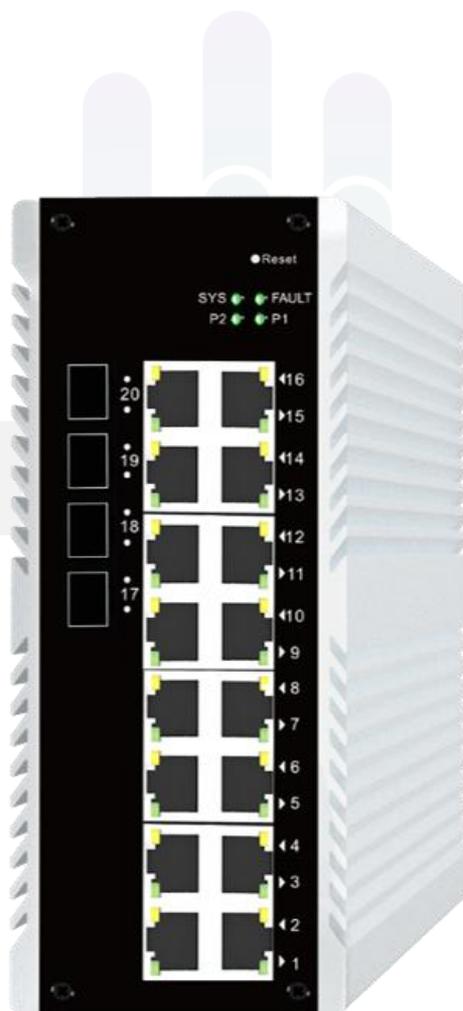


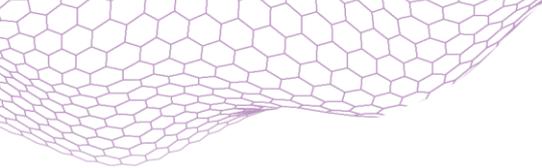


## 20 PORT LAYER 2+

# INDUSTRIAL ETHERNET MANAGED SWITCH-GIGA

## DDSMG CF SERIES





## SYNOPSIS

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- THE DDSMG 3016-4S CF IS A FULL GIGABIT L2 MANAGED INDUSTRIAL ETHERNET FIBER SWITCH INDEPENDENTLY DEVELOPED BY DATABRIDGE DYNAMIC.
- IT HAS 16\*10/100/1000BASE-T RJ45 PORTS AND 4\*100/1000BASE-X SFP FIBER PORTS.
- EACH PORT CAN SUPPORT WIRE-SPEED FORWARDING.
- THE DDSMG 3016-4S CF HAS L2 NETWORK MANAGEMENT FUNCTION, COMPLETE SECURITY PROTECTION MECHANISM, ACL/QOS POLICY AND RICH VLAN FUNCTIONS, EASY TO MANAGE AND MAINTAIN.
- SUPPORT MULTIPLE NETWORK REDUNDANCY PROTOCOLS STP/RSTP/MSTP(<50MS), SUPPORT ERPS RING NETWORK FUNCTION (CONVERGENCE TIME<20MS) TO IMPROVE LINK BACKUP AND NETWORK RELIABILITY TO ENSURE UNINTERRUPTED COMMUNICATION OF IMPORTANT APPLICATIONS.
- ACCORDING TO ACTUAL APPLICATION NEEDS, ROUTING ADDRESS MANAGEMENT, PORT MANAGEMENT, PORT FLOW CONTROL, VLAN DIVISION, IGMP, SECURITY POLICY AND OTHER APPLICATION SERVICE CONFIGURATIONS ARE PERFORMED THROUGH WEB, CLI, SNMP, TELNET AND OTHER NETWORK MANAGEMENT METHODS.
- THE SHELL IS MADE OF ALUMINUM ALLOY, WHICH HAS EXCELLENT INDUSTRIAL FIELD ENVIRONMENTAL ADAPTABILITY (INCLUDING MECHANICAL STABILITY, CLIMATE ENVIRONMENT ADAPTABILITY, ELECTROMAGNETIC ENVIRONMENT ADAPTABILITY, ETC.),
- PROTECTION LEVEL IS IP40, SUPPORT DUAL REDUNDANT POWER SUPPLY, LOW POWER CONSUMPTION AND NO FAN.
- IT IS SUITABLE FOR INDUSTRIAL SCENARIOS SUCH AS INTELLIGENT TRANSPORTATION, RAIL TRANSIT, ELECTRIC POWER INDUSTRY, MINING, PETROLEUM, SHIPPING, METALLURGY AND GREEN ENERGY CONSTRUCTION TO ESTABLISH A COST-EFFECTIVE, STABLE AND RELIABLE COMMUNICATION NETWORK.

## FEATURES & BENEFITS

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### 1. GIGABIT ACCESS, SFP FIBER PORT UPLINK INTEGRATED BYPASS FUNCTION

- SUPPORT NON-BLOCKING WIRE-SPEED FORWARDING.
- SUPPORT FULL-DUPLEX BASED ON IEEE802.3X AND HALF-DUPLEX BASED ON BACKPRESSURE.
- SUPPORT GIGABIT ETHERNET PORT AND GIGABIT SFP PORT COMBINATION, WHICH ENABLES USERS TO FLEXIBLY BUILD NETWORKING TO MEET THE NEEDS OF VARIOUS SCENARIOS.
- SUPPORT PHYSICAL SINGLE-MODE SINGLE FIBER OPTICAL PATH(BYPASS) FUNCTION, PURE HARDWARE SWITCHING, SHORT SWITCHING TIME, DOES NOT AFFECT THE DATA TRANSMISSION RATE AND IMPROVES THE STABILITY OF THE NETWORK SYSTEM.

### 2. NETWORK MANAGEMENT AND FAST RING FUNCTION

- STP/RSTP/MSTP/ERPS.
- STATIC AND DYNAMIC AGGREGATION.
- IEEE802.1Q VLAN, FLEXIBLE VLAN DIVISION, ACCESS, TRUNK AND HYBRID.
- QOS, PRIORITY MODE BASED ON 802.1P, PORT & DSCP, QUEUE SCHEDULING ALGORITHM INCLUDING EQU, SP, WRR & SP+WRR.
- IGMP SNOOPING V1/V2/V3 MEETS MULTI-TERMINAL HIGH-DEFINITION VIDEO SURVEILLANCE AND VIDEO CONFERENCE ACCESS REQUIREMENTS.
- ALC, FILTER DATA PACKET THROUGH CONFIGURING MATCHING RULES PROCESSING OPERATION & TIME PERMISSION, AND PROVIDE FLEXIBLE AND SAFE ACCESS CONTROL.

### 3. SECURITY

- 802. 1X AUTHENTICATION.
- PORT ISOLATION, STORM CONTROL.
- IP-MAC-VLAN-PORT BINDING

### 4. STABLE AND RELIABLE

- CCC, CE, FCC, ROHS.
- LOW POWER CONSUMPTION, NO FAN, ALUMINUM SHELL.
- THE USER-FRIENDLY PANEL CAN SHOW THE DEVICE STATUS THROUGH THE LED INDICATOR OF PWR, SYS, LINK, L/A.

### 5. ONE-STOP REMOTE CONTROL AND MANAGEMENT

- HTTPS, SSLV3, AND SSHV1/V2.
- RMON, SYSTEM LOG, LLDP, AND PORT TRAFFIC STATISTICS.
- CPU MONITORING, MEMORY MONITORING, PING TEST, AND CABLE DIAGNOSE.
- WEB MANAGEMENT, CLI COMMAND LINE (CONSOLE, TELNET), SNMP (V1/V2/V3).

## TECHNICAL SPECIFICATIONS

### INTERFACE

<b>Fixed Port</b>	16 * 10/ 100/ 1000Base-T RJ45 ports 4 * 100/ 1000Base-X uplink SFP slot ports 1 * RS232 console port
<b>Ethernet Ports</b>	Port 1-16 support 10/ 100/ 1000Base-T auto-sensing, full/half duplex Auto MDI/MDI-X
<b>Twisted Pair Transmission</b>	10BASE-T: Cat3,4,5 UTP (≤100 meters) 100BASE-TX: Cat5 or later UTP (≤100 meters) 1000BASE-T: Cat5e or later UTP (≤100 meters)
<b>SFP Slot Port</b>	Gigabit SFP optical Fiber interface
<b>Wavelength/Distance</b>	Multimode: 850nm 0 to 550M,1310nm 0 to 2KM Single mode: 1310nm 0 to 40KM , 1550nm to 120KM

### POWER

<b>Power Supply</b>	DC12-57V industrial power supply Dual Redundant
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## HARDWARE FEATURES

<b>Network Management Type</b>	L2+	
<b>Ring network</b>	Supports ERPS ring network function, with a maximum number of rings of 5 and a convergence time of <20ms	
<b>Network Protocol</b>	IEEE802.3 10BASE-T, IEEE802.3i 10Base-T, IEEE802.3u 100Base-TX, IEEE802.3ab 1000Base-X, IEEE802.3z 1000Base-X, IEEE802.3x	
<b>Forwarding Mode</b>	Store and Forward (Full Wire Speed)	
<b>Switching Capacity</b>	40Gbps	
<b>Buffer Memory</b>	29.7Mpps	
<b>MAC</b>	8K	
<b>LED Indicator</b>	Power Indicator Light	P: Green
	Fiber Indicator Light	F: Green (Link, SDFED)
	On the RJ45 seat	Yellow: Indicate PoE Green: Indicates network working status
<b>Reset Switch</b>	Yes, Press and hold the reset switch for 5s and release it to restore the factory settings	

## PHYSICAL CHARACTERISTICS

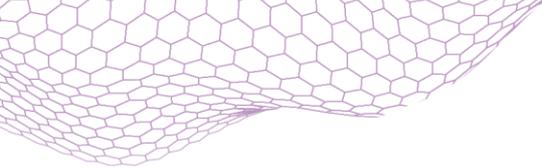
<b>Dimension (L*W*H)</b>	174mm* 148mm*68mm
<b>Installation</b>	Desktop, DIN rail

## ENVIRONMENT

<b>Working Temperature</b>	-40°C to +75°C
<b>Storage Temperature</b>	-40°C to +85°C
<b>Operating Humidity</b>	5%~95% (no condensation)

## SOFTWARE FEATURES

<b>Port configuration</b>	Auto-negotiation Flow Control Port Mirror: TX/RX/BOTH; Many-to-1 monitor. Traffic statistics
<b>Link Aggregation</b>	Static link aggregation LACP Algorithm based on Source/Destination MAC Algorithm based on Source/Destination IP
<b>MAC Table</b>	Aging Time Static MAC address Dynamic MAC address management
<b>VLAN</b>	4094 Active VLANs 4094 VID 802.1Q Tag VLAN Port VLAN Protocol VLAN MAC VLAN Voice VLAN 802.1ad Q-in-Q tunnelling Private VLAN (Protected port) GARP/GVRP
<b>ACL</b>	256ACLs L2, L3 e L4 Time-based ACL
<b>Spanning tree</b>	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
<b>Ring Protection</b>	<20ms G.8032 ERPS Ring
<b>Multicast</b>	256 groups IGMP v1/v2/v3 Snooping, Fast Leave MLD Snooping Multicast VLAN
<b>QOS</b>	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

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**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

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**Other Features**

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

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**Maintenance**

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

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## APPROVALS AND STANDARDS TESTED FOR

<b>IEC61000-4-2</b>	ESD: ±8kV contact discharge, ±15kV air discharge
<b>IEC61000-4-3</b>	RS:10V/m (80~ 1000MHz)
<b>IEC61000-4-4</b>	EFT: power cable: ±4kV; data cable: ±2kV
<b>IEC61000-4-5</b>	Surge: power cable:CM±4kV/DM±2kV; data cable: ±4kV
<b>IEC61000-4-6</b>	radio frequency transmission:10V(150kHz~80MHz)
<b>IEC61000-4-8</b>	power frequency magnetic field:100A/m;1000A/m, 1s to 3s
<b>IEC61000-4-9</b>	pulsed magnet field:1000A/m
<b>IEC61000-4- 10</b>	damped oscillation:30A/m 1MHz
<b>IEC61000-4- 12/ 18</b>	shockwave: CM 2.5kV, DM 1kV
<b>IEC61000-4- 16</b>	common-mode transmission:30V; 300V, 1s
<b>IEC61000-6-2</b>	Common Industrial Standard
<b>IEC60068-2-6</b>	anti vibration
<b>IEC60068-2-27</b>	anti shock
<b>IEC60068-2-32</b>	free fall
<b>CCC, CE mark, commercial, CE/LVD EN62368- 1, FCC Part 15 Class B, RoHS</b>	Certifications
<b>Lightning Protection</b>	Lightning protection: 6KV 8/20us, Protection level: IP40

## ORDERING CODE

DDSMG 3016-4S CF

<b>DDSMG</b>	Industrial Grade L2+ Giga Managed Ethernet Switch
<b>3016</b>	16 * 10/100/1000M Copper Port
<b>4S</b>	4 * 100/1000Base-X uplink SFP slot ports
<b>CF</b>	Fixed