19"/2 ® RM2102

Cisco Router - ESR6300

The 19"/2 ® RM2102 is a high-performance router based on the Cisco ESR6300 router card. It comes with onboard hardware encryption, which enables highly secure video, voice and data services. The router offers five external gigabit ethernet ports as well as an internal LTE modem for connectivity.

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
- Hardware encryption
- Gigabit interfaces
- Onboard Trust Anchor module (TAm)
- Cisco unified Communications Manager Express support
- Various throughput licenses
- Built in LTE modem

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Connector Interfaces

SERVICE (back)	• 1x RS232 Service
X1 DC IN (front)	• 1x Power • 1x Remote
X2 (front)	• 1x RS-232 • 1x USB 2.0 • 1x USB 2.0 Console
X3 (front)	• 1x WAN ETH 1000BASE-SX • 1x LAN ETH 1000BASE-SX
X4 (front)	• 2x LAN ETH 1000BASE-SX
X5 (front)	• 1x WAN 1000BASE-T
X6-X7 (front)	2 connectors which each has: • 1x LTE Antennas

Other Interfaces

1x Radio transmitter state indicator (front)

1x Sim card (front)

1x System button (front)

Technical Specification

Blanking	Double-pressing the System button
Built in test (BIT)	Displayed by status LED
Cisco IOS XE software	ESR6300 Network Essentials or Network Advantage Default (50 Mbps) Performance (250 Mbps) Boost (2 Gbps) Optional licenses for CME, Cisco DNA Center and HSEC
Firewall (ESR6300)	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
Management (ESR6300)	Web UI MIB SNMP Syslog DHCP server Full Flexible Netflow (FnF) RADIUS HSRP
MilDef remote management bus	Enable remote host to perform the following on this device: Power on/off (Gracefully shutdown) Zeroization(if unit supports it) Unit state readback (Unit ready)
Radio transmitter disable	System button sequence Configurable startup state
Reference design	Based on the Cisco ESR6300
Router features (ESR6300)	GRE and MGRE 802.1D STP NAT DDNS IPv4 and IPv6 Multicast OSPF, BGP, EIGRP, RIP v1-v2 L2TP VPN for remote access IPSec over IPv6 Cisco IOS Firewall 2 routed and 4 switched Gigabit Ethernet interfaces
Security (ESR6300)	SSL VPN NGE PKI support IPSEC IPSEC stateful failover VRF-aware IPSEC Easy VPN NAT transparency DMVPN Flex VPN SSHv2 Integrated Threat Control (CoPP, etc)
Wireless connectivity	Sierra Wireless RV50X 4G/LTE modem
Zeroization	Zeroization by pressing the system button for 12 sec
Electronics ground to chassis	Non-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	23 W
Power input	12-32 VDC
Power to chassis	Isolated
Power to electronics ground	Isolated
Chassis material	Aluminum
Coating and color	AE0305-7703520 Axalta (RAL 7035)
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	368 mm (14.5 in)
Weight	3.1 kg (6.9 lbs)
MTBF	> 150,000 h
CE	Compliant

Environmental Specification

Functional shock - Operating	MIL-STD-810H, Method 516.8, Procedure I - Functional shock. Table 516.8-IV, Terminal peak sawtooth pulse, Ground materiel 40 g 11 ms
High temperature - Operating	MIL-STD-810H, Method 501.7, Procedure II - Operation 55 °C (131 °F)
High temperature - Storage	MIL-STD-810H, Method 501.7, Procedure I - Storage 71 °C (160 °F)
Humidity	MIL-STD-810H, Method 507.6, Procedure II - Aggravated 95 ± 4% RH Ten 24-hour cycles
IP Class (Solid Particle Protection)	IP Class 6X
IP Class (Water)	IP Class X5
Low air pressure - Rapid decompression	MIL-STD-810H, Method 500.6, Procedure III - Rapid decompression 2,438 m (8,000 ft) 12,192 m (40,000 ft)
Low air pressure - Operating	MIL-STD-810H, Method 500.6, Procedure II - Operation/air carriage 4,572 m (15,000 ft)
Low temperature - Operating	MIL-STD-810H, Method 502.7, Procedure II - Operation -30 °C (-22 °F)
Low temperature - Storage	MIL-STD-810H, Method 502.7, 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-810H, Method 509.7 5 ± 1% (by weight) Two cycles, 24 h wet + 24 h dry / cycle
Temperature shock - Operating	MIL-STD 810H, Method 503.7, Procedure I-C, - Multi-cycle shocks from constant extreme temperature 55 °C (131 °F) -40 °C (-40 °F)
Vibration - Helicopter	MIL-STD-810H, Method 514.8, Procedure I - General vibration, Category 14 - Rotary wing aircraft - helicopter
Vibration - Loose cargo	MIL-STD-810H, Method 514.8, Procedure II - Loose cargo transportation, Category 5 - Truck/trailer - loose cargo
Vibration - Tracked vehicle	MIL-STD-810H, Method 514.8, Procedure I - General vibration, Category 20 - Ground vehicle - ground mobile, Tracked vehicle
Vibration - Wheeled vehicle	MIL-STD-810H, Method 514.8, Procedure I - General vibration, Category 20 - Ground vehicle - ground mobile, Wheeled vehicle

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