19"/2® RM2139

Switch and Router in one

RM2139 combines the Cisco ESS3300 Switch and the ESR6300 Router in a single unit. The result is an extremely capable network product, offering high performance levels and a wide range of routing and switching capabilities, all fitted inside a 1U Half Rack unit.

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 to a surface and in 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 ESR6300 & ESS3300
- Cisco IOS XE
- Comprehensive Layer 2/3 switching
- IPv4 and IPv6 unicast and multicast routing
- Unified Communications Manager Express support
- Firewall support

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Connector Interfaces

DC IN (front)	• 1x Power
CONSOLE R (front)	• 1x RS232 Console
CONSOLE S (front)	• 1x RS232 Console
G1/3-G1/10 ETH S (front)	8 connectors which each has: • 1x ETH 10/100/1000BASE-T with PoE
TE1/1-TE1/2 ETH S (back)	2 connectors which each has: • 1x ETH 10/100/1000BASE-T
GE0/0/0-GE0/0/1 WAN R (back)	2 connectors which each has: • 1x ETH WAN 10/100/1000BASE-T
GE0/1/0-GEO/1/3 ETH R (back)	4 connectors which each has: • 1x ETH 10/100/1000BASE-T
SERVICE (back)	• 1x RS232 Service

Other Interfaces

1x System button (front)

Technical Specification

Cisco IOS XE software	ESR6300 Network Essentials or Network Advantage It is available with different throughput licenses: Default (50 Mbps) Performance (250 Mbps) Boost (2 Gbps) Optional licenses for CME, Cisco DNA Center and HSEC is also available. ESS3300 Network Essentials or Network Advantage
Firewall	Zone-based policy firewall Stateful inspection Advanced application inspection and control HTTPS/FTP/Telnet Authentication Proxy Dynamic and static port security Firewall stateful failover VRF-aware firewall
IPv4/IPv6 services features	RIP v1 & v2, OSFP v2 & v3, BGP, EIGRP, IS-IS, IP SLA, NAT, GRE/MGRE, DHCP, DDNS, DNS proxy, DNS spoofing, DLEP, MPLS, Mobile IP, OSPF MANET, L2TP, etc
LAN 1000BASE-T	1000BASE-T standard
LAN POE compatibility	Type 1 (PoE) and 802.3at Type 2 (PoE+) Mode A on all switch Ethernet-ports 1-8 Total PoE power available depending on DC IN: < 14 VDC 90 W # 14 VDC 105 W
Layer 2 switching	Layer 2 switching: IEEE 802.1, 802.3 standard, NTP, CDP, LLDP, unicast MAC filter, VTP, ACLs, EtherChannel, PVST+, MSTP, RSTP, etc
Management	Web UI MIB SmartPort SNMP Syslog DHCP server SPAN session Full Flexible Netflow (FnF) RADIUS HSRP
Multicast services	IGMPv1, v2, v3 snooping, IGMP filtering, IGMP querier. PIM sparse mode (PIM-SM), PIM dense mode (PIM-DM) and PIM Sparse dense mode
Quality of service	Ingress policing, rate limit, egress queuing/shaping, autoQoS, LLQ, WFQ, CBWFQ, CBTS, PBR, Class-Based QoS MIB, CoS, DSCP, CBWRED, RSVP, RTP, cRTP, DiffServ, QoS pre-classify and pre-fragmentation, HQoS, App-aware QoS polices, etc.

Security	SSL VPN NGE PKI support IPSEC IPSEC stateful failover VRF-aware IPSEC Easy VPN DMVPN Flex VPN SSHv2 MACsec Port security 802.1x DHCP snooping Dynamic ARP inspection IP source guard Guest VLAN MAC authentication bypass 802.1x multidomain authentication Storm control SCP SNMPv3 TACACS+ RADIUS server/client Integrated Threat Control (CoPP, etc)
Unified Communications	Unified Communications Manager Express support
Virtualization	VRF-lite
Electronics ground to chassis	Isolated
MIL-STD-1275D	5.3.2.2 5.3.2.3 5.3.2.4
Polarity protection	Protected against incorrect polarity connection on the power input within the normal operating voltage range
Power consumption	At 28 VDC: Without PoE: Max 31 W Without PoE: Typ 26 W Without PoE: Idle 24 W With PoE: Max 150 W
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	220 x 43.4 x 374 mm (8.7 x 1.7 x 14.8 in) (WxHxD)
Earth point	M6 12 mm
Surface treatment chassis	Chromit-Al
Weight	3.8 kg (8.4 lbs)

MTBF	> 125,000 h

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 55 °C (131 °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 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 °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)

Transit drop, in shipping package	MIL-STD-810G, method 516.6, Procedure IV - Transit Drop. Table 516.6-VI, Transit drop test, < 45.4 kg (100 lbs), < 91 cm (36 inch), Manpacked or man-portable
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