



28-PORT LAYER 3 INDUSTRIAL ETHERNET SWITCH – GIGA

DDSMGR SERIES



SYNOPSIS

- TYPE: L3 MANAGED INDUSTRIAL RACK-MOUNT ETHERNET SWITCH
- PORTS: 24 × 10/100/1000BASE-T RJ45, 4 × 1G/2.5G/10GBASE-X SFP+
- MANAGEMENT PORTS: 1 × RJ45 CONSOLE, 1 × USB 2.0 (FOR CONFIGURATION/UPGRADE)
- OPTIONAL I/O: 1 × RS485, 1 × DI, 1 × DO (ON -D MODEL)
- POWER INPUT: 36–75VDC, 100–240VAC, REDUNDANT OPTIONS WITH PROTECTION (REVERSE POLARITY, OVER-VOLTAGE, OVER-CURRENT)
- ENCLOSURE: IP40, FAN-LESS, RACK-MOUNT
- OPERATING TEMPERATURE: -40°C TO +80°C
- MTBF: >200,000 HOURS
- WARRANTY: 5 YEARS

FEATURES & BENEFITS

KEY FEATURES

- LAYER 3: STATIC/DYNAMIC ROUTING, RIP, OSPF, BGP4, ECMP, VRRP, IS-IS
- LAYER 2: VLAN, QINQ, STP/RSTP/MSTP, ERPS (G.8032, ≤20MS RECOVERY), LINK AGGREGATION (LACP/STATIC, UP TO 64 GROUPS), IGMP SNOOPING, PORT MIRRORING, 802.1X, ACL, QOS, RMON, NTP, DHCP SNOOPING/CLIENT, SFP DDM
- REDUNDANCY: DUAL REDUNDANT POWER INPUT, G.8032 ERPS, MSTP/RSTP/STP
- SECURITY: 802.1X, RADIUS, PORT SECURITY, IP/MAC BINDING, ARP CHECK, ACL
- MANAGEMENT: WEB, SNMP V1/V2C/V3, CLI (CONSOLE/TELNET/SSH), USER MANAGEMENT, SYSLOG, FIRMWARE UPGRADE VIA HTTP/TFTP/USB, CONFIGURATION IMPORT/EXPORT (USB/FTP/TFTP)
- DIAGNOSTICS: CABLE DETECTION, DYING GASP, SFP DDM, WATCHDOG, PING/TRACEROUTE
- ALARM/IO (OPTIONAL): DI/DO/RS485

PERFORMANCE

- SWITCHING CAPACITY: 128 GBPS
- PACKET FORWARDING RATE: 190.4 MPPS
- MAC ADDRESS TABLE: 16K
- VLANS SUPPORTED: 4K
- BUFFER: 12 MBIT
- JUMBO FRAME: 10 KB
- FORWARDING DELAY: <5 MS

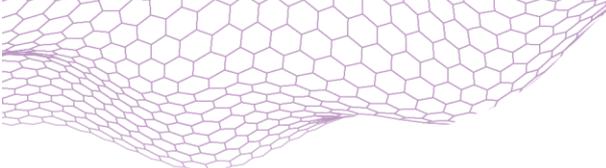
INDUSTRIAL & EMC STANDARDS

- SURGE PROTECTION: IEC 61000-4-5 (POWER: DC 6KV/6KV, AC 4K/2K; ETHERNET: 6KV/2KV)
- ESD: IEC 61000-4-2 (CONTACT: 8KV, AIR: 15KV)
- EFT: IEC 61000-4-4 (POWER: 4KV, SIGNAL: 2KV)
- EMI: FCC PART 15B CLASS A
- SHOCK/VIBRATION/FREE FALL: IEC 60068-2-27/32/6
- CERTIFICATIONS TESTED FOR: CCC, CE, UKCA, ROHS, REACH, FCC

TECHNICAL SPECIFICATIONS

PERFORMANCE

Interface	Fiber ports	Copper RJ45 ports
	4	24
Ethernet	24*10/100/1000Base-T RJ45 4*1G/2.5G/10GBase-X SFP+	
Management port	1*RJ45 Console port (115200,8,N,1) , 1*USB 2.0 for configuration and firmware update	
Data & Alarm channel(optional)	1 channel RS485 1 channel DI(digital input) 1 channel DO(digital output)	
Standard	IEEE 802.3 10Base-T Ethernet IEEE 802.3u 100Base-TX Ethernet IEEE 802.3ab 1000Base-T Ethernet IEEE 802.3z 1000Base-X Ethernet IEEE802.3x Flow Control and Back Pressure IEEE 802.1D Spanning Tree Protocol IEEE 802.1w Rapid Spanning Tree Protocol IEEE 802.1Q VLAN ITU-T G.8032 ERPS IEEE 802.1X Port Authentication Network Control IEEE 802.1ab LLDP IEEE 802.3ad LACP	



LED INDICATORS

P (Power indicator)	Off: the device is power off or failed	On: the device power on is normal
S (System status indicator)	Blinking: device initialization	On: device on normal operation
USB (USB status indicator)	Off: USB flash drive not insert or not detected by device	
	On: USB flash drive is detected by device	
	Blinking: the device is reading and writing the data from USB flash drive	
ALM (Fault status indicator)	Off: Device on normal working state	On: Fault alarm
Red		
1-24 (Copper ports indicators) Green	Off: ports link down	
	On: ports link up	
	Blinking: data on TX/RX	
1-24(Copper speed indicators) Yellow	Off: ports on 10/100M	
	On: ports on 1000M	
25-28(Fiber ports indicators) Green	Off: ports link down	
	On: ports link up	
	Blinking: data on TX/RX	

POWER PARAMETER

Input voltage	36-75VDC 100~240VAC redundant power input
Input current	1A DC/AC input Max
Total power consumption	Full loading $\leq 32W$
Connector	Removable 2*2-pin terminal block(DC/DC) 3-pin AC socket(AC/AC)
Reverse polarity protection	Support
Over-voltage & Current protection	Support

SOFTWARE SPECIFICATIONS

LAYER 2 FUNCTIONS

Port aggregation	Support GE port aggregation Support 2.5GE aggregation Support 10GE aggregation Support static aggregation Support LACP dynamic aggregation Up to 64 aggregation groups and up to 8 ports per group
Port features	Support IEEE802.3x flow control Support interface counters Support port isolation Port mirroring (One-to-One, Many-to-One) Support loop detection(Port-based; VLAN-based) Support broadcast storm suppression(broadcast; unknown multicast; unknown unicast)
Mac-address table management	Support static Mac-address management Support dynamic Mac-address Management Support filtering Mac-address Support MAC limit based on port and VLAN Support MAC flapping based on port and VLAN
VLAN	Support access mode Support trunk mode Support hybrid mode
VLAN classification	Mac Based VLAN IP Based VLAN Protocol Based VLAN
GVRP	Normal mode Fixed mode Forbidden mode
QinQ	Port-based QinQ VLAN-based QinQ (VLAN-stacking; VLAN-mapping) Flow-based QinQ
LLDP	LLDP (Link Layer Discovery Protocol)
Ring network protocol	Support IEEE802.1D-STP Support IEEE802.1W-RSTP

Support IEEE802.1S-MSTP

Support G.8032 ERPS protocol, single ring, sub Ring and major ring
Recovery time ≤ 20 ms

LAYER 2 MULTICAST

IGMP snooping Support IGMP snooping

Group address Support group address

SECURITY FUNCTIONS

ACL IP Standard ACL
MAC extend ACL
IP extend ACL
IPv6 ACL

QoS Support QoS Class, remarking
Support SP, WRR queue scheduling
Ingress port-based rate-limit
Egress port-based rate-limit
Support policy-based QoS

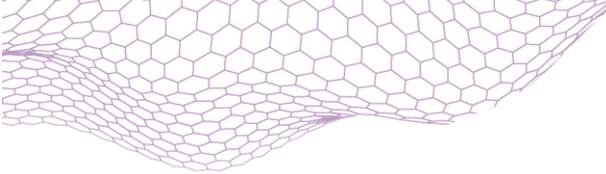
802.1x Port access control
Mac-address access control
RADIUS server

Port-security Port-security

IP source guard IP Port/MAC binding

ARP-check Support ARP-check and ARP packet filtering for illegal users

Access control Support Telnet/SSH/HTTP/HTTPS user access control



MANAGEMENT & MAINTENANCE FUNCTIONS

User Management	Support password protection Support user authorization management
SNMP	Supporting SNMP V1/V2C/V3 version
Web Management	Web Management Support HTTP V1.1 Support HTTPS
CLI management	Console/Telnet command line management
RMON	Support RMON(Remote Monitoring) alarm
Firmware upgrade	Firmware upgrade
Fault Detection	Ping/Tracerout Dying gasp Support optical transceiver DDM function
Cable detection	Support copper port cable detection
NTP	Network Time Protocol
Syslog/Debug	Syslog/Debug Syslog send to three servers
Configuration import/export	Support FTP/TFTP remote import/export Support USB import/export
Dual partition management	Support dual partition switching

APPLICATION PROTOCOL FUNCTIONS

DHCP Snooping	DHCP snooping trust port Support remote-id/circuit-id configuration DHCP option-82
DHCP client	Support DHCP client
Telnet server	Support telnet server
Telnet client	Support telnet client

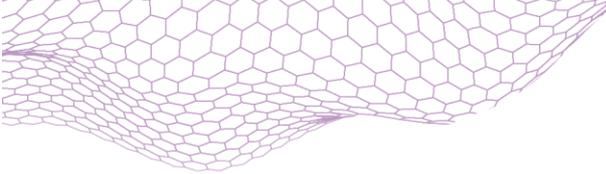
SSH server	Support SSH server
TACACS	Support TACACS(the terminal access controller accesses the control system)
sflow	Support network traffic analysis
TFTP	Support TFTP Client

LAYER 3 FUNCTIONS

ARP	ARP table aging
IPv4 / IPv6	static routing
ECMP	Support ECMP (Equal-cost multi-path routing) Support the configuration of ECMP Max next-hop Support capacity balanced configuration
Route policy	IPv4 prefix-list
VRRP	Virtual Router Redundancy Protocol

ROUTING PROTOCOL SPECIFICATION

RIP	RIPv1/v2
OSPFv2	OSPFv2
BGP4	BGP4 BGP Support Routing Recursive ECMP Support to view the number of neighbors and up/down state
IS-IS	IS-ISv4
Routing entry	13K



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SWITCHING FEATURES

Switching capacity	128Gbps
Packet forwarding rate	190.4Mpps
MAC address table	16K
VLAN	4K
Buffer	12M bit
Forwarding delay	<5us
Jumbo Frame	Support 10Kbytes
MDX/MIDX	Support
Watchdog	Support

MECHANICAL STRUCTURE

Case protection	IP40
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Installation method	Rack mountable
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Dimension(W*D*H)mm	440*45*280mm
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OPERATING ENVIRONMENT

Operating temperature	-40°C~+ 80°C
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Storage / transportation temperature	-40°C~+ 85°C
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Relative humidity	Operation humidity: 10%-90%RH Storage humidity: 5%-95%RH
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CERTIFICATIONS TESTED FOR

INDUSTRIAL STANDARD

EMS	Surge protection of power: IEC 61000-4-5 DC:6KV/6KV Surge protection of Ethernet ports: IEC 61000-4-5 RS : IEC 61000-4-3 80 MHz-1 GHz : 10 V/m EFT : IEC 61000-4-4 power 4K, signal 2K CS : IEC 61000-4-6 10V ESD : IEC 61000-4-2Contact: 8K ; Air: 15K
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EMI	FCC Part 15B Class A
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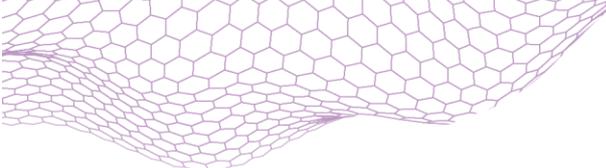
Shock	IEC 60068-2-27
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Free fall	IEC 60068-2-32
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Vibration	IEC 60068-2-6
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Certification	CCC/CE/UKCA/RoHS/REACH/FCC
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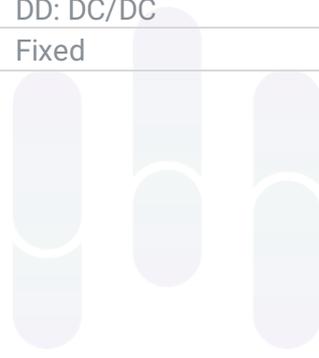
MTBF	> 200,000 hours
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ORDERING CODE

DDSMGR 4024-4S+ XX ST

DDSMGR	Rack Type L3 Giga Managed Industrial Ethernet Switch
4024	24 * Giga Copper Ports
4S+	4 * 10G Fiber SFP Slots
XX	AA: AC/AC AD: AC/DC DD: DC/DC
ST	Fixed



DATA BRIDGE
D Y N A M I C