RESMLAC-28MG - Managed military Ethernet switch - 24 Gigabit + 4 combo 10G ports

Military ethernet switch for harsh environment - Fully MIL-STD compliant

Description

The **RESMLAC-28MG** is a MIL-STD Fully managed Military-grade network switch offering 24 triple speed (10/100/1000) ports + 4 optional x 10G fiber ports.

The **RESMLAC-28MG** is compatible with all the newest military industry network protocols for redundant link topology, security, multi-cast and management requirements.

Developed specifically for military and harsh mobile applications, the RESMLAC-28MG features mechanical packaging enhancements designed for MIL-STD-810F airborne and ground environmental compliance and high reliability. The unit has been especially hardened to improve ingress, impact, and shock/vibration protection, as well as eliminate all moving parts through passive cooling, and interface through sealed MIL-DTL-38999 circular connectors and SCE.

Leveraging best-in-class switching technology, the RESMLAC-28MG serves as a robust COTS solution for providing local area network (LAN) connectivity to IP-enabled computing and net-centric devices. Compact in size, the RESMLAC-28MG is particularly useful for expanding port density to tactical IP routers in space-constrained airborne and ground vehicle environments.

Main features

ETHERNET PORTS

- Managed 24x to 28x switched ports
- 24x 10/100/1000 ports + Optional 4x10Gbps Fiber optic ports
- The 4 optional ports provide 100/1000Base-FX/SX/LX

NETWORKING

- Wire-speed hardware-based 28 ports gigabit ethernet switch
- Multicasting (IGMP Snooping), GARP, GMRP, MLD and GVRP
- Multicast groups up to 8K for both IPv4 and IPv6
- Broadcasting and flooding control up to 8K groups
- 802.1q tagged based VLAN up to 4K VLAN groups
- Link Aggregation 802.3ad, up to 16 members in group
- Link Aggregation mechanism based on L2/ L3/ L4 parameters
- Jumbo Frame support up to 10K
- WEB, CLI, Telnet Management

QUALITY OF SERVICE

- QoS Multi-Layer Classifier: 802.1p, EtherType, VLAN-ID, IPv4/ 6 DSCP/ToS, and UDP/TCP ports & ranges traffic classification
- Per port WFQ and Strict Queuing scheduling
- DSCP remarking for both IPv4 and IPv6 frames
- Ingress policer and ingress shaper per port with 500Kbps granularity
- Egress shaper per port with 500Kbps granularity
- Full-duplex flow control (IEEE802.3X) and half-duplex backpressure, symmetric and asymmetric.

VOLTAGE OPERATION

- DC versions: 24VDC (18VDC - 32VDC)
- VAC versions: 90-265 VAC / 47-65Hz

MILITARY RUGGED SWITCH
MIL-STD-1275B
MIL-STD-704A
MIL-STD-461F
MIL-STD-810F/GM
IP67
RTCA-DO160
MIL-STD-167-1A

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Military Ethernet Switch for Harsh Environment with Industrial EMI Compliancy

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Main features

SECURITY

- Security via Radius authentication 802.1x, Port/ MAC access control
- Port security
- Per port ingress and egress port mirroring
- Mirroring per VLAN and per content awareness match
- Private VLAN support per VLAN (Isolated and Promiscuous ports)
- Content Aware Policers:

> • 128 Content Aware Policers
> • 16 Content Aware rate policers with rates from 1fps to 32 million fps
> • 8 UDP/TCP port range policers
> • Advanced ACL through hardware based match patterns
> • Content Aware Policers for generic MAC, ARP, IPv4, IPv6 protocols
> • No restriction on any mix of entries to Content Aware Policers
> • Contente Aware Policers actions are permit/ deny, police, count, snoop and mirror
> Special support for IP fragments, UDP/TCP port ranges and ARP
> • Extensive CPU DoS prevention
> • Surveillance functions by Content Aware Policers counters
> • Multiple ACLs per port for optimal usage of Content Aware Policers

- Storm controllers for flooded broadcast, multicast and unicast

REDUNDANCY AND RING PROTECTION

- Spanning tree (802.1d), RSTP (802.1w) and multiple Spanning tree (802.1S) for fast recovery rings
- RPR for up to 30 units per ring with recovery time <50ms hardware based
- RPR for up to 30 units per ring with recovery time <50ms hardware
- 20-Gbps bandwidth for ring topology
- QoS consistency across stack / ring
- Mirroring across stack / ring
- Link aggregation groups spanning multiple switches in stack/ring

CONNECTORS

- 2 x Power connector type: MIL-DTL-38999/24WC4P (1 optional)
- 24 x LAN connector type: SCE2-B-76A07-14SN-001
- Optional fiber optic connectors:

> • TVOP (MIL-DTL- 38999)
> • CTOS (STANAG 4290)
> • TACBEAM (M83526/20&21)

- 1 x Serial interface, shared with LAN port #1
- LED indication per Port (Speed, Link/Activity) per Unit (Power A, Power B)

Product specifications

Chassis	• Low profile rugged aluminium extrusion • Conductively cooled w/custom internal heat-sinks • Ingress protection against sand, dust and moisture • Polyurethane Paint, Per MIL-C-83286 type II, color : Nato green, FS24079, semi-gloss
Standards	• MIL-STD-1275B, MIL-STD-704A, MIL-STD-461F, MIL-STD-810F GM, IP67
Performance	• 96.8 Mbps wire speed forwarding rate • 56 Gbps maximum forwarding bandwidth • 8K MAC address

Power	• Exceed MIL-STD-1275B and MIL-STD-704A Surge and Spike protection
	• Voltage input:
	   - DC versions: 24VDC nominal (18-32VDC)
	   - VAC versions: 90-265 VAC / 47-65 Hz
	• Power consumption: 20W typical
	• Chassis grounding

Electromagnetic	• MIL-STD-461F : CS-114, CS-115, CS-116, RE-101, RE-102, RS-101, RS-103 • RTCA-DO160 sec 25 : +/- 15KV 150pF 330Ohm
Shock / Vibration / Humidity / Altitude	• MIL-STD-810F G, 507.5, 500.4 I & II, 501.5 I & II, 502.5 I & II, 516.6 I, 514.6 cat 4 & 10, 509.5 • MIL-STD-167-1A, type I, shipboard vibration
Physical	• Dimensions: 440mm (L) x 200mm (W) x 88(H), including connectors & hardware, 2U, 19" rack • Weight: 5.6 kg

Due to technical modifications, all information provided is subject to change without prior notice
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Product specifications

Installation	• 19" standard mounting ears • Other options available (rear mount or ears for mounting to any flat surface)
Cooling	• No moving parts. Passive cooling.
Operating temp	• -40°C to +70°C (-40°F to +158°F)
Storage temp	• -46°C to +71°C (-51°F to +160°F)

Overall dimension
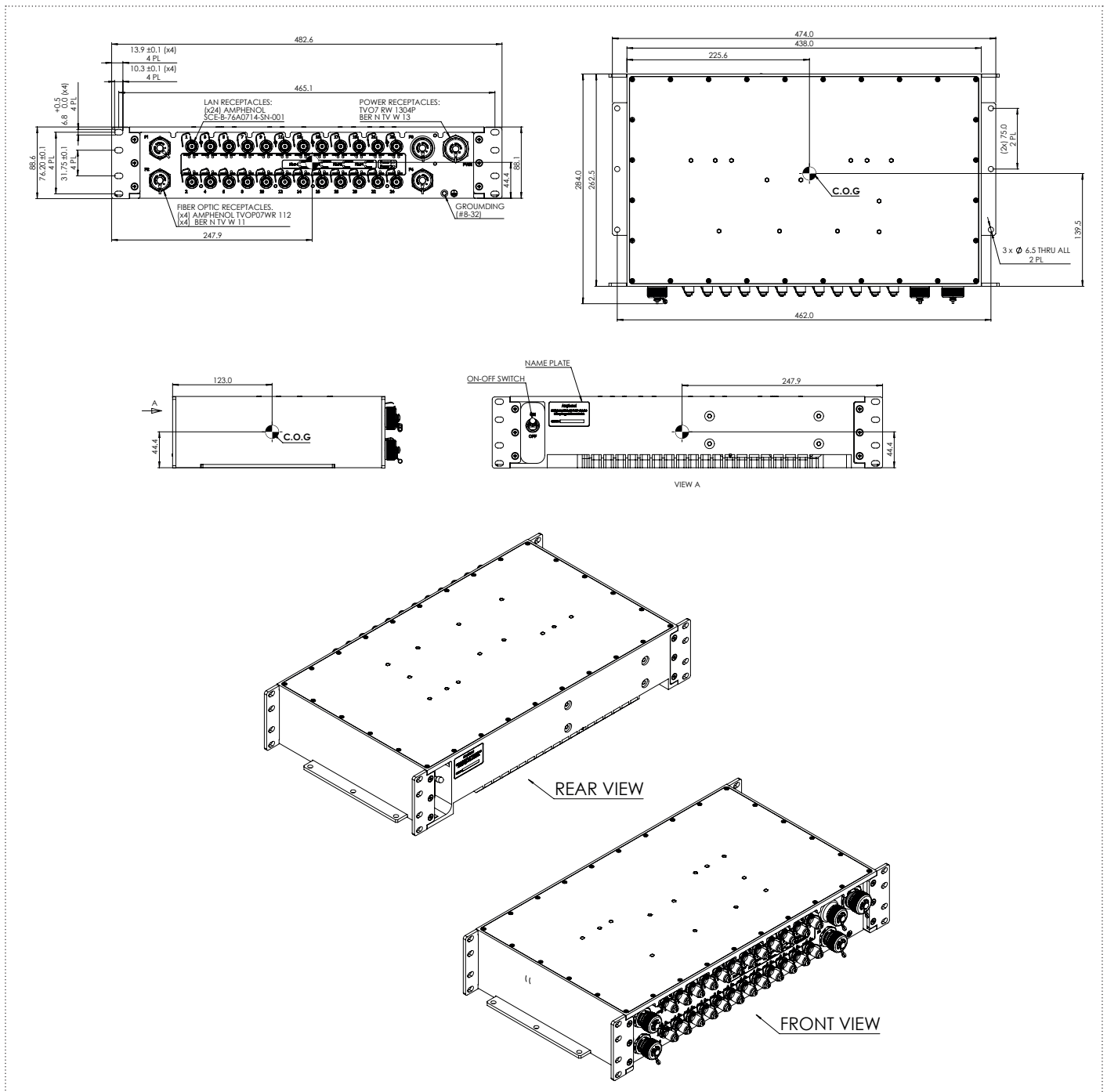
Dimensional line drawing - All measurements are in millimeters

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How to order

1.	2.	3.	4.	5.	6.
Series	Fiber optics ports	Type of fiber optic	Fiber optic connectors	Datarate for fiber optic ports	Voltage input
RESMLAC-28MG	4	M	TVOP	10G	DC

1. Series

RESMLAC-28MG	Rugged Managed Ethernet Switch

2. Fiber optics ports

(empty)	No fiber optic ports
2	2 fiber optic ports
4	4 fiber optic ports

3. Type of fiber optic

M	Multimode fiber optic, 2 ways, 50/125µm
S	Singlemode fiber optic, 2 ways, 9/125µm

4. Fiber optic connectors

TVOP	TVOP connector with butt joint, MIL-DTL-38999
CTOS	CTOS connector with expanded beam, for intensive use in harsh environments, STANAG 4290
TACB	TACBEAM connector with expanded beam, M83526/20&21

5. Datarate for fiber optic ports

G	1000 Mbps
10G	10 Gbps

6. Voltage input

DC	Unit powered with 18-36VDC
VAC	Unit powered with 90-265 VAC / 47-65 Hz

Part number	Description
RESMLAC-28MG-CBL-PWR-2M	Power cordset for RESMLAC-28MG, 1 side with MIL-DTL-38999 plug, 1 side with 4mm plugs for power supply, cable 2m long
RESMLAC-28MG-CBL-MNG-2M	Management Cordset for RESMLAC-28MG, SCE2B-L1K-0714PN on one side, DB-9 female plug on the other side, length 2m
RESMLAC-28MG-CBL-LAN-2M	LAN Cordset for RESMLAC-28MG, 1 termination with SCE2B-L1K-0714PN, 1 termination with RJ45, RJFSFTP5E cat 5E cable 2m

For specific cable harnesses, please consult us.

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