

# VIPER

## SMALL FORM FACTOR

Gigabit Ethernet Defence Switch



## PRODUCT HIGHLIGHTS

- ⊕ Managed 20-Port GbE Switch
- ⊕ 4-Port 1000-Base Fiber Optic Links
- ⊕ General Purpose Service Ethernet Port
- ⊕ Auxiliary RS232 Console Port
- ⊕ Advanced Real Time Processing
- ⊕ Latest Generation ARM© Cortex Hardware
- ⊕ Multilayer Management, Security & Monitoring
- ⊕ Sealed Military Enclosure Cold Plate Cooled
- ⊕ Dual Redundant MIL-STD-704 AC/DC Power Supply
- ⊕ System Operation Front Panel LED Indicators
- ⊕ Optimized Conduction-Cooled Heat Dissipation
- ⊕ Real Time High/Low Temperature Monitoring
- ⊕ Remote Reset, Battleshort & Standby System Control
- ⊕ Dual Oversized in-line EMI/EMC Power Input Filters
- ⊕ Tested and Certified by Independent Testing Labs to MIL-STD-810G & MIL-STD-461G
- ⊕ Made in Canada & USA

## FEATURES

<b>PORTS CONFIGURATION</b>	4x 1000-Base-SX Fiber Optic HSR/PRP Port (other media options optional) 20x 10/100/1000-BaseT Copper Ports	<b>TT ETHERNET</b>	IEEE 1588 AS profile -TSN- supported (station & switches)
<b>PROCESSING</b>	Zync UltraScale FPGA+EG devices feature a quad-core 1.5GHz ARM® Cortex-A53, with dual-core Cortex-R5; Real-time processors, a Mali-400 MP2 GPU, and FinFET+ programmable logic	<b>GATEWAY</b>	Optional CAN 2.0 Integrated ports Optional RS-232/422/485 buses with Modbus / Profibus / Serial Console
<b>REMOTE MANAGEMENT</b>	Protocol SNMP V1/V2/V3	<b>SYNCHRONIZATION</b>	IEEE 1588v2 PTP 'Precision Time Protocol' Profiles with E2E mode and P2P mode of operation IEEE 1588v2 PTP 'Precision Time Protocol' over HSR & PRP Optional Ordinary Clock & Boundary Clock mode of operation S(NTP) & Client
<b>MEMORY</b>	16GB DDR4 - 64-bit w/ ECC attached to Processor Subsystem	<b>LAYER 2 FUNCTIONALITY</b>	IEEE 802.3-2000 Automatic MAC Address Learning & Aging Static MAC Table Port-Based Virtual LANs (VLANs) IEEE 802.1Q for VLAN Tagging IEEE 802.1Q for VLAN based Ethernet Priorities Ethertype Based Switching IEEE 802.1p for Class of Service (CoS) IEEE 802.1ab for Link Layer Discovery Protocol (LLDP) Priority Modes: PCP (802.1p), Ethertype (Up to 16) Broadcast protection configurable via register Layer 2 Multicast Filtering Jumbo Frame Support IEEE 1588 Stateless TC (Transparent Clock)
<b>HSR/PRP TECHNOLOGY</b>	Reconfigurable Switch Architecture: flexible combination of low-latency HSR/PRP, L2 and L3 blocks	<b>MANAGEMENT</b>	HTTPS WEB interface with secure firmware/bitstream update Graphic representation of Network status (HSR DANs & VDANs) Statistics independent per port SNMP RFC 1157/RFC DHCP (Client and Server) ANSI C Low Level Library System Syslog MIB Support Console Port
<b>REDUNDANCY</b>	IEC 624393 Clause-4 PRP 'Parallel Redundancy Protocol' IEC 624393 Clause-5 HSR 'High Availability Seamless Redundancy' Optional IEC 62439-2 Media Redundancy Protocol (MRP) Optional Device Level Ring (DLR) Redundancy Optional IEEE 802.1w for RSTP (Rapid Spanning Tree Protocol)		
<b>LAYER-3 FUNCTIONALITY (DOES NOT APPLY TO HSR/PRP PORTS)</b>	IPv4/IPv6; Dynamic Routing; Multicast IP Routing BGPv4, BGPv6, OSPFv2, RIPv2; IGMP Snooping; Static routing; DSCP TOS		
<b>SECURITY</b>	IEEE 802.1X access control: port & MAC based authentication, MAC Port binding & authentication for login security TACACS+, and RADIUS Authentication Secure Shell (SSH) Protocol v2 Internal Gyroscope and Accelerometer for security purposes TPM chip for identity authentication AES 256/HMAC/RSA 2048 Encryption/Authentication & Signature for Firmware and bitstream		

## ORDERING INFORMATION

