

19"/2® ESW2224



20 port switch with PoE+

The 19"/2® ESW2224 gives you twenty ethernet ports in a compact form factor. The switch offers PoE and PoE+ as standard, and IP routing capabilities as an option.

With a rugged case that has a protection rating of IP67 against rain and dust, you can count on long-term performance in any environment.

Small form factor

The MilDef 19"/2® form factor is optimized for reduced size, weight, and power (SWaP) to meet industry and military requirements without sacrificing reliability, ruggedness or performance.

Flexible mounting

The 19"/2® standard enables flexible mounting options for a wide array of integration scenarios. The unit can be mounted in a standard 19" rack, half racks, or directly on to a surface and at any angle.

Military-relevant rugged design

MilDef products are designed to operate in extreme environmental conditions and challenging electromagnetic operational scenarios. Operationally proven, MilDef products are actively employed in military operations in over 60 countries.

Guaranteed performance

MilDef products are designed for the long lifecycles of military programs and come with a lifetime support program to ensure your equipment maintains peak performance for many missions to come.

We also guarantee the availability of spare parts for an additional 5 years after product end-of-life.

Features

- Cisco IOS® XE software
- Single-mode fiber uplinks
- IP routing capabilities (optional)
- PoE / PoE+

Connector Interfaces	
DC IN (front)	• 1x Power
G1/3 - G1/8 (front)	6 connectors which each has: <ul style="list-style-type: none"> • 1x ETH 10/100/1000BASE-T
G2/1-G2/12 (back)	12 connectors which each has: <ul style="list-style-type: none"> • 1x ETH 10/100/1000BASE-T
SERVICE (back)	• 1x RS232 Service
CONSOLE (front)	• 1x Serial Console
T1/1, T1/2 (front)	2 connectors which each has: <ul style="list-style-type: none"> • 1x ETH 1000BASE-LX

Other Interfaces	
2x Indicator (front)	
1x System button (front)	

Technical Specification	
Blanking	Enable/disable all externally visible indicators from emitting light via the "blanking command"
Design	Based on the Cisco ESS 3300
IP Multicast (Network Advantage only)	PIM sparse mode (PIM-SM), PIM dense mode (PIM-DM) and PIM Sparse dense mode
IP routing protocols (Network Advantage only)	OSPF (v4 and v6), RIP (V1 and V2), ISIS (v4 and v6), EIGRP (v4 and v6)
LAN 1000BASE-LX	1000BASE-LX standard with SM 1310 nm fiber
LAN 1000BASE-T	1000BASE-T standard
LAN POE compatibility	Type 1 (PoE) and 802.3at Type 2 (PoE+) Mode A PoE available when powered > 18 VDC, 120 W available
Layer 2 IPv6	IPv6 host support, HTTP over IPv6, SNMP over IPv6
Management	Web UI, MIB, SmartPort, SNMP, syslog, DHCP server, SPAN session (1), Full Flexible Netflow (FnF)
Multicast	IGMPv1, v2, v3 snooping, IGMP filtering, IGMP querier
Quality of service	Ingress policing, rate limit, egress queuing/shaping, autoQoS

Security	Port security, 802.1x, DHCP snooping, dynamic ARP inspection, IP source guard. Storm control - unicast, multicast, broadcast, SSH, SNMPv3, TACACS+, RADIUS, BPDU guard, MACsec-128, MACsec-256 (Network Advantage only)
Switching	IEEE 802.1, 802.3 standard, NTP, UDLD, CDP, LLDP, unicast MAC filter, VTPv2, VTPv3, EtherChannel, RSTP, etc
Virtualization (Network Advantage only)	VRF-lite
Electronics ground to chassis	Isolated
MIL-STD-1275E	Fully compliant
Polarity protection	Protected against incorrect polarity connection on the power input within the normal operating voltage range
Power consumption	150 W when powered in the range 18-36 VDC (PoE available) 30 W when powered in the range 12-18 VDC (PoE not available)
Power input	12-36 VDC
Power to chassis	Isolated
Power to electronics ground	Isolated
Chassis material	Aluminum
Coating and color	AE0305-6603120 Axalta (RAL 6031)
Cooling	Passively cooled
Dimensions width and height	220 x 43.4 mm (8.66 x 1.71 in) (WxH)
Earth point	M6 12 mm
Rack mounting depth	400 mm (15.8 in)
Surface treatment chassis	Chromit-Al
Weight	3.5 kg (7.8 lbs)
MTBF	132,377 h
CE	Compliant

Environmental Specification	
Functional shock - Operating	MIL-STD-810G, Method 516.6, Procedure I - Functional Shock. Table 516.6-II, Terminal peak sawtooth pulse, Ground equipment 40 g 11 ms
High temperature - Operating	MIL-STD-810G, method 501.5, Procedure II - Operation 65 °C (149 °F)



High temperature - Storage	MIL-STD-810G, Method 501.5, Procedure I - Storage 71 °C (160 °F)
Humidity	MIL-STD-810G, Method 507.5, Procedure II - Aggravated 95 ± 4 % RH Ten 24 h cycles
IP Class (Solid Particle Protection)	IP Class 6X
IP Class (Water)	IP Class X7
Low air pressure - Rapid decompression	MIL-STD-810G, Method 500.5, Procedure III - Rapid decompression 75.2 kPa, corresponding to 2,438 m (8,000 ft) 17 kPa, corresponding to 12,192 m (40,000 ft)
Low air pressure - Operating	MIL-STD-810G, method 500.5, Procedure II - Operation/Air Carriage 4,572 m (15,000 ft)
Low temperature - Operating	MIL-STD-810G, method 502.5, Procedure II - Operation -40 °C (-40 °F)
Low temperature - Storage	MIL-STD-810G, method 502.5, Procedure I - Storage -40 °C (-40 °F)
Noise level	Maximum noise level of 40 dB SPL A-weighting at 1 m (3.3 ft) distance
Salt fog	MIL-STD-810G Method: 509.5 5 % ± 1 % (by weight) Two cycles, 24 h wet + 24 h dry / cycle
Temperature shock - Operating	MIL-STD 810G, method 503.5 procedures I - C, - Multi-cycle shocks from constant extreme temperature 55 °C (131 °F) -40 °C (-40 °F)
Vibration - Helicopter	MIL-STD-810G. Method 514.6, Procedure I - General vibration, Category 14 - Rotary wing aircraft - helicopter
Vibration - Loose cargo	MIL-STD-810G. Method 514.6, Procedure II - Loose cargo transportation, Category 5 - Truck/trailer - loose cargo
Vibration - Tracked vehicles	MIL-STD-810G. Method: 514.6 , Procedure 1 - General Vibration, Category 20 - Ground vehicles - ground mobile, tracked vehicles
Vibration - Wheeled vehicles	MIL-STD-810G. Method: 514.6 , Procedure 1 - General Vibration, Category 20 - Ground vehicles - ground mobile, wheeled vehicles

EMC Specification

EMI conducted CE102	MIL-STD-461F, Method CE102, Conducted emissions, power leads BASIC CURVE 10 kHz - 10 MHz
EMI radiated RE102	MIL-STD-461F, Method RE102, Radiated emissions, electric field Navy Mobile & Army 2 MHz - 18 GHz
EMS conducted CS101	MIL-STD-461F, Method CS101, Conducted susceptibility, power leads CURVE #1 30 Hz - 150 kHz
EMS conducted CS114	MIL-STD-461F, Method CS114, Conducted bulk susceptibility Army, Ground 10 kHz - 200 MHz
EMS conducted CS115	MIL-STD-461F, Method CS115, Conducted susceptibility, bulk cable injection, impulse excitation
EMS conducted CS116	MIL-STD-461F, Method CS116, Conducted susceptibility, damped sinusoidal transients, cables and power leads 10 kHz - 100 MHz
EMS radiated RS103	MIL-STD-461F, Method RS103, Radiated susceptibility, electric field Army 2 MHz - 1 GHz

