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Introduction

PoE+ Series

DVS-G512W01-4GF / DVS-G402R00-INJ / DVS-G401R00-SPL



Power over Ethernet (PoE) has become increasingly popular in recent years since the technology eliminates the need for power outlets at device locations and makes it easier to configure power supplies. In addition, PoE switches provide greater reliability by making it easier to manage your network's power requirements.

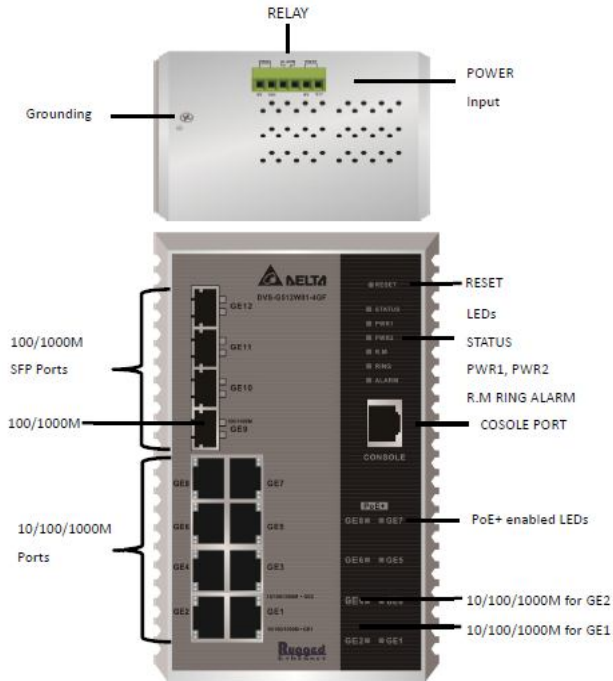
DVS PoE+ Series offers 30 watts for PoE devices. They are ideal for high powered devices in harsh environments for industrial applications, such as PTZ/outdoor IP cameras, LED display boards, and outdoor wireless applications.

PoE+ is consisted of ruggedized hardware and designed with redundant power inputs. It offers a wide operating temperature range of -40°C to 70°C without the use of internal fans. It has LEVEL 3&4 of immunity to electromagnetic interference (EMI) which is well beyond what is currently delivered by commercial grade networking products, therefore, providing superior reliability.

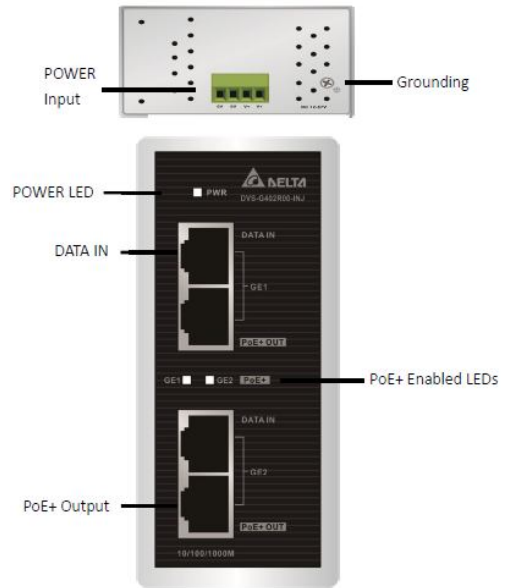


Product Overview

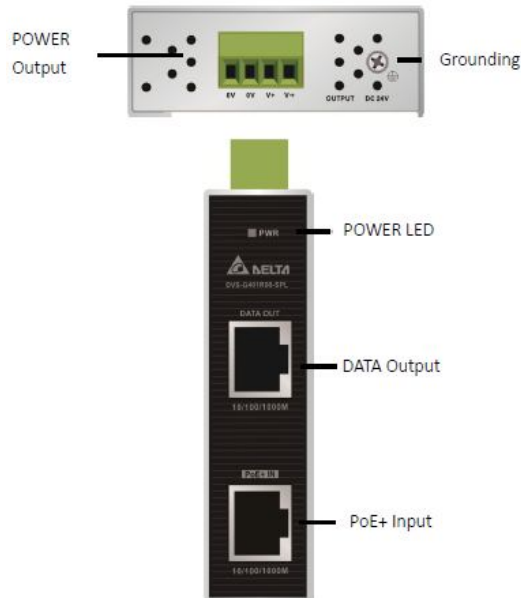
DVS-G512W01-4GF



DVS-G402R00-INJ



DVS-G401R00-SPL





DVS-G512W01-4GF

IEEE 802.3af/at PoE+ Managed Industrial 8 10/100/1000Base-T(PSE) + 4 100/1000Base-SFP Ethernet Switches

Main features

- Based on IEEE 802.3at standard up to 30Watts per port. Backward compatible with IEEE 802.3af
- Advanced PoE management and intelligent powered device(PD) class detection
- IPv6 address suitable for larger network and neighbor discovery
- 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
- SNMP v1/v2c/v3 facilitates the exchange of management between network devices
- Proprietary Redundancy RING and Redundancy CHAIN high end redundancy technologies, easy to build multiple ring topology, self-healing recovery time < 30 ms
- IEC 62439-2 MRP(media redundancy protocol) for IEC-based redundant ring topology
- STP/RSTP/MSTP for network redundancy further ensures reliability
- QoS(IEEE 802.1p) and TOS/DSCP for mission-critical applications
- IEEE 802.1Q VLAN, Q-in-Q double VLAN, VLAN isolation and GVRP optimize network strategy
- 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 improves throughput problems
- Loopback-Detection to avoid broadcast loops, and shutdown the corresponding ports automatically
- Cable diagnostic provides the mechanism to detect and report potential cabling issues
- Intelligent Access Control List(ACL)
- MAC addresses locking function per port blocks unauthorized access
- IGMP Snooping prunes multicast traffic
- Port mirroring for Many-to-One ports online troubleshooting
- DDM diagnosis function by SFP fiber module
- Auto warning by email, relay, Syslog & SNMP trap
- Compatible with various industrial protocols, including EtherNet/IP, Profinet, CC-LINK IE and DNP 3.0



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Specifications

Technology

Standard Compliance

IEEE 802.3 10Base-T	IEEE 802.1p Class of Service, Priority Protocols
IEEE 802.3u 100Base-T(X) and 100Base-FX	IEEE 802.1Q VLAN Tagging
IEEE 802.3ab 1000Base-T	IEEE 802.1X Port Authentication
IEEE 802.3z 1000Base-X	IEEE 802.3ad LACP Aggregation
IEEE 802.3x Flow Control	IEEE 802.1AB Link Layer Discovery Protocol
IEEE 802.1D Spanning Tree Protocol	IEEE 1588v2 Clock Synchronization
IEEE 802.1w Rapid Spanning Tree Protocol	IEEE 802.3af PoE 15.4 Watts
IEEE 802.1s Multiple Spanning Tree Protocol	IEEE 802.3at PoE 30 Watts

Processing type

Store and Forward

IEEE 802.3x flow control in full duplex, back- pressure flow control in half duplex

Interface

Ethernet Ports	RJ45 Ports	8 10/100/1000Base-T, auto MDI/MDI-X, auto negotiation
	SFP Ports	4 100/1000Base-SFP
	PoE+ Pinout	1 & 2 DC +, 3 & 6 DC -
Alarm Relay(DO)		1 set relay output with current carrying capacity 1A@24 V _{DC}
Console Port		1 set USB B-type
Reset Button		1 set

Ethernet Performance

Switching Capacity	24 Gbps, wire-speed, non-blocking switching fabric
MAC Table	8K MAC addresses
Packet Buffer Memory	4M bits



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Management

Console	WEB-based, USB console, Telnet
Protocol	STP/RSTP/MSTP, LACP, QoS, IGMP Snooping v1/v2/v3, IGMP Query v1/v2, VLAN, 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, SNMP Client, DOS/DDOS auto prevention, MRP, MODBUS TCP
Network Redundancy	Proprietary Ring/Chain, STP/RSTP/MSTP
Security MIB	MAC/IP/TCP/UDP filtering, HTTPS, SSH, 802.1x, TACACS+, SNMP v3 MIB II, Bridge MIB, VLAN MIB, Trunking MIB, DELTA Private MIB

Power Requirement

Input Voltage	2 sets 24 V _{DC} (12 to 48 V _{DC}) redundant inputs by terminal block
Power Consumption	Max. 5.5 A (with powered device); Max. 0.26A (without powered device)

Physical

Housing	IP30 protection, metal case
Dimensions	154 mm (H) x 96.4 mm (W) x 105.5 mm (D)
Weight	1205g
Installation	Industrial DIN-Rail and wall mounting

Environmental Limits

Operating Temperature	-40°C to 70°C (-40°F to 158°F)
Storage Temperature	-40°C to 85°C (-40°F to 185°F)
Ambient Relative Humidity	5% to 95% (non-condensing)

Approval

Safety	EN 60950-1
EMI	FCC 47 CFR Part 15 Subpart B Class A, EN 55022(CISPR 22), RCM
EMS	IEC 61000-4-2, IEC 61000-4-3, IEC 61000-4-4, IEC 61000-4-5, IEC 61000-4-6, IEC 61000-4-8, IEC 61000-4-11



DVS-G402R00-INJ

2 10/100/1000Base-T Industrial IEEE 802.3 af/at PoE+ Injectors

Main features

- Based on IEEE 802.3at standard up to 30Watts per port. Backward compatible with IEEE 802.3af
- Dual 10/100/1000Base-T for PoE+ OUT and DATA IN
- Intelligent PoE output overvoltage protection
- Reverse polarity and overload current protection
- Built-in 24 V_{DC} power booster for flexible PoE deployment
- Dual PoE+ outputs design to supply more devices

Technology

Standards	IEEE 802.3 10Base-T IEEE 802.3u 100Base-T(X) IEEE 802.3ab 1000Base-T IEEE 802.3af PoE 15.4 Watts IEEE 802.3at PoE 30 Watts
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Interface

Ethernet Ports	RJ45 Ports	2 10/100/1000Base-T PoE+ OUT, 2 10/100/1000Base-T DATA IN, auto MDI/MDI-X, auto negotiation
	PoE+ Pinout	1 & 2 DC +, 3 & 6 DC -

Power Requirement

Input Voltage	2 sets, 12 to 57 V _{DC} redundant terminal block input
Power Consumption	5.5 A max. (with powered device)
PoE+ Output Power	Max. 600mA @ 50 V _{DC} , 30 watts per port

Physical

Housing	IP30 protection, metal case
Dimensions	95 mm (H) x 41 mm (W) x 70 mm (D)
Weight	370g
Installation	Industrial DIN-Rail and wall mounting



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Environmental Limits

Operating Temperature	-40°C to 70°C (-40°F to 158°F)
Storage Temperature	-40°C to 85°C (-40°F to 185°F)
Ambient Relative Humidity	5% to 95% (non-condensing)

Approval

Safety	EN 60950-1
EMI	FCC 47 CFR Part 15 Subpart B Class A, EN 55022(CISPR 22)
EMS	IEC 61000-4-2, IEC 61000-4-3, IEC 61000-4-4, IEC 61000-4-5, IEC 61000-4-6, IEC 61000-4-8, IEC 61000-4-11



DVS-G401R00-SPL

1 10/100/1000Base-T Industrial IEEE 802.3 af/at PoE+ Splitters

Main features

- Based on IEEE 802.3at standard up to 30Watts per port. Backward compatible with IEEE 802.3af
- 10/100/1000Base-T for PoE+ IN and DATA OUT
- Intelligent PoE input overvoltage protection
- Reverse polarity and port isolation protection
- Power output up to 27 watts
- Dual power outputs design to supply more devices

Technology

Standards	IEEE 802.3 10Base-T IEEE 802.3u 100Base-T(X) IEEE 802.3ab 1000Base-T IEEE 802.3af PoE 15.4 Watts IEEE 802.3at PoE 30 Watts
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Interface

Ethernet Ports	RJ45 Ports	1 10/100/1000Base-T PoE+ IN, 1 10/100/1000Base-T DATA OUT, auto MDI/MDI-X, auto negotiation
	PoE+ Pinout	PD auto negotiation (1 & 2 DC +, 3 & 6 DC – or 4 & 5 DC +, 7 & 8 DC –)

Power Requirement

PoE+ Input Voltage	36 to 57 V _{DC}
Output Voltage	2 sets, 24 V _{DC} redundant terminal block
Output Current	Max. 1.125 A

Physical

Housing	IP30 protection, metal case
Dimensions	95 mm (H) x 26.1 mm (W) x 70 mm (D)
Weight	250g
Installation	Industrial DIN-Rail and wall mounting



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Environmental Limits

Operating Temperature	-40°C to 70°C (-40°F to 158°F)
Storage Temperature	-40°C to 85°C (-40°F to 185°F)
Ambient Relative Humidity	5% to 95% (non-condensing)

Approval

Safety	EN 60950-1
EMI	FCC 47 CFR Part 15 Subpart B Class A, EN 55022(CISPR 22)
EMS	IEC 61000-4-2, IEC 61000-4-3, IEC 61000-4-4, IEC 61000-4-5, IEC 61000-4-6, IEC 61000-4-8, IEC 61000-4-11



Ordering Information

Product		Port Combination			Interface		
Model Name	Operating Temperature	af/at PoE+, 10/100/1000Base-T	100/1000 Base-SFP	10/1000/1000 Base-T	DI	DO (Relay)	Power Input(Output)
DVS-G512W01-4GF	-40°C ~ 70°C	8	4	---	---	1	2
DVS-G402R00-INJ	-20°C ~ 70°C	2	---	2	---	---	2
DVS-G401R00-SPL	-20°C ~ 70°C	1	---	1	---	---	2

Released Date

Model Name	Date
DVS-G512W01-4GF	19-May-2017
DVS-G402R00-INJ	19-May-2017
DVS-G401R00-SPL	19-May-2017

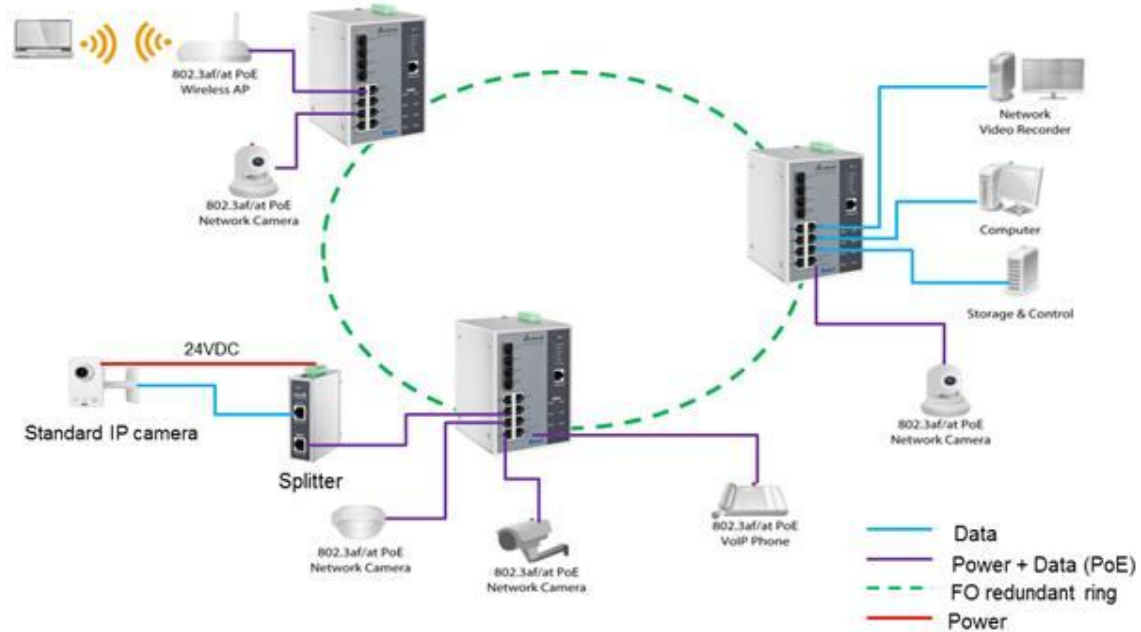
Application Examples

The applications of DVS series include intelligent traffic system (ITS), data collection, public transport, pollution monitoring, street lighting as well as tolling.



A typical application is video surveillance, where several IP cameras are implemented along with other PoE devices.

PoE network example 1:



PoE network example 2:

