10G Cisco Fiber Switch - Concept 3199

MilDef offers our customers complete realization of any product idea or concept within rugged electronics. Based on our long experience of designing and customizing products, our engineering team is ready to attack any technical problem thrown at them. A MilDef concept enables the possible implementation of customer specific requirements. Realization may involve NRE cost. This featured product is currently at a concept stage, contact us to further discuss your requirements.

10G fiber switch

The switch offers a high-end ruggedized Cisco fiber switch, with 10x 10G fiber ethernet interfaces all in a 1U half rack form factor.

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

- Based on Cisco ESS-9300
- Cisco IOS XE
- 10x 10G fiber

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Connector Interfaces

CONSOLE (front)	• 1x RS232 Console
X1 DC IN (front)	• 1x Power
MGMT (back)	• 1x ETH 1000BASE-T
T01-T10 (front)	5 connectors which each has: • 2x 10GBASE-SX
SERVICE (back)	• 1x RS232 Service

Other Interfaces

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 9300
LAN 10GBASE-SX	10GBASE-SX standard with MM 850nm OM3/OM4 fiber
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
Switching	IEEE 802.1, 802.3 standard, NTP, UDLD, CDP, LLDP, unicast MAC filter, VTPv2, VTPv3, EtherChannel, RSTP, etc
MIL-STD-1275E	Transient disturbances 5.1.3.1 5.1.3.2
Polarity protection	Protected against polarization failure on the power input in the voltage range of normal operation
Power consumption	50 W
Power input	12-36 VDC
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
Surface treatment chassis	Chromit-Al
Unit depth	299 mm (11.8 in)

Weight	4 kg (8.9 lbs)

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 ℃
High temperature - Storage	MIL-STD-810G, Method 501.5, Procedure I - Storage 71 ℃ (160 ℉)
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 X5
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 ℃ (-40 ℉)
Low temperature - Storage	MIL-STD-810G, method 502.5, Procedure I - Storage -40 ℃ (-40 ℉)
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 ℃ (131 ℉) -40 ℃ (-40 ℉)
Vibration - Helicopter	MIL-STD-810G. Method 514.6, Procedure I - General vibration, Category 14 - Rotary wing aircraft - helicopter

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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 Vehicle	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 BASIC CURVE 10 kHz to 10 MHz
EMI radiated RE102	MIL-STD-461F Navy Mobile & Army 2 MHz - 18 GHz
EMS conducted CS101	MIL-STD-461F, Method CS101, conducted suceptibility, power leads. CURVE #1 30 Hz to 150 kHz
EMS conducted CS114	MIL-STD-461F Army, Ground 10 kHz - 200 MHz
EMS conducted CS115	MIL-STD-461F Conducted susceptibility, bulk cable injection, impulse excitation
EMS conducted CS116	MIL-STD-461F 10 kHz - 100 MHz
EMS radiated RS103	MIL-STD-461F Army 2 MHz - 1 GHz

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