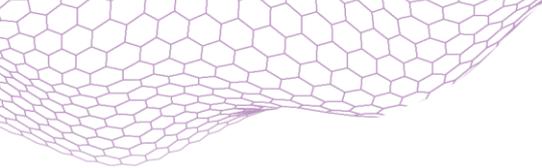# 4 PORT LAYER 2+

INDUSTRIAL ETHERNET MANAGED SWITCH-GIGA

DDSMG SERIES

SYNOPSIS

- DDSMG 302-2S CF IS A FULL-GIGABIT, L2+ MANAGED INDUSTRIAL ETHERNET FIBER SWITCH.
- IT FEATURES 2 × 10/100/1000BASE-T RJ45 PORTS AND 2 × 100/1000BASE-X SFP UPLINK PORTS.
- THE DDSMG 302-2S CF SUPPORTS ADVANCED L2+ NETWORK MANAGEMENT, INCLUDING IPV4 STATIC ROUTING, COMPREHENSIVE SECURITY MECHANISMS, ACL/QOS POLICIES, AND RICH VLAN FEATURES.
- IT SUPPORTS MULTIPLE NETWORK REDUNDANCY PROTOCOLS SUCH AS STP/RSTP/MSTP (RECOVERY TIME < 50 MS) AND ERPS RING TOPOLOGY WITH CONVERGENCE TIME < 20 MS.
- NETWORK CONFIGURATION AND MANAGEMENT—INCLUDING ROUTING ADDRESS MANAGEMENT, PORT MANAGEMENT, FLOW CONTROL, VLANS, IGMP, AND SECURITY POLICIES—CAN BE PERFORMED VIA WEB UI, CLI, SNMP, AND TELNET.
- THE SWITCH IS HOUSED IN A RUGGED ALUMINUM ALLOY ENCLOSURE WITH AN IP40 PROTECTION RATING.
- IT FEATURES A DUAL REDUNDANT POWER INPUT, LOW POWER CONSUMPTION, AND FANLESS DESIGN.
- THE DEVICE IS IDEAL FOR INDUSTRIAL APPLICATIONS SUCH AS INTELLIGENT TRANSPORTATION SYSTEMS, RAIL TRANSIT, POWER UTILITIES, MINING, PETROLEUM, SHIPPING, METALLURGY ETC

FEATURES & BENEFITS

- SUPPORTS NON-BLOCKING, WIRE-SPEED PACKET FORWARDING FOR HIGH-PERFORMANCE DATA TRANSMISSION.
- SUPPORTS FULL-DUPLEX COMMUNICATION BASED ON IEEE 802.3X FLOW CONTROL AND HALF-DUPLEX OPERATION BASED ON BACKPRESSURE.
- SUPPORTS STP, RSTP, MSTP, AND ERPS PROTOCOLS TO ENSURE RAPID NETWORK RECOVERY AND HIGH AVAILABILITY.
- SUPPORTS BOTH STATIC AND DYNAMIC LINK AGGREGATION TO IMPROVE BANDWIDTH UTILIZATION AND LINK REDUNDANCY.
- COMPLIES WITH IEEE 802.1Q VLAN, SUPPORTING FLEXIBLE VLAN CONFIGURATIONS INCLUDING ACCESS, TRUNK, AND HYBRID MODES.
- ADVANCED QOS CAPABILITIES WITH PRIORITY CLASSIFICATION BASED ON 802.1P, PORT, AND DSCP, AND MULTIPLE QUEUE SCHEDULING ALGORITHMS INCLUDING EQU, SP, WRR, AND SP+WRR.
- SUPPORTS IGMP SNOOPING V1/V2/V3, MEETING THE REQUIREMENTS OF MULTI-TERMINAL HD VIDEO SURVEILLANCE AND VIDEO CONFERENCING APPLICATIONS.
- SUPPORTS ACL (ACCESS CONTROL LISTS) TO FILTER DATA PACKETS THROUGH CONFIGURABLE MATCHING RULES, OPERATION POLICIES, AND TIME-BASED PERMISSIONS, PROVIDING SECURE AND FLEXIBLE ACCESS CONTROL.
- SUPPORTS IEEE 802.1X AUTHENTICATION FOR ENHANCED NETWORK SECURITY.
- SUPPORTS PORT ISOLATION AND STORM CONTROL TO PROTECT THE NETWORK FROM BROADCAST STORMS AND UNAUTHORIZED TRAFFIC.
- SUPPORTS IP-MAC-VLAN-PORT BINDING TO STRENGTHEN ENDPOINT SECURITY.
- SUPPORTS SECURE MANAGEMENT ACCESS VIA HTTPS, SSLV3, AND SSH (V1/V2).
- SUPPORTS RMON, SYSTEM LOGS, LLDP, AND DETAILED PORT TRAFFIC STATISTICS FOR EFFICIENT NETWORK MONITORING AND MAINTENANCE.
- PROVIDES CPU AND MEMORY MONITORING, PING TESTING, AND CABLE DIAGNOSTICS FOR EFFECTIVE TROUBLESHOOTING.
- SUPPORTS MULTIPLE MANAGEMENT INTERFACES, INCLUDING WEB UI, CLI (CONSOLE AND TELNET), AND SNMP (V1/V2/V3).

TECHNICAL SPECIFICATIONS

INTERFACE

|	
Fixed Port	2* 10/ 100/ 1000Base-T ports 2* 100/ 1000Base-X uplink SFP slot ports 1*RS232 console port
Ethernet Ports	Port 1-2 support 10/ 100/ 1000Base-T Autosensing, 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)
SFP Slot Port	Gigabit SFP optical Fiber interface
Wavelength/Distance	Multimode: 850nm 0 to 550M, 1310nm 0 to 2KM Single mode: 1310nm 0 to 40KM, 1550nm 0 to 120KM

HARDWARE FEATURES

Network Management Type	L2+
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-X, IEEE802.3z 1000Base-X, IEEE802.3x
Forwarding Mode	Store and Forward (Full Wire Speed)
Switching Capacity	12Gbps
Buffer Memory	8.92Mpps
MAC	8K
LED Indicator	Power, Fiber, PoE
Reset Switch	Yes

SOFTWARE FEATURES

Port configuration	Auto-negotiation Flow Control Port Mirror: TX/RX/BOTH; Many-to-1 monitor. Traffic statistics
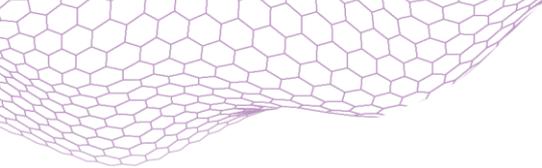
Link Aggregation	Static Link aggregation
	LACP
	Algorithm based on Source/Destination
	MAC Algorithm based on Source/Destination IP
MAC Table	Aging Time
	Static MAC address
	Dynamic MAC address management
VLAN	4094 Active VLANs
	4094 VID
	802.1Q Tag VLAN
	Port VLAN
	Protocol VLAN
	MAC VLAN
	Voice VLAN
	802.1ad Q-in-Q tunnelling Private
	VLAN (Protected port) GARP/GVRP
ACL	256 ACLs
	L2, L3 e L4
	Time-based ACL
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
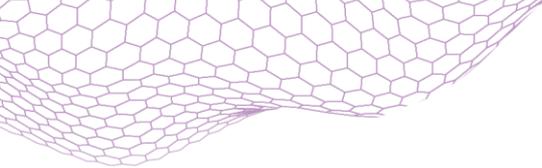
DHCP	SNMP v1/v2c/v3 with Full Private MIBs RMON 4 groups WEB (HTTP/HTTPS) CLI (Telnet, Console, SSHv1/v2) Firmware upgrade via console/web/TFTP Configuration Backup/Reload Dual Firmware LLDP
Security Features	Port Security MAC Address filter ARP Association (Manual, ARP scanning, DHCP snooping) ARP Protection 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

L3 FUNCTIONS

Static Routing	IPV4 Equal Cost Routing
	NG protocol, maximum 1000 entries
	ARP protocol, maximum 1000 entries
	Pingv6, Telnetv6, TFTPv6, DNSv6, ICMPv6
	IPV4/IPV6 VRRP, the maximum group is 255
	IPV4/IPV6 VLANIF interface supports up to 128
	IPV4/IPV6 static route/default route supports up to 128 entries
	L3 network management function,
	IPV4/IPV6 Dual-stack management
	Layer 3 routing and forwarding, support communication between different network segments and different VLANs

APPROVALS AND STANDARDS TESTED FOR

IEC61000-4-2	ESD: ±8kV contact discharge, ±15kV air discharge
IEC61000-4-3	RS:10V/m (80~ 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: CM 2.5kV, DM 1kV
IEC61000-4- 16	Common-mode transmission:30V; 300V, 1s
IEC61000-6-2	Common Industrial Standard
IEC60068-2-6	Anti vibration
IEC60068-2-27	Anti shock
IEC60068-2-32	Free fall
Lightning Protection	Lightning protection: 6KV 8/20us,

POWER

Power Supply	12-57VDC Dual Redundant Power Supply

PHYSICAL CHARACTERISTICS

Dimension (L*W*H)	172mm* 145mm*55mm
Installation	Desktop, DIN rail
IP rating	IP40
Enclosure	Aluminium Alloy

ENVIRONMENT

Working Temperature	-40˚C to +75˚C
Storage Temperature	-40˚C to +85˚C
Operating Humidity	5% to 90% (no condensation)
Storage Humidity	5% to 95% (no condensation)

ORDERING CODE

DDSMG 302-2S CF

DDSMG	Industrial Grade L2+ Giga Managed Ethernet Switch
302	2 * 10/100/1000 T ports
2S	2 * 100/1000Base-X uplink SFP slot ports
CF	Fixed