

Xtreme/GbE Managed Carrier Ethernet Switch

Connect Tech's Xtreme/GbE Managed Carrier Ethernet Switch provides Carrier Grade Ethernet switching capabilities in an extremely small embedded form factor.

Excellent for high-end applications such as Mobile and Microwave backhaul, the Xtreme/GbE Managed Carrier Ethernet Switch is also a highly reliable way to communicate with 10/100/1000 devices in an embedded system. Powered by the latest generation Carrier Ethernet Switch engine the Vitesse VSC7428. Its embedded 416 MHz MIPS 32-bit CPU, 1Gb DDR2 external memory and DMA-based frame extraction and insertion support timing over packet, Ethernet OAM, and performance monitoring.

Available in models with RJ-45 or Rugged Positive Locking Headers, making this embedded Ethernet switch ideal for any type of environment.

Hardware Specifications

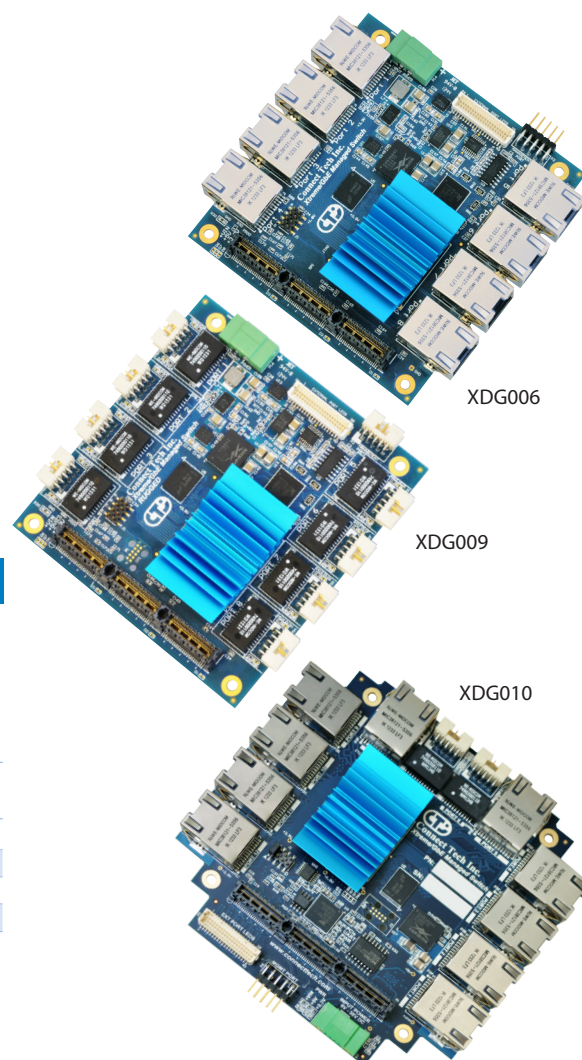
Ethernet Switch Engine	Vitesse VSC7428 Carrier Grade Ethernet Switch Chipset (XDG004-009)							
	Vitesse VSC7429 Carrier Grade Ethernet Switch Chipset (XDG010)							
	A powerful embedded 416 MHz RISC 32-bit CPU, with DDR2 external memory and DMA-based frame extraction and insertion supports timing over packet, Ethernet OAM, and performance monitoring.							
Memories	1Gb DDR2 SDRAM 128Mb Serial NOR Flash							
Port Type	Gigabit ethernet (10/100/1000 Mbps)							
Connectors (PC Type and Rugged Type)	Part	XDG004	XDG005	XDG006	XDG007	XDG008	XDG009	XDG010
	RJ-45	8	8	8	0	0	0	10
	Rugged Locking	0	0	0	8	8	8	2
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 PCIe/104 Bus							
Indicator LEDs	2 LEDs per port (available on RJ-45 and through external connector) Power Rail LEDs Status LEDs							
Standalone Operation	Switch can be used as a standalone unit OR it can be paired with an embedded SBC.							
Input Voltage	Wide input range: +9V to +36V DC with Reverse Polarity Protection Can be powered from external connector OR directly from expansion bus							
Power Consumption	Idle: 0.3A, 3.6W Typical: 0.35A, 4.2W Max: 0.5A, 6W (with +12V input)							
Bus Interface	no bus connector populated PC/104 bus pass through (for sourcing power only) PCIe/104 bus (sourcing power and management interface)							
Dimensions	PC/104 compliant: 3.775" x 3.550" Tallest Top Side Component: Heatsink 0.375" (9.5mm)							
Operating Temp	-40°C to +85°C (chipset rated to +125°C thermals)							

RoHS

Specifications subject to change without notice.

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Product Name: Xtreme/GbE
Managed Carrier Ethernet Switch
Part Numbers: XDG004, XDG005, XDG006,
XDG007, XDG008, XDG009, XDG010



FEATURES

- ✓ 8 or 12 x Gigabit Ethernet (10/100/1000 Mbps)
- ✓ Carrier Grade Ethernet Switching
- ✓ Small PC/104 Form Factor
- ✓ Single Wide Range Input Voltage +9V to +36V DC
- ✓ Extended Temperature Range -40°C to +85°C



Xtreme/GbE

Managed Carrier 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

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Part Number	Description
XDG004	Standalone RJ-45 Model
XDG005	PC/104 RJ-45 Model
XDG006	PCle/104 RJ-45 Model
XDG007	Standalone Rugged Locking Model
XDG008	PC/104 Rugged Locking Model
XDG009	PCle/104 Rugged Locking Model
XDG010	PCle/104 12-Port Model
CKG019	Ruggedized Cable Kit for XDG007/8/9
CKG029	Cable Kit for XDG010

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