

Dual-use Military and Civilian Fiber Optic Router



Article Overview

Dual-use fiber optic routers combine high-speed, ruggedized military-grade performance with civilian network compatibility, supporting both fiber and copper connectivity for mission-critical applications.

Overview

Dual-use fiber optic routers are designed to operate in harsh military environments while remaining compatible with civilian network infrastructure. These routers typically support 1G to 10G fiber and copper ports, Layer 2 and Layer 3 routing, VLANs, traffic prioritization (QoS), IPv4/IPv6, bandwidth aggregation, and advanced security protocols. They are suitable for applications ranging from C4ISR, UAV/UGV platforms, and shipboard systems to enterprise and industrial networks.

Key Features

- **Rugged Design:** Built to withstand extreme temperatures, shock, vibration, and ingress (IP67/68), meeting MIL-STD-810G, MIL-STD-461G, and MIL-STD-1275 standards.
- **High-Speed Connectivity:** Supports multiple fiber optic ports (up to 24 FO ports) and copper ports, enabling short-range and long-range fiber connections.
- **Flexible Routing & Switching:** Hardware-accelerated FPGA and multi-core processors allow customizable switching, routing, and edge computing functions, including HSR/PRP, (M)RSTP, and Time-Sensitive Networking protocols....

Article Content

Expanding the Role of RF-over-Fiber in Defense and Civilian ...

Enhanced Security: Fiber optics offer a higher level of security against eavesdropping and signal interception because

Techaya Military Grade Routers

Our range of Rugged and Military-Grade Routers is engineered to provide secure, resilient, and reliable

Secure Fiber Optic Network Infrastructure Solutions for Military and ...

Our future-ready fiber network solutions ensure the reliability and speed of deployment needed for sensitive military communications

Rugged Military 10Gbe Fiber Ports Router

The MILTECH 9028 is a rugged military 10Gbe router specifically designed for battlefield C4ISR, voice,

Rugged, Small Form Factor Networking Systems

Explore Curtiss-Wright's rugged, highly-reliable networking systems, designed for extremely low-SWaP

Fiber Optic Router — Everything You Need to Know

IoT solutions A fiber router in combination with fiber optic internet enables high-speed internet so that you can efficiently use IoTs in

Government and Military fiber network solutions

Omnitron provides media conversion, multiplexing, and fiber optic connectivity solutions for federal government civilian and defense

Fiber Connectivity Solutions for Military & Government

For over 65 years, we've proudly supported military, naval, aerospace, and federal government organizations with robust fiber optic

Rugged Routers

Purpose-built Ethernet routers for mobile military environments MILTECH routers offer up to 10G transmission speeds for both fiber

Military Rugged Router | Mil-Spec Ruggedized Router Suppliers

A rugged router designed specifically for military applications offers the durability and advanced features necessary to

Developing a Tactical Switch Router for Rugged Ethernet Applications

The use of 3200 Series router technology in the TSR was also imperative to meet the requirements set forth by

The Pivotal Role of Fiber Optic Systems in Modern Military Applications

Explore how custom fiber optics from FSI power secure, high-speed military communications—enabling advanced data links, EMI

Civilian Technology and Military Security

Because of these concerns, OTA conducted policy- oriented case studies of three dual-use1 technologies— fiber optics, software,

MILTECH 9028

The MILTECH 9028 is a rugged military rack-mount 10GbE router with 24 triple-speed (10/100/1000Mbps) ports and 4x10Gbps fiber

Expanding the Role of RF-over-Fiber in Defense and Civilian ...

RF-over-Fiber offers high-bandwidth, EMI-resistant signal transport—ideal for defense and civilian systems needing

Fiber-Optic Drones Now Available on Major E-Commerce Sites ...

Military-grade fiber-optic drones, immune to electronic jamming, now available on Amazon and Alibaba, transforming

The Military and Aerospace Nervous System Runs on

As fiber optics continue to shape the future of military and aerospace communications, the reliability of

The Pentagon's fiber future: How DoD networks race to meet new

From copper to fiber and modernizing the backbone Network modernization begins with replacing legacy infrastructure

HIGH-AVAILABILITY MILITARY FIBER OPTIC SWITCH-ROUTER

Fiber Optic rings combining these protocols are feasible thanks to the inter-switch coordination mechanism developed by RELYUM.

trend of fiber optic drone: 2025 military & civilian use

Explore the trend of fiber optic drone technology in 2025. Discover how unjammable control and high-definition video

Military Managed 12 X 10G Copper Ports with 10G Fiber Optic Ports ...

The MILTECH 9116 is a fully managed military grade network switch/router offering 12 x 10G copper ports with option to combine up

MilTech 9116

Mobile military platforms now require 10 Gb Ethernet network infrastructure to meet these demands. While

Rugged military Routers

Get to know our military router, engineered for resilience and high performance in extreme environments. Designed to meet military

Fiber Optic Connectors for Military Use

Fiber optic connectors are typically plugs or so-called male connectors with a protruding ferrule that holds the fibers and

Multi-WAN Router for DoD and Government | Mushroom Networks

Winner of 7 Best Technology awards, Mushroom's multi-WAN routers are ideal for DoD and government applications for faster and

Rugged Military 10GE Router-Milsource

The MILTECH 9028 rugged military 10GE router is designed for battlefield C4ISR, voice, video, and sensor

Contact Us

For more information, pricing, or custom solutions, please contact us:

Website: <https://watermanfinance.co.za>

Email: sales@watermanfinance.co.za

Phone: +49-176-8294713

Address: Neue Mainzer Str. 66-68, 60311 Frankfurt am Main, Germany

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