MILTECH™ 9124

PCB level Ethernet Switch, 1GE Managed 24-Port Ethernet Router/Switch

FEATURES DESCRIPTION

The MILTECH 9124 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 MILTECH 9124 is ideal for mobile platforms, shipboard systems, ground, avionic, and UAV that deal with high resolution video and other data-intensive signaling.

The MILTECH 9124 features both L2/L3 network switching and routing capabilities, including virtual LANS (VLANS), traffic prioritization/QoS, IPv4/IPv6 support, dynamic routing and bandwidth aggregation. It supports all the latest networking protocols for redundancy, security, multicast, and management.

The MILTECH 9124 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.

Its 1GE transmission speeds and 3.3VDC power make it instantly compatible with network devices and power systems.

With conformal coating and board-to-board connectors, it is plug-in ready for any rugged or military-grade communications platform housing. By using the MILTECH 9124 PCB level solution the customer can reduce size and weight of his overall unit.

The MILTECH 9124 PCB will withstand working temperatures of -40°C to +85°C and will comply with MIL-STD-810 & MIL-STD461 (when incorporated in a suitable enclosure).

SPECIFICATIONS

ETHERNET PORTS:	• Managed 24 x switched 10/100 /1000 ports • Total of 24 Ports
NETWORKING:	• Wire-speed hardware-based 24 ports gigabit and 10 Gigabit Ethernet switch — L2, L3, L4 Capabilities • L3-Routing capabilities:static,RIPV1,V2,OSPF V2/V3 Multicast Routing, BGP4*,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 • WEB, CLI, Telnet , SNMP V2/V3 management

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SPECIFICATIONS

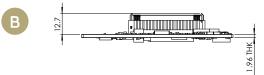|	
NETWORKING: Quality of Service:	• QoS Multi-Layer Classifier: 802.1p, EtherType, VLAN-ID, IPv4/6 DSCP/ToS, and UDP/TCP ports & ranges traffic classification. • Per port WFQ and Strict Queuing scheduling • DSCP remarking for both IPv4 and IPv6 frames • Ingress policer and ingress shaper per port with 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:	• SAMTEC ERM8-050-09.0-L-DV
STANDARDS:	• MIL-STD-461E | MIL-STD-810F GM | IP67 • When encorporated in a suitable enclouser

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PERFORMANCE:	• 96.8 Mpps wire speed forwarding rate • 56 Gbps maximum forwarding bandwidth • 8K MAC Address
POWER:	• 3.3VDC • Power Consumption: 25W Typical
ELECTROMAGNETIC:	• MIL-STD-461E Electromagnetic compatibility • CE-102, CS-114, CS-115, CS-116, RE-102, RS-103 • When encorporated in a suitable enclouser
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 • When encorporated in a suitable enclouser
PHYSICAL:	• Dimensions: 91mm (L) x 65mm (W) • Dimensions: 3.58" (L) x 2.6"(W)
COOLING:	• No Moving Parts. Passive Cooling.
OPERATING TEMP:	• -45ºC to +85ºC (-49ºF to +185ºF) Cold Start-Up
STORAGE TEMP:	• -45ºC to +85ºC (-49ºF to +185ºF)

* Currently not supported — software upgrade option.

ORDERING INFORMATION

PART NUMBER	DESCRIPTION
1-9124-000	• PCB Level Ethernet Gigabit Switch, 24 x 10/100/1000TX

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Email: info@techaya.com │ Web: www.techaya.com   PRODUCT DATASHEET rev. 4

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