

MILTECH™ 9028

Military Managed 28 Ports Gigabit Switch



PRODUCT DATASHEET

FEATURES DESCRIPTION

The MILTECH™ 9028 is a MIL-STD Fully managed Military-grade network switch offering 24 triple speed (10/100/1000) ports + 4 x 10G fiber ports. The MILTECH9028 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 MILTECH9028 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-D-38999 circular connectors.



Leveraging best-in-class switching technology from Techaya, the MILTECH9028 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 MILTECH9028 is particularly useful for expanding port density to tactical IP routers in space-constrained airborne and ground vehicle environments.

MILTECH9028 is specifically designed for Data Acquisition & Transmission, Battlefield Communication C4ISR, Rugged Networks, Mobile Communications, Combat vehicles and Avionic & Shipboard Systems.

SPECIFICATIONS

ETHERNET PORTS:

- Managed 24 x switched 10/100 /1000 ports + 4 x 10G Fiber ports – Total of 28 Ports.
- 4 ports out of the 24 10/100/1000 are Combo ports and can provide alternative 4 ports 100/1000Base-FX ports.

NETWORKING:

General

- Wire-speed hardware-based 28 ports gigabit and 10 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
- Bridge support for VLAN Q-in-Q
- 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

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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)
- Contact Aware Policers:
 - 128 Content Aware Policers
 - 16 Contact 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:

- 2 x Power Connector Type: MIL-D-38999/24WA98PN
- 24 x LAN Connector Type: MIL-D-38999 or SCE (4 ports are Gigabit Combo ports - 10/100/1000 or 1000FX Fiber)
- 4 x LAN Fiber Connectors Type: MIL-D-38999
- 1 x Serial interface, shared with LAN port #1
- LED Indication Per Port (Speed, Link/Activity)
Per Unit (Power A, Power B)

CHASSIS:

- Low profile rugged aluminum extrusion
- Conductively cooled w/custom internal heat-sinks
- Ingress protection against sand, dust and moisture
- Anodize Coating, MIL-A-8625, Type II, Class 2

STANDARDS:

- MIL-STD-1275B, MIL-STD-704A, MIL-STD-461E, MIL-STD-810F GM, IP67
- Support up to 50ms holdup time, and 6VDC drops

VOLTAGE:

- Redundant with load sharing Power Supplies 24VDC, 48VDC or 90~230VAC

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PERFORMANCE:

- 96.8 Mpps 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 with 50ms holdup time and 6VDC drops.
- Voltage Input: 24Vdc Nominal (18-32V), Option for Redundant Power Supply, 48VDC and 90~230VAC
- Power Consumption: 20W Typical
- Chassis grounding

ELECTROMAGNETIC:

- MIL-STD-461E Electromagnetic compatibility
- CE-102, CS-114, CS-115, CS-116, RE-102, RS-103

SHOCK/VIBRATION/HUMIDITY:

- MIL-STD-810F; 501.4I, 501.4II, 502.4I, 502.4II, 507.4, 500.4II, 514, 516I, 516VI, 514.5, 512.4

PHYSICAL:

- Dimensions: 440mm (L) x 200mm (W) x88(H), including connectors & hardware, 2U, 19" rack.
- Weight: 5.5kg

INSTALLATION:

- Set of four 4.5mm mounting holes on bottom for mounting to any flat surface.
- 19" standard mounting ears

COOLING:

- No Moving Parts. Passive Cooling.

OPERATING TEMP:

- -35°C to +75°C (-31°F to +167°F) Cold Start-Up

STORAGE TEMP:

- -45°C to +85°C (-49°F to +185°F)

ORDERING INFORMATION

PART NUMBER

MILTECH9028
MILTECH9024F/XX
CBL-MIL9028-01
MILCAP-11

DESCRIPTION

Manage Military Grade Gigabit Switch, 24 x 10/100/1000TX + 4 x 10G Fiber ports
Managed Military Grade Gigabit Switch, 18 x 10/100/1000TX + 6 x 1000FX (SM, MM or WDM)
Starter Cable set for MILTECH9028, MIL-D-38999 to RJ-45 Connectors, 5 feet length
Protective Caps for MILTECH-9028