RM2100 with LTE - Concept 3313

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.

Cisco Router

The RM2100 series is based on the ESR6300 from Cisco. This unit features LTE support.

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 ESR6300
- Cisco IOS XE
- IPv4 and IPv6 unicast and multicast routing
- Unified Communications Manager Express support
- Firewall support
- LTE support
- Option for mSATA internal Storage for other Cisco applications

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Connector Interfaces

CONSOLE-S (front)	• 1x RS232 Console
DC IN (front)	• 1x Power
G1/2-G1/5 LAN (front)	4 connectors which each has: • 1x ETH 1000BASE-T
ANT1-ANT2 (front)	2 connectors which each has: • 1x LTE
SERVICE (back)	• 1x RS232 Service
G1/0-G1/1 WAN (front)	2 connectors which each has: • 1x ETH 1000BASE-T

Other Interfaces

1x Sim Card (front)
1x System button (front)

Technical Specification

Blanking	Enable/disable all externally visible indicators from emitting light via the "blanking command"
Cisco IOS XE software	ESR6300 Network Essentials or Network Advantage Default (50 Mbps) Performance (250 Mbps) Boost (350Mbps) Optional licenses for CME, Cisco DNA Center and HSEC
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
LAN 1000BASE-T	1000BASE-T standard
Management	Web UI MIB SmartPort SNMP Syslog DHCP server SPAN session Full Flexible Netflow (FnF) RADIUS HSRP
Reference design	Based on the Cisco ESR6300
Router features	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	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)
MIL-STD-1275E	Fully compliant
Polarity protection	Protected against polarization failure on the power input in the voltage range of normal operation
Power consumption	40 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	245 mm (9.7 in)
Weight	4 kg (8.9 lbs)
MTBF	125,000 h
CE	Compliant

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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 -40 °C (-40 °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 + 24h 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 Vehicles	MIL-STD-810H, Method 514.8, Procedure I - General Vibration, Category 20 - Ground vehicles - ground mobile, Tracked vehicles
Vibration - Wheeled Vehicle	MIL-STD-810H, Method 514.8, Procedure I - 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 susceptibility, 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