

# 19"/2<sup>®</sup> ESW2225



## 22 port switch with PoE+

The 19"/2<sup>®</sup> ESW2225 gives you twentytwo 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<sup>®</sup> 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<sup>®</sup> 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<sup>®</sup> XE software
- Single-mode fiber uplinks
- IP routing capabilities (optional)
- PoE / PoE+

## Connector Interfaces

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

## Other Interfaces

1x System button (front)

## Technical Specification

Blanking	Enable/disable all externally visible indicators from emitting light via the "blinking command"
Blanking	Double-pressing the System button
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-T	1000BASE-T standard
LAN POE compatibility	Type 1 (PoE) and 802.3at Type 2 (PoE+) Mode A Total PoE power available depending on DC IN: < 18 VDC 90 W ≥ 18 VDC 105 W
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 polarization failure on the power input in the voltage range of normal operation
Power consumption	TBD W
Power input	12-36 VDC
Power to chassis	Isolated
Power to electronics ground	Isolated
Chassis material	Aluminum
Coating and color	Dupont AE0305-6603120 (RAL6031)
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	133,572 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

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

<b>EMC Specification</b>	
<b>EMI conducted CE102</b>	MIL-STD-461F, Method CE102 BASIC CURVE 10 kHz to 10 MHz
<b>EMI radiated RE102</b>	MIL-STD-461F Navy Mobile & Army 2 MHz - 18 GHz

<b>EMS conducted CS101</b>	MIL-STD-461F, Method CS101, conducted susceptibility, power leads. CURVE #1 30 Hz to 150 kHz
<b>EMS conducted CS114</b>	MIL-STD-461F Army, Ground 10 kHz - 200 MHz
<b>EMS conducted CS115</b>	MIL-STD-461F Conducted susceptibility, bulk cable injection, impulse excitation
<b>EMS conducted CS116</b>	MIL-STD-461F 10 kHz - 100 MHz
<b>EMS radiated RS103</b>	MIL-STD-461F Army 2 MHz - 1 GHz