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.

### Hardware Specifications

<table>
<thead>
<tr>
<th>Feature</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Ethernet Switch Engine</strong></td>
<td>Vitesse VSC7429 Carrier Grade Ethernet Switch Chipset (VPG201)</td>
</tr>
<tr>
<td><strong>Memories</strong></td>
<td>1Gb SDRAM, 128Mb Flash</td>
</tr>
<tr>
<td><strong>Ports</strong></td>
<td>20 x GbE (10/100/1000 Ethernet) Ports -16 to VPX backplane, 4 to front panel IO</td>
</tr>
<tr>
<td><strong>Connectors</strong></td>
<td>VPX backplane and/or 4 port RJ45 on the front panel</td>
</tr>
<tr>
<td><strong>Layer 2 Switching</strong></td>
<td>802.1Q VLAN switch with 8K MACs and 4K VLANs</td>
</tr>
<tr>
<td></td>
<td>Push/pop up to two VLAN tags</td>
</tr>
<tr>
<td></td>
<td>IPv4/IPv6 multicast</td>
</tr>
<tr>
<td></td>
<td>Policing with storm control and MC/BC protection</td>
</tr>
<tr>
<td></td>
<td>RSTP and MSTP support</td>
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<tr>
<td></td>
<td>Hardware and software-based learning</td>
</tr>
<tr>
<td></td>
<td>Link aggregation (IEEE 802.3ad)</td>
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<td></td>
<td>Independent and shared VLAN learning (IVL, SVL)</td>
</tr>
<tr>
<td></td>
<td>Jumbo frame support</td>
</tr>
<tr>
<td><strong>Management Access</strong></td>
<td>Web Interface, RS-232 Serial Interface (CLI), and Software API</td>
</tr>
<tr>
<td><strong>Indicator LEDs</strong></td>
<td>2 LEDs per port (available on RJ-45 and through external connector)</td>
</tr>
<tr>
<td><strong>Input Voltage</strong></td>
<td>5V only (VS3) and 3.3V Aux required</td>
</tr>
<tr>
<td><strong>Power Consumption</strong></td>
<td>23W Max</td>
</tr>
<tr>
<td><strong>Dimensions</strong></td>
<td>1&quot; Pitch VITA 65 Compliant 3U VPX form factor: L x W = 160mm x 100mm.</td>
</tr>
<tr>
<td><strong>Operating Temp</strong></td>
<td>-40°C to +85°C (chipset rated to +125°C junction temperature)</td>
</tr>
</tbody>
</table>

### 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

**Specifications subject to change without notice.**

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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)

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**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

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

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