



Connect Tech Inc.
Embedded Computing Experts

GraphiteVPX/GbE Managed Ethernet Switch

Connect Tech's GraphiteVPX/GbE Managed Ethernet Switch provides Carrier Grade Ethernet switching capabilities in a small 3U embedded form factor.

Excellent for demanding applications with rugged environments and extreme temperatures, the GraphiteVPX/GbE Managed Ethernet Switch is also a highly reliable way to communicate with 10/100/1000 Base-T devices in an embedded system. Powered by the latest generation Carrier Ethernet Switch engine, the Vitesse 7429 features an embedded MIPS 32-bit CPU, 1Gb external memory and DMA-based frame extraction and insertion support timing over packet, Ethernet OAM, and performance monitoring.

Available in models with VPX backplane and/or 4 port RJ45 on the front panel connectors, making this embedded Ethernet switch ideal for any type of environment.

OpenVPX
3U VPX 20 PORT GbE SWITCH

Product Name: GraphiteVPX/GbE
Managed Carrier Ethernet Switch
Part Numbers: VPG200 Series



Hardware Specifications

Ethernet Switch Engine	Vitesse VSC7429 Carrier Grade Ethernet Switch Chipset (VPG201) A powerful embedded RISC 32-bit CPU, with DDR2 external memory and DMA-based frame extraction and insertion supports timing over packet, Ethernet OAM, and performance monitoring.
Memories	1Gb SDRAM 128Mb Flash
Ports	20 x GbE (10/100/1000 Ethernet) Ports - 16 to VPX backplane - 4 to front panel IO
Connectors	VPX backplane and/or 4 port RJ45 on the front panel
Layer 2 Switching	802.1Q VLAN switch with 8K MACs and 4K VLANs Push/pop up to two VLAN tags IPv4/IPv6 multicast Policing with storm control and MC/BC protection RSTP and MSTP support Hardware and software-based learning Link aggregation (IEEE 802.3ad) Independent and shared VLAN learning (IVL, SVL) Jumbo frame support
Management Access	Web Interface RS-232 Serial Interface (CLI) Software API
Indicator LEDs	2 LEDs per port (available on RJ-45 and through external connector) Power Rail LEDs Status LEDs
Input Voltage	5V only (VS3) and 3.3V Aux required
Power Consumption	23W Max
Dimensions	1" Pitch VITA 65 Compliant 3U VPX form factor. L x W = 160mm x 100mm.
Operating Temp	-40°C to +85°C (chipset rated to +125°C junction temperature)

FEATURES

- ✓ *Conduction cooled or Air cooled Heatsink option*
- ✓ *20 x GbE (10/100/1000 Ethernet) Ports - 16 to VPX backplane, 4 to front panel IO*
- ✓ *Web GUI or CLI Management*
- ✓ *Carrier Grade Ethernet Switching*
- ✓ *Available with RJ-45 Front panel for easy interfacing*
- ✓ *Supports 3U OpenVPX profile: MOD3-SWH-16T-16.4.7-1*
- ✓ *Extended Temperature Range -40°C to +85°C*



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GraphiteVPX/GbE

Managed Ethernet Switch

Software Specifications

Port control	Port Speed/Duplex Mode/Flow Ctrl Port Frame Size (Jumbo frames) Port State (administrative status) Port Status (link monitoring) Port Statistics (MIB counters) Port VeriPHY (cable diagnostics)
QoS	Traffic Classes (8 active priorities) Port Default Priority QoS User Priority Input priority mapping QoS Control List (QCL Mode) Storm Control for UC, MC and BC Port policers Global/VCAP (ACL) policers Port egress shaper Queue egress shapers TRTCM (two rate three color market) Scheduler mode (Strict or Weighted Fair Queuing)
L2 Switching	Auto MAC addr. Learning/Ageing MAC Addresses – Static Virtual LAN Private VLAN – Static Port Isolation – Static IEEE-802.1ad Provider Bridge (Native or Translated VLAN) Rapid Spanning tree – RSTP, STP Loop Guard Link Aggregation – Static Link Aggregation – LACP IGMPv2 snooping Port Mirroring (Ingress and Egress Mirroring)
L3 Switching	IPv4 Unicast: RIPv1/RIPv2
Security	Port-Based 802.1X Multiple 802.1X Web & CLI Authentication ACLs for filtering/policing/port copy

Software Specifications Continued

Synchronization	SNTP & client
Power Saving	Cold start Cool start ActiPHY PerfectReach EEE Power Management LED Power Management Thermal Protection
Management	DHCP Client HTTP Server CLI - Console Port Industrial Standard CLI Industrial Standard Configuration Management access filtering HTTPS System Syslog Software Upload via web SNMP v1 / v2c / v3 Agent SNMP multiple trap destinations IEEE 802.1AB-2005 Link Layer Discovery – LLDP Configuration Download/Upload - XML Configuration Download/Upload - Industrial Standard Loop detection restore to default Symbolic Register Access
MIBs	RFC 1213 MIB II RFC 1215 TRAPS MIB RFC 4188 Bridge MIB RFC 3635 Ethernet-like MIB RFC 3411 SNMP Management Frameworks IEEE 802.1 MSTP MIB IEEE 802.1AB LLDP-MIB (LLDP MIB included in a clause of the STD) RFC 3621 LLDP-MED Power (POE) (No specific MIB for POE+ exists) Private MIB framework

RoHS

Specifications subject to change without notice.

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3U VPX Extended RTM is available for Engineering integration. (Part # RTG002)

