MILTECH™ 9024

Military Managed 24-Port 1G Ethernet Router/Switch

FEATURES DESCRIPTION

Ethernet is becoming the standard for IP-based components in military and commercial applications on land, sea and air platforms.

The MILTECH9024 is specifically designed for battlefield C4ISR, voice, video, sensor data acquisition and communications in platforms that handle large quantities of real-time data. With 24 triple-speed (10/100/1000Mbps) ports, the MILTECH9024 is ideal for mobile platforms and shipboard systems that deal with high resolution video and other data-intensive signaling.

The MILTECH9024 features both L2/L3 network switching and routing capabilities, including virtual LANS (VLANS), traffic prioritization/QoS, IPv4/IPv6 support, and bandwidth aggregation. It supports all the latest networking protocols for redundancy, security, multicast, and management.

The MILTECH9024 offers the best performance and combination of size, weight, and power (SWaP) in the industry, saving valuable real estate for devices that make mobile platforms highly effective.

The MILTECH9024 is MIL-STD, fully managed, and military grade. Its 1GE transmission speed and 24VDC power make it instantly compatible with network devices and power systems. An optional redundant power connection adds to overall system survivability.

Developed for military and harsh ground applications, the MILTECH9024's mechanical packaging enhancements are designed for MIL-STD-810G 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 the use of passive cooling. D38999 circular connectors give the MILTECH9024 an IP67 rating.

SPECIFICATIONS

ETHERNET PORTS:	• Router/switch layer 3 managed 24x10/100/1000 TX ports
NETWORKING:	• Wire-speed hardware-based 24 ports Gigabit Ethernet switch – L2, L3, L4 Capabilities • L3-Routing capabilities:static,RIPV1,V2,OSPF V2/V3 Multicast Routing, VRRP, ECMP Routing • Multicasting (IGMP Snooping), GARP, GMRP, MLD and GVRP up to 8K groups for both IPv4 and IPv6 • Broadcasting and flooding Control up to 8K Groups • 802.1q Tagged based VLAN up to 4K VLAN groups • Bridge Support for VLAN Q-in-Q , manual tunneling • 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 , SNMP V2/V3 management

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PRODUCT DATASHEET rev. 2

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SPECIFICATIONS

NETWORKING: 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

NETWORKING:
Security:
	• Security via Radius Authentication 802.1x, Port / MAC access control
	• Port Security
	• Per port ingress and egress port mirroring including 10G 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
	   • Content Aware Policers actions are permit/deny, police, count, snoop and mirror
	   • Special support for IP fragments, UDP/TCP port ranges
	   • 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 • 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:	• 1 x Power Connector Type: MIL-D-38999/24WC04PN • 24 x LAN Connector Type: TV07RW09-09S (D38999) • SCE2-B76A0607SN • LED Indication: Per Port (Speed, Link/Activity)
CHASSIS:	• Machined rugged aluminum • Conductively cooled w/custom internal heat-sinks • Ingress protection against sand, dust and moisture • Military-grade coating per MIL-C-83286B
STANDARDS:	• MIL-STD-1275E | MIL-STD-704A | MIL-STD-461F | MIL-STD-810G | IP67

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MILTECH™ 9024

Military Managed 24-Port 1G Ethernet Router/Switch

SPECIFICATIONS
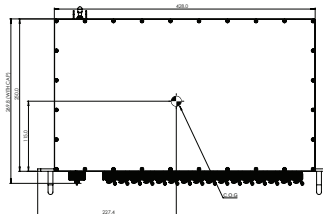
PERFORMANCE:	• 96.8 Mpps wire speed forwarding rate • 56 Gbps maximum forwarding bandwidth • 8K MAC Address
POWER:	• Voltage Input: 24Vdc Nominal (18-32Vdc) or 220VAC (90-230VAC) • Power Consumption: 30W Max • Chassis grounding
ELECTROMAGNETIC:	• MIL-STD-461F Electromagnetic compatibility • CS-114, CS-115, CS-116, RE-101, RE-102, RS-101, RS-103, ESD
EVNIRONMENTAL:	• MIL-STD-810G: Humidity (507.5) | Altitude (500.4I,II) | Temp.(501.5I,II) | Drip, Vibration (167-1A) | Shocks (516.6I) | Transportation (514.6,4,10) | Salt-fog (509.5)
PHYSICAL:	• Dimensions: 428mm (L) x 270mm (W) x 88.1mm (H), including connectors, 2U, 19" rack. • Dimensions: 16.85'' (L) x 10.6'' (W) x 3.47'' (H), including connectors, 2U, 19" rack. • Weight: 5.5kg
INSTALLATION:	• 19" standard mounting ears • Other mounting options are available
COOLING:	• No Moving Parts. Passive Cooling.
OPERATING TEMP:	• -45ºC to +80ºC (-49ºF to +176ºF) Cold Start-Up
STORAGE TEMP:	• -45ºC to +85ºC (-49ºF to +185ºF)

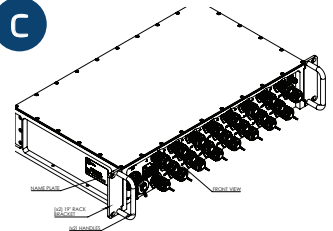* Currently not supported — software upgrade option.
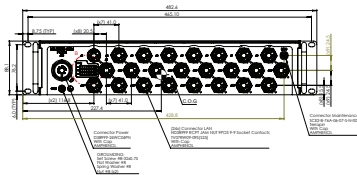
*All measurements are in millimeters

ORDERING INFORMATION

PART NUMBER	DESCRIPTION
1-9024-000	• Military Managed 24 Ports 1G, D38999 conn Rugged Switch/Router & DC P.S
1-9024AC-000	• Military Managed 24 Ports 1G, D38999 conn Rugged Switch/Router & AC P.S
2-CBL910PoELN	• LAN Harness for MILTECH910PoE/9024
2-CBL910PoEPW	• Power Harness for MILTECH9022/9024/9028
2-CBL928MNG	• Management harness for MILTECH928/9024