

# 19"/2<sup>®</sup> ESW2216



## 10 Port Switch

The 19"/2<sup>®</sup> ESW2216 gives you eight GVA copper and two 10G fiber ports, in a compact MIL-SPEC form factor.

### 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.

### 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

- Based on the Cisco ESS 3300
- Management via SNMP, Command Line (Telnet, SSH) and Web
- Passively cooled

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## Connector Interfaces

<b>SERVICE</b> (back)	<ul style="list-style-type: none"> <li>1x RS232 Service</li> </ul>
<b>X1 DC IN</b> (front)	<ul style="list-style-type: none"> <li>1x Power</li> </ul>
<b>X2-X4</b> (front)	3 connectors which each has: <ul style="list-style-type: none"> <li>2x ETH 1000BASE-T</li> </ul>
<b>X5</b> (back)	<ul style="list-style-type: none"> <li>2x ETH 1000BASE-T</li> </ul>
<b>X6</b> (front)	<ul style="list-style-type: none"> <li>1x Serial Console</li> </ul>
<b>X7-X8</b> (back)	2 connectors which each has: <ul style="list-style-type: none"> <li>1x ETH 10GBASE-SR</li> </ul>

## Other Interfaces

10x ETH indicator (front)
1x System button (front)

## Technical Specification

<b>Blanking</b>	Enable/disable all externally visible indicators from emitting light via the "blanking command"
<b>Design</b>	Based on the Cisco ESS 3300
<b>LAN 1000BASE-T</b>	1000BASE-T standard
<b>Switch features</b>	Management via SNMP, Command Line (Telnet, SSH) and Web IEEE 802.1, 802.3 standard VLAN IDs 256 IGMP Groups 1K ACL (PACL, VACL) EtherChannel IPv6 SNMP VTP v2, v3 802.1x multidomain authentication MIB SNMP v3 IGMP v1, v2, v3 NTP, PTP* *not on Te1/1 and Te1/2 ports
<b>MIL-STD-1275D</b>	5.3.2.2 5.3.2.3 5.3.2.4
<b>Polarity protection</b>	Protected against incorrect polarity connection on the power input within the normal operating voltage range
<b>Power consumption</b>	30 W
<b>Power input</b>	12-32 VDC
<b>Chassis material</b>	Aluminum
<b>Coating and color</b>	Dupont AE0305-1101320 (RAL 1013)
<b>Cooling</b>	Passively cooled
<b>Dimensions width and height</b>	220 x 43.4 mm (8.66 x 1.71 in) (WxH)

<b>Earth point</b>	M6 12 mm
<b>Surface treatment chassis</b>	Chromit-Al
<b>Unit depth</b>	221 mm (8.7 in)
<b>Weight</b>	2.2 kg (4.9 lbs)
<b>MTBF</b>	287,723 h
<b>CE</b>	Compliant

## 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
<b>High temperature - Operating</b>	MIL-STD-810G, method 501.5, Procedure II - Operation 65 °C (149 °F)
<b>High temperature - Operating (Optional)</b>	MIL-STD-810G, method 501.5, Procedure II - Operation 71 °C (160 °F)
<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 X5
<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