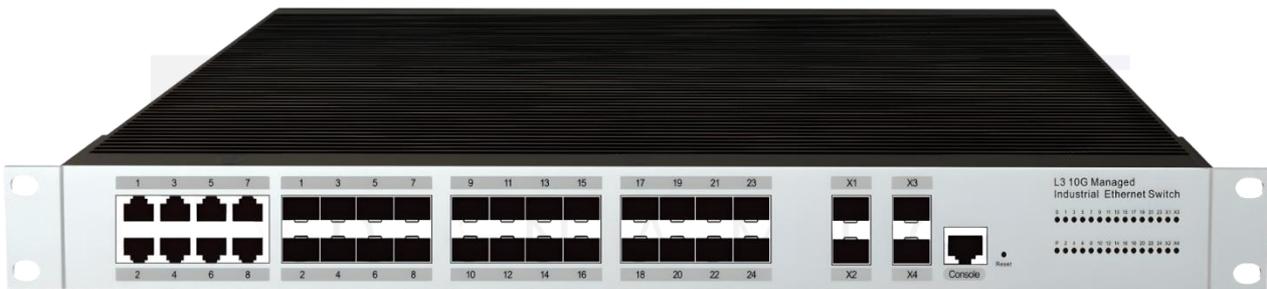
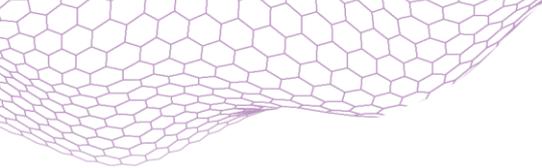




28 PORT LAYER 3 INDUSTRIAL GRADE MANAGED GIGA RACK TYPE SWITCH

DDSMGR SERIES





SYNOPSIS

- THE DDSMGR 4016S-8GC-4S+ AD CF IS A 28-PORT LAYER 3 MANAGED INDUSTRIAL ETHERNET SWITCH
- IT IS EQUIPPED WITH 16 × 100/1000BASE-X SFP PORTS, 8 × COMBO PORTS (10/100/1000BASE-T + 100/1000BASE-X), AND 4 × 1/10G SFP+ FIBER UPLINK PORTS
- THE SWITCH DELIVERS ADVANCED LAYER 3 SWITCHING AND ROUTING CAPABILITIES, SUPPORTING IPV4/IPV6 MANAGEMENT, DYNAMIC ROUTING, AND WIRE-SPEED FORWARDING ACROSS ALL PORTS.
- COMPREHENSIVE SECURITY MECHANISMS ARE INTEGRATED, INCLUDING ACL, QOS POLICIES, AND ADVANCED VLAN FUNCTIONS, ENSURING SECURE, EFFICIENT, AND PRIORITIZED DATA TRANSMISSION WHILE SIMPLIFYING NETWORK MANAGEMENT AND MAINTENANCE.
- FEATURING INDUSTRIAL-GRADE REDUNDANT RING NETWORKING TECHNOLOGY, THE SWITCH SUPPORTS MULTIPLE TOPOLOGIES SUCH AS RING, CHAIN, STAR, DUAL-STAR, TANGENT RING, INTERSECTING RING, AND COUPLED RING NETWORKS.
- EACH PORT CAN PARTICIPATE IN RING FORMATION, WITH FAST SELF-HEALING RECOVERY (<20 MS) USING ERPS, ENSURING UNINTERRUPTED COMMUNICATION IN THE EVENT OF LINK FAILURES.
- DESIGNED FOR HARSH INDUSTRIAL ENVIRONMENTS, THE DDSMGR 4016S-8GC-4S+ CF OFFERS HIGH RELIABILITY, ENHANCED SECURITY, AND STRONG MANAGEABILITY, WITH FULL SUPPORT FOR REMOTE NETWORK MANAGEMENT
- THE RUGGED IP40-RATED ALUMINUM ALLOY ENCLOSURE PROVIDES EXCELLENT HEAT DISSIPATION AND RESISTANCE TO MECHANICAL, CLIMATIC, AND ELECTROMAGNETIC STRESSES
- THE SWITCH ALSO SUPPORTS AC + DC DUAL REDUNDANT POWER INPUTS, ENSURING CONTINUOUS OPERATION IN CRITICAL INDUSTRIAL APPLICATIONS.

FEATURES

- SUPPORTS NON-BLOCKING, WIRE-SPEED PACKET FORWARDING ACROSS ALL PORTS.
- SUPPORTS FULL-DUPLEX OPERATION COMPLIANT WITH IEEE 802.3X FLOW CONTROL AND HALF-DUPLEX OPERATION USING BACKPRESSURE MECHANISM.
- SUPPORTS PORT ISOLATION TO ENHANCE NETWORK SECURITY.
- SUPPORTS BROADCAST STORM CONTROL ON PORTS TO PREVENT NETWORK CONGESTION.
- SUPPORTS FLEXIBLE BINDING OF IP ADDRESS, MAC ADDRESS, PORT, AND VLAN COMBINATIONS FOR ENHANCED ACCESS CONTROL.
- SUPPORTS IEEE 802.1X PORT-BASED AUTHENTICATION, ENABLING CENTRALIZED USER AUTHENTICATION AND DYNAMIC PORT AUTHORIZATION BASED ON AUTHENTICATION RESULTS.
- SUPPORTS ERPS RING PROTECTION AND STP/RSTP/MSTP SPANNING TREE PROTOCOLS FOR NETWORK REDUNDANCY AND LOOP PREVENTION.
- SUPPORTS IEEE 802.1Q VLAN, INCLUDING FLEXIBLE VLAN SEGMENTATION, VOICE VLAN, AND QINQ (VLAN STACKING) CONFIGURATIONS.
- SUPPORTS STATIC AND DYNAMIC LINK AGGREGATION, ENABLING BANDWIDTH EXPANSION, LOAD BALANCING, LINK REDUNDANCY, AND IMPROVED LINK RELIABILITY.
- SUPPORTS QOS MECHANISMS, INCLUDING PORT-BASED, IEEE 802.1P PRIORITY-BASED, AND DSCP-BASED PRIORITIZATION, WITH FOUR QUEUE SCHEDULING ALGORITHMS: EQUAL (EQU), STRICT PRIORITY (SP), WEIGHTED ROUND ROBIN (WRR), AND SP+WRR.
- SUPPORTS ACCESS CONTROL LISTS (ACLs) WITH RULE-BASED PACKET FILTERING, TIME-BASED POLICIES, AND FLEXIBLE SECURITY ACCESS CONTROL.

- SUPPORTS IGMP V1/V2/V3 MULTICAST PROTOCOLS; IGMP SNOOPING OPTIMIZES MULTICAST TRAFFIC FOR MULTI-TERMINAL HD VIDEO SURVEILLANCE AND VIDEO CONFERENCING APPLICATIONS.
- SUPPORTS CPU AND MEMORY UTILIZATION MONITORING, ICMP PING DIAGNOSTICS, AND CABLE LENGTH DETECTION FOR NETWORK HEALTH MONITORING.
- SUPPORTS SECURE MANAGEMENT ACCESS VIA HTTPS, SSLV3, AND SSH V1/V2 ENCRYPTION PROTOCOLS.
- SUPPORTS RMON, SYSTEM LOGGING, AND PORT TRAFFIC STATISTICS FOR PERFORMANCE ANALYSIS, TROUBLESHOOTING, AND NETWORK OPTIMIZATION.
- SUPPORTS LLDP (LINK LAYER DISCOVERY PROTOCOL) TO ENABLE NETWORK MANAGEMENT SYSTEMS TO DISCOVER DEVICES AND ASSESS LINK STATUS.
- SUPPORTS MULTIPLE NETWORK MANAGEMENT AND MAINTENANCE METHODS, INCLUDING WEB-BASED MANAGEMENT, CLI (CONSOLE, TELNET), AND SNMP V1/V2/V3.

TECHNICAL SPECIFICATIONS

INTERFACE CHARACTERISTICS

Fixed Port	16* 100/ 1000Base-X SFP ports 8*Combo (10/100/1000Base-T+100/1000Base-X) 4* 1/ 10G uplink SFP+ ports 1*Console port
Ethernet Port	Port 17-24 support 10/ 100/ 1000Base-T auto-sensing, Full/Half duplex Auto MDI/MDI-X
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 Port Expansion	Support Turbo overclocking 2.5G optical Module expansion and ring network
Optical Cable/ Distance	Multi-mode :850nm /0 to 300M(10G), 850nm /0 to 500M (1.25G). Single mode: 1310nm/ 0 to 40KM, 1550nm/ 0 to120KM

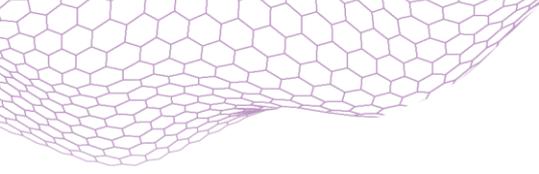
HARDWARE SPECIFICATIONS

Network Management Type	L3
Ring network	Supports ERPS Ring network function, with a maximum number of rings of 5 and a convergence time of<20ms
Network Protocol	IEEE802.3 10BASE-T, IEEE802.3i 10Base-T, IEEE802.3u 100Base-TX IEEE802.3ab 1000Base-T, IEEE802.3z 1000Base-X, IEEE802.3ae 10GBase-LR/SR, IEEE802.3x

Forwarding Mode	Store and Forward (Full Wire Speed)
Switching Capacity	128 Gbps
Buffer Memory	96 Mpps
MAC	32K
LED Indicator	Power, Fiber, Network
Reset Switch	Yes, Press and hold the reset switch for 5s and release it to restore the factory settings

SOFTWARE FEATURES

L3 Function	<p>Support L3 Network Management Function</p> <p>Supports IPV4 Dynamic routing RIPv1/v2, OSPFv2</p> <p>Supports IPV4/IPV6 static routing/default routing, each supporting a maximum of 128 entries</p> <p>Supports Three-Layer Routing forwarding,</p> <p>Supports communication between different network segments and VLANs</p>
Port configuration	<p>Auto-negotiation</p> <p>Flow Control</p> <p>Port Mirror: TX/RX/BOTH; Many-to-1 monitor</p> <p>Traffic statistics</p>
Link Aggregation	<p>Static Link Aggregation</p> <p>LACP</p> <p>Algorithm based on Source/Destination MAC</p> <p>Algorithm based on Source/Destination IP</p>
MAC Table	<p>Aging Time</p> <p>Static MAC address</p> <p>Dynamic MAC address management</p>
VLAN	<p>4094 Active VLANs</p> <p>4094 VID</p> <p>802.1Q Tag VLAN</p> <p>Port VLAN</p> <p>Protocol VLAN</p> <p>MAC VLAN</p> <p>Voice VLAN</p> <p>802.1ad Q-in-Q tunneling Private</p> <p>VLAN (Protected port) GARP/GVRP</p>
ACL	<p>256 ACLs</p> <p>L2, L2+, e L4</p> <p>Time-based ACL</p>



Spanning Tree

802.1D Spanning Tree Protocol (STP)
802.1w Rapid Spanning Tree Protocol (RSTP)
802.1s Multiple Spanning Tree Protocol (MSTP)
Loop Guard
Root Guard
TC-BPDU Guard
BPDU Guard
BPDU Filter

Ring Protection

<20ms G.8032 ERPS Ring

Multicast

256 groups
IGMP v1/v2/v3 Snooping,
Fast Leave MLD Snooping
Multicast VLAN

QOS

Port-based
CoS 802.1p-based CoS
DSCP-based
Scheduling Algorithms SP, WRR, SP+WRR
Storm Control (Broadcast, Multicast, Unknown Unicast)
Bandwidth control per port

DHCP

SNMP v1/v2c/v3 with Full Private MIBs RMON 4 groups
WEB (HTTP/HTTPS)
CLI (Telnet, Console, SSHv1/v2) Firmware
Upgrade via console/web/TFTP Configuration
Backup/Reload
Dual Firmware
LLDP

Security Features

Port Security
MAC Address filter
ARP Association (Manual, ARP scanning, DHCP snooping)
ARP Protection
DoS (Denial of Service)
Classification of packages based on: End.MAC, IP End, TCP /
UDP Ports, Protocol Type.
802.1x Authentication (port-based e MAC-based)
TACACS/TACACS+ Authentication
RADIUS Authentication
DHCP Filter
Guest VLAN
SSLv2/SSLv3/TLSv1
SSHv1/SSHv2
Restriction of WEB access based on: IP Address, And. MAC
and Port; Port Isolation Loopback detection

Other Features

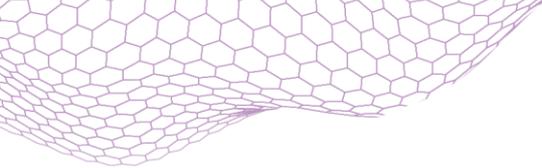
DNS Client DHCP
Relay DHCP Client
DHCP Snooping
DHCP Option 82
SNTP Client
UDLD

Maintenance

Cable Diagnostics
Ping
SFP DDM (Digital Diagnostics Monitoring) Thermal protection
System log (Local and Remote)
Memory and CPU Monitoring

APPROVAL AND STANDARD TESTED FOR

IEC61000-4-2	ESD: ±8kV contact discharge, ±15kV air discharge
IEC61000-4-3	RS:10V/m (80 to 1000MHz)
IEC61000-4-4	EFT: power cable: ±4kV; data cable: ±2kV
IEC61000-4-5	Surge: power cable:CM±4kV/DM±2kV; data cable: ±4kV
IEC61000-4-6	Radio frequency transmission:10V(150kHz~80MHz)
IEC61000-4-8	Power frequency magnetic field:100A/m;1000A/m, 1s to 3s
IEC61000-4-9	Pulsed magnet field:1000A/m
IEC61000-4-10	Damped oscillation :30A/m 1MHz
IEC61000-4- 12/ 18	shockwave 2.5kV, DM 1kV
IEC61000-4- 16	common-mode transmission:30V; 300V, 1s
FCC Part 15/CISPR22(EN55022): Class B	EMI
IEC61000-6-2	Common Industrial Standard
IEC60068-2-6	Anti vibration
IEC60068-2-27	Anti shock
IEC60068-2-32	Free fall
Lightning Protection	6KV 8/20us



POWER

Power Supply	Dual Built-in AC/DC, AC: 100–240V 50/60Hz, DC: 36–72V, 72W
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PHYSICAL CHARACTERISTICS

Dimension (L*W*H)	440mm* 300mm*44mm
Installation	Desktop, 19-inch 1U cabinet installation
IP Rating	IP40

ENVIRONMENTAL

Working Temperature	-40 to +80°C
Storage Temperature	-40 to +85°C
Operating Humidity	5% to 90% RH Non condensing
Storage Humidity	5% to 95% RH Non condensing

ORDERING CODE

DDSMGR 4016S-8GC-4S+ AD CF

DDSMGR	Layer3 Industrial Ethernet Managed Giga Rack Switch
4016S	16 * 100/ 1000Base-X SFP ports
8GC	8 * Combo (10/100/1000Base-T+100/1000Base-X)
4S+	4 * 1/ 10G uplink SFP+ ports
AD	Fixed. AC (100–240V 50/60Hz) and DC (36–72V, 72W)
CF	Fixed