DVS-G928 series

Layer 3 Managed Industrial 28-Port GbE Modular Rack Mount Ethernet Switch

-40~85°C EMC LEVEL 4 FANLESS

Rugged ETHERNET



- IPv6 address suitable for larger network and neighbor discovery
- Layer 3 routing function allows multiple subnets in a large network to exchange data and information across a network address
- Automatic IP assignment by DHCP server for easy network construction
- DHCP relay option 82 for sending DHCP requests with clients' identities to a DHCP server
- VLAN Unaware: Supports priority-tagged frames to be received by specific IEDs
- Q-in-Q double VLAN to achieve multiple VLANs
- SNMP v1/v2c/v3 facilitates real-time remote management for network devices
- Supports EtherNet/IP and MODBUS TCP protocols that facilitates the remote management by SCADA and other industrial devices
- Proprietary redundancy RING and redundancy CHAIN high-end redundancy technology adopts easy-to-build multiple ring topology, with self-healing recovery time <30 ms to ensure reliable network transmission
- STP/RSTP/MSTP for network redundancy ensures reliability
- QoS(IEEE 802.1p) and TOS/DSCP for mission-critical applications
- IEEE 802.1Q VLAN and GVRP optimize network strategy
- Advanced DoS/DDoS auto prevention
- Enhanced network security with IEEE 802.1X, TACACS+, SSH, HTTPS and SNMP v3
- IEEE 802.3ad port trunking in parallel to increase the link bandwidth
- IEEE 1588v2 PTP (Precision Time Protocol) for precise time synchronization of network
- Broadcast/Multicast/ Unknown Unicast storm control to improve transmission quality
- Loopback-Detection to avoid broadcast storms by automatically shutting down the ports over a switching loop
- Cable diagnostic to auto-detect and report potential cabling issues
- Intelligent Access Control List (ACL)
- Each port adopts the MAC address locking function to block unauthorized access
- IGMP Snooping filters and manages multicast traffic
- RMON groups 1,2,3,9(history, statistics, alarms and events) for enhanced flow management and analysis
- Port mirroring for Many-to-One ports online troubleshooting
- Versatile system file updates by TFTP, HTTPS or HTTP
- DDM diagnosis function by SFP fiber modules
- Auto warning by email, relay, Syslog & SNMP trap
- Compatible with various industrial protocols, including EtherNet/IP, Profinet, CC-LINK IE and DNP 3.0

Specifications

TECHNOLOGY

Standard Compliance

- IEEE 802.3 10Base-T
- IEEE 802.3u 100Base-T(X) and 100Base-FX
- IEEE 802.3ab 1000Base-T
- IEEE 802.3z 1000Base-X
- IEEE 802.3ae 10 Gigabit
- IEEE 802.3x Flow Control
- IEEE 802.1D Spanning Tree Protocol
- IEEE 802.1w Rapid Spanning Tree Protocol
- IEEE 802.1s Multiple Spanning Tree Protocol
- IEEE 802.1p Class of Service, Priority Protocols
- IEEE 802.1Q VLAN Tagging
- IEEE 802.1AD VLAN Q-in-Q
- IEEE 802.1X Port Authentication
- IEEE 802.3ad LACP Aggregation
- IEEE 802.1AB Link Layer Discovery Protocol

Processing Type

- Store and Forward
- IEEE 802.3x Flow control in full duplex, back-pressure flow control in half duplex

Specifications

INTERFACE

Gigabit Ethernet
RJ45 Ports
- auto MDI/MDI-X, auto negotiation

SFP Ports
- 100/1000Base-SFP

M12 Ports
- A-coded 8-pin female connector; auto MDI/MDI-X, auto negotiation

Console Port
- RS-232(RJ45 connector)

Module Number
Module slots 1, 2 and 3:
- 8-Port 10/100/1000Base-T
  8-Port 100/1000Base-SFP
  6-Port 10/100/1000Base-T M12 modules

Module slot 4 :
- 4-Port 1000Base-SFP module

LEDs
Device:
- STATUS, PWR1, PWR2, R.M, RING, ALARM, RESET

Ports:
- 10/100/1000M (RJ45 port), LINK/ACT

Alarm Contacts (DO)
- 1 relay output (Normal open)
- 1 relay output (Normal close)
- Carry current 1A @ 24V_{DC}

Reset Button
- 1 set

PERFORMANCE AND SCALABILITY

Switching Capacity
- 128Gbps, Wired speed, Non-blocking switching fabric

Forwarding Rate
- 41.7Mpps

MAC Address Table
- 32K

Packet Buffer Memory
- 32M bits

Flash Memory
- 128M bits

DRAM Size
- 1G bits

IGMP Multicast Groups
- 128

Max. VLANs
- 4096

Quality of Service
- 8 priority queues per port

DHCP Server
- 512 IP addresses

Jumbo Frame
- 10K Bytes

MANAGEMENT

Layer 3 Routing
- RIP, VRRP v2/v3

Software
- STP/RSTP/MSTP, LACP, QoS, IGMP Snooping v1/v2/v3, IGMP Query v1/v2, GVRP, VLAN, VLAN Q-in-Q, VLAN unaware, SSH, DNS, HTTP, HTTPS, RADIUS, TACACS+, SNMP v1/v2c/v3, SNMP Traps, TFTP, RMON, LLDP, DHCP Server/Client, DHCP Relay Option 82, Telnet, Syslog, SMTP, SNTP Server/Client, IPv6, MODBUS TCP, EtherNet/IP

Security
- MAC/IP/TCP/UDP filtering, HTTPS, SSH, 802.1x, TACACS+, SNMP v3

Configuration
- Web browser, Cisco-like Telnet CLI , RJ45 console, SNMP

MIB
- MIB II, Bridge MIB, SNMP MIB, Ether-like MIB, Q-Bridge/P-Bridge MIB, IF MIB, Traceroute MIB, TCP MIB, UDP MIB, IP MIB, RMON Group 1,2,3,9, Delta Private MIB

POWER REQUIREMENTS

Input Voltage
- Installation: Rear cabling, industrial terminal block, redundant design
- 2 sets 100 to 240V_{AC} / 125 to 370V_{DC} (Tested @ 100 to 240V_{AC})

Input Current
- Max. 1.3A

Overload Current Protection
- Present, Max. input current 6.3A

Reverse Polarity Protection
- Present (V_{DC} input)

PHYSICAL

Housing
- IP30 metal case

Dimensions
- 44 mm(H) x 440 mm(W) x 325 mm (D)

Weight
- 6,600g

Installation
- 19" Rack mounting

ENVIRONMENTAL LIMITS

Operating Temperature
- -40℃ to 85℃ (-40 ℉ to 185 ℉)

Storage Temperature
- -40℃ to 85℃ (-40 ℉ to 185 ℉)

Ambient Relative Humidity
- 5% to 95% (non-condensing)