEEE802.3ad Link Aggregation IEEE 802.1D Media Access Control (MAC) Bridges IEEE 802.1D Spanning Tree Protocol IEEE 802.1Q Virtual Bridged Local Area Networks (VLAN) IEEE 802.1s Multiple Spanning Tree Protocol IEEE 802.1w Rapid Spanning Tree Protocol IEEE 802.3ad Link Aggregation Control Protocol (LACP) IEEE Std 802.3x Full Duplex and flow control</p>

DM-S400 – ORDERING INFORMATION

MODEL	DESCRIPTION	PHOTO
DM-S400 20XS4VS2QX 825.4549.xx	DM-S400 20XS4VS2QX L3 Switch with 20 1G/2.5G/10G SFP+ ports, 4 10G/25G SFP28 ports, and 2 40G QSFP+ ports. Supports redundant AC supplies that must be purchased separately. Transceivers must be purchased separately. Managed by DmCloud.	
DM-S400 PSU AC-F 820.0031.00	DM-S400 PSU AC-F - AC Power Supply, 100-240VAC and 50/60Hz input, 150W power.	

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