

# 19"/2 ® ESW2225



## 22 port switch with PoE+

The 19"/2 ® 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 ® 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
- IP routing capabilities (optional)
- PoE / PoE+

**Connector Interfaces**

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

**Other Interfaces**

1x System button (front)

**Technical Specification**

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

<b>Security</b>	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)
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<b>Switching</b>	IEEE 802.1, 802.3 standard, NTP, UDLD, CDP, LLDP, unicast MAC filter, VTPv2, VTPv3, EtherChannel, RSTP, etc
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<b>Virtualization (Network Advantage only)</b>	VRF-lite
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<b>Electronics ground to chassis</b>	Isolated
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<b>MIL-STD-1275E</b>	Fully compliant
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<b>Polarity protection</b>	Protected against incorrect polarity connection on the power input within the normal operating voltage range
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<b>Power consumption</b>	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)
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<b>Power input</b>	12-36 VDC
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<b>Power to chassis</b>	Isolated
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<b>Power to electronics ground</b>	Isolated
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<b>Chassis material</b>	Aluminum
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<b>Coating and color</b>	AE0305-6603120 Axalta (RAL 6031)
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<b>Cooling</b>	Passively cooled
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<b>Dimensions width and height</b>	220 x 43.4 mm (8.66 x 1.71 in) (WxH)
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<b>Earth point</b>	M6 12 mm
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<b>Rack mounting depth</b>	400 mm (15.8 in)
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<b>Surface treatment chassis</b>	Chromit-Al
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<b>Weight</b>	3.5 kg (7.8 lbs)
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<b>MTBF</b>	> 125,000 h
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<b>CE</b>	Compliant
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**Environmental Specification**

<b>Functional shock - Operating</b>	MIL-STD-810G, Method 516.6, Procedure I - Functional Shock. Table 516.6-II, Terminal peak sawtooth pulse, Ground equipment 40 g 11 ms
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<b>High temperature - Operating</b>	MIL-STD-810G, method 501.5, Procedure II - Operation 65 °C (149 °F)
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<b>High temperature - Storage</b>	MIL-STD-810G, Method 501.5, Procedure I - Storage 71 °C (160 °F)
<b>Humidity</b>	MIL-STD-810G, Method 507.5, Procedure II - Aggravated 95 ± 4 % RH Ten 24 h cycles
<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

**EMC Specification**

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

