



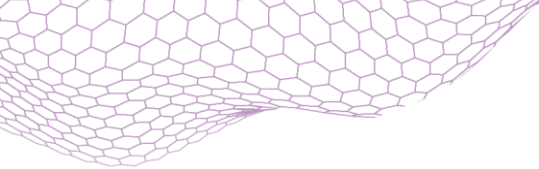
48 PORT – LAYER 3

INDUSTRIAL ETHERNET MANAGED SWITCH-GIGA

DDSMGR SERIES



D Y N A M I C



SYNOPSIS

- THE DDSMGR 4048-4S+ L IS A HIGH-PERFORMANCE, RACK-MOUNTED LAYER 3 INDUSTRIAL MANAGED SWITCH DESIGNED FOR MISSION-CRITICAL INFRASTRUCTURE AND HIGHLY DEMANDING OPERATIONAL ENVIRONMENTS.
- IT COMBINES CARRIER-CLASS HARDWARE ARCHITECTURE WITH ADVANCED SOFTWARE CAPABILITIES TO ENSURE UNINTERRUPTED, DETERMINISTIC NETWORK PERFORMANCE, EVEN UNDER EXTREME CONDITIONS.
- THE SWITCH FEATURES A HIGH-DENSITY PORT CONFIGURATION ALONG WITH MULTI-GIGABIT 10G UPLINK INTERFACES, ENABLING SCALABLE BACKBONE CONNECTIVITY AND RING NETWORK TOPOLOGIES.
- TO SUPPORT CONTINUOUS AND FAULT-TOLERANT OPERATION, IT OFFERS FULLY REDUNDANT DC POWER INPUTS OR A SINGLE AC POWER INPUT WITH WIDE VOLTAGE RANGE SUPPORT, ENSURING RELIABLE PERFORMANCE IN DIVERSE INDUSTRIAL APPLICATIONS.
- THE DDSMGR 4048-4S+ L SUPPORTS COMPREHENSIVE LAYER 3 ROUTING PROTOCOLS FOR EFFICIENT INTER-VLAN ROUTING AND DYNAMIC TRAFFIC MANAGEMENT, ADVANCED QOS ENSURES PRECISE TRAFFIC PRIORITIZATION AND BANDWIDTH CONTROL, WHILE INTEGRATED SECURITY FEATURES – INCLUDING ACLS, PORT SECURITY, DOS PROTECTION—PROVIDE ROBUST NETWORK SEGMENTATION AND PROTECTION AGAINST UNAUTHORIZED ACCESS.
- DESIGNED FOR INDUSTRIAL IOT, TRANSPORTATION SCADA, AND SMART GRID APPLICATIONS, IT DELIVERS HIGH OPERATIONAL RESILIENCE WITH MILLISECOND-LEVEL RECOVERY AND LONG-TERM STABILITY, ENSURING RELIABLE 24/7 PERFORMANCE FOR CRITICAL INFRASTRUCTURE NETWORKS

FEATURES

- SUPPORTS IEEE802.3, IEEE 802.3U, IEEE802.3AB, IEEE802.3Z, IEEE802.3AE
- PROVIDES 48*10/100/1000 BASE-TX PORTS
- PROVIDES 4*10G SFP+ PORTS
- HIGH BACK-PLANE BANDWIDTH 176GBPS
- 2 * 12-57V DC POWER INPUT OR 1 * 100-240VAC INPUT
- SUPPORT MLD SNOOPING
- SUPPORT STANDARD IP/ EXTEND IP / MAC IP / ARP ACL
- SUPPORT IGMP SNOOPING FOR MULTI-MEDIA APPLICATION
- SUPPORT PORT MIRROR AND BANDWIDTH CONTROL
- SUPPORT IEEE802.3X FLOW CONTROL
- SUPPORT PORT BASED VLAN / 802.1Q TAG VLAN
- SUPPORT IEEE802.3AD PORT TRUNK WITH LACP
- SUPPORT SPANNING TREE PROTOCOL IEEE802.1D/802.1W/802.1S
- SUPPORT IEEE 802.1P CLASS OF SERVICE
- SUPPORT IEEE 802.1X USER AUTHENTICATION
- SUPPORT BROADCAST STORM FILTER
- SUPPORT DHCP CLIENT, DHCP RELAY, DHCP SERVER, DHCP SNOOPING
- SUPPORT STATIC ROUTE, POLICY ROUTE, RIP, OSPF, VRRP
- SUPPORT SYSTEM EVENT LOG
- SUPPORT COMMAND LINE INTERFACE MANAGEMENT
- MANAGEMENT BY WEB / SNMP / SSH / TELNET / CONSOLE
- IP40 ALUMINUM CASE
- 200,000 HOURS MTBF (PARTS COUNT RELIABILITY PREDICTION)

TECHNICAL SPECIFICATIONS

INTERFACE

Networking Interfaces	48 x 10/100/1000 Mbps RJ45 Ethernet Ports 4 x 10Gbps SFP+ Ethernet Ports
Management Interface	Console
Alarm Terminal	Power Fail Alarm
LED Indicators	Pwr, Link/Act

PERFORMANCE

Switching Capacity	176 Gbps
Forwarding Capacity	130.9Mpps
Forwarding Mode	Store and forward
Packet Buffer Memory	16 Mbit
RAM for CPU	2 Gbit
Flash Memory	256Mbit
MAC Address Table	32K
Max. Jumbo Frame size	12K
ACL Table	4K
VLAN Quantity	4K
VLAN Interface	1K
Multicast groups	4K
Routing Host	8K IPv4 or 2K IPv6
Routing Entries	12K IPv4 or 3K IPv6
Port Queues	8

PORT CONFIGURATION

Enable and disable	Support control Enable and disable
Auto-Negotiation	Support force port mode and speed
Flow Control	Support IEEE802.3x Full duplex Support half-duplex backpressure
Storm Control	Support broadcast, multicast and DLF package rate limit
Port Mirroring	Support many to one mirroring
Rate Limit	Support Port input and output rate limit

Link Aggregation

Support Manual Link Aggregation

Support LACP

Up to 8 maximum aggregation groups, each containing up to 8 ports

Aggregation Strategy

Source MAC / Destination MAC / Source Destination MAC

Source IP / Destination IP / Source Destination IP

Port Protection

Each port can be configured into isolated protected port from each other

MAC CONFIGURATION

MAC Address Table Management

Support

Transfer Mode

Support IVL transfer mode

Static MAC Address

Support

MAC Binding

Support

MAC Address Filter

Support

MAC Quantity Limitation

Support limits the number of MAC-addresses Learning per port

VLAN CONFIGURATION

VLAN Based on 802.1Q

Support

MAC-Based VLAN

Support

IP-Based VLAN

Support

Protocol-Based VLAN

Support

Guest VLAN

Support

Private VLAN

Support

Voice VLAN

Support

VLAN Mapping

Support 1:1 mapping

QinQ

Support basic QinQ

Support flexible QinQ

RELIABILITY PROTOCOL

Spanning Tree

Support STP/RSTP/MSTP

BPDU Guard

Support

BPDU Filter

Support

Port Loop Detection

Support

EAPS Protocol	Support RFC3619
ERPS Protocol	Support
DLDP Protocol	Support DLDP
LLDP Protocol	Support LLDP and LLDP-MED
UDLD Protocol	Totally compatible with UDLD protocol of CISCO
VLLP (VRRP Layer-2 Loop Protection)	Support. only used with VRRP

L3 HOST ROUTING

ARP	Support Static and dynamic ARP
Static Route	Support static route based on IPv4 and IPv6
RIP	Support RIP v1/v2 & IPv6 RIPng
OSPF	Support OSPFv2 & IPv6 OSPFv3
BGP	Support BGP4 & IPv6 BGP4+
Policy Route	Support
VRRP	Support

MULTICAST

Static Multicast MAC Address	Support
IGMP SNOOPING	Support
IGMP Querier	Support
IGMP Filter	Support
MVR	Support
GMRP	Support
PIM-SM	Support

ACCESS CONTROL LIST

Based on Standard IP	Support
Based on Extend IP	Support
Based on MAC IP	Support
Based on MAC ARP	Support
Based on time	Support
Port Filtering	Support

QUALITY OF SERVICE (QOS)

Scheduling Mode	Support WRR, RR, WDRR, SP
Sorting Based on Port	Support
Sorting Based on 802.1p	Support
Sorting Based on DSCP	Support
Sorting Based on ACL	Support
QoS Policy	Support packets mapping to queue Support COS or DSCP Remarking Support rate limits of data flow Support data flow statistics Support mirroring of data flow

DHCP

DHCP Client	Support
DHCP Relay	Support
DHCP Server	Support
DHCP Snooping	Support
DHCP option 82	Support

SECURITY

Administrative Security	Support starts and end TELNET, WEB and SNMP serve Support TELNET, WEB and SNMP serve binding with Standard IP ACL Support controls the number of users for TELNET
CPU Protect	Switch self-security protect, forbid flow attack
IP-MAC Address Binding	Support binding between static configuration IP, MAC and Port
AAA	Support 802.1x protocol Support RADIUS protocol Support RADIUS server Authentication Authorization and bill Support MAC-based 802.1X authentication. Support 802.1x Guest VLAN
DHCP SNOOPING	Support dynamic ARP binding to prevent ARP spoofing Support dynamic IP, MAC port binding Support stationary port connects to DHCP server, to prevent privately connect to DHCP sever

Prevent ARP Spoofing

Support manual configures ACL rule based on MAC
ARP prevent ARP spoofing
Support DHCP SNOOPING function, switch dynamically binding ARP and port, when the DHCP get IP address, to prevent ARP spoofing

IPV6

IPv4/IPv6 Dual Protocol Stack

Support

IPv6 Address

Support manual address configuration and stateless address auto-configuration

IPv6 Neighbor Discovery

Support

ICMPv6

Support

IPv6 Path MTU Discovery

Support

MANAGEMENT FEATURES

CLI Management

Support Console, Telnet and SSH
Support multiple TELNET connections based on IPv4 and IPv6
Support multiple SSH connections based on IPv4 and IPv6

WEB Management

Support HTTP / HTTPS based on IPv4 and Ipv6

SNMP Management

Support SNMP protocol
Support SNMP TRAP
Support standard and private MIB

User management

Support Multi-user Management

Show CPU Utilization

Support

Show RAM Utilization

Support

Log Management

Support Local Log Management
Support SYSLOG

TACACS+

Support switch authentication via TACACS+ server
remote username and password
Support password encryption in PAP and CHAP mode
Support TACACS+ server to authorize the switch's commands
Support TACACS+ based on IPv4 and IPv6

RMON

Support RMON 1, 2, 3 and 9 groups

Configuration Download / Upload

Support Web / TFTP transmission based IPv4 and Ipv6

Upgrade Firmware

Support Web / TFTP transmission based IPv4 and Ipv6

Timer Management

Support local timer management
Support SNTP protocol get clock

DEBUGGING TOOLS

PING	Support
PING6	Support
TRACEROUTE	Support
TELNET Client	Support
SSH Client	Support

POWER

Input Power	2 * 12-57V DC Power Input or 1 * 100-240VAC input
Max. Power Consumption	60W max

PHYSICAL CHARACTERISTICS

Dimensions	440 x 200 x 44 mm
Weight	5Kg

ENVIRONMENT

Operating Temperature	-40 to 75°C
Storage Temperature	-40 to 85°C
Operating Humidity	5 to 95% Noncondensing

ORDERING CODE

DDSMGR 4048-4S+ X L

DDSMGR	Industrial Ethernet Layer 3 Managed Giga Rack Switch
4048	48 x 10/100/1000M RJ45
4S+	4 x 10G SFP
X	A: 1 * 100-240VAC input D: 2 * 12-57V DC Power Input
L	Fixed