Connect Tech

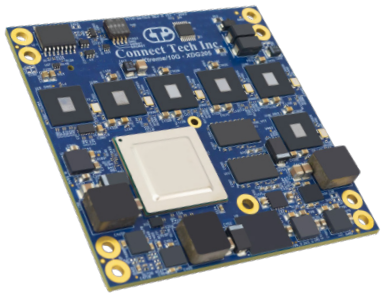
XTREME/10G XDG205
MANAGED ETHERNET SWITCH/ROUTER

PART NUMBERS: XDG205

The Xtreme/10G Managed Ethernet Switch/Router provides high density, high port count Layer 2 switching and Layer 3 routing with 10G uplinks.

A total of 36 switchable ports, with 12 x 10G, 24 x 2.5G (Copper 10/100/1000/2500 Mbps) ports in an extremely small form factor 85mm x 85mm.

This embedded ethernet switch platform is ideal for space constrained environments requiring high-desity, high-bandwidth ethernet switching. Ideal for robotics and unmanned vehicle platforms ideal for switching camera and sensor data at 2.5G/1G speeds as well as multiple 10G connections.



FEATURES

- ✓ 12x 10G SERDES Ports
- ✓ 24x 2.5G/1G Copper Ports
- ✓ High-density board-to-board connector
- ✓ +4V to 14V input range
- ✓ 85mm x 85mm module
- ✓ -40°C to +85°C (-40°F to +185°F)
- ✓ Fully managed L2 switching and L3 routing features
- ✓ Complete TSN feature set (Time-Sensitive Networking)

HARDWARE SPECIFICATIONS

Ethernet Switch Engine	Microsemi SparX-5i L2/L3 TSN-Enabled Industrial Ethernet Switch
Industrial Ethernet	• TSN feature set: 802.1Qbv, 802.1Qch, 802.1Qci, • 802.1AS-Rev, 802.1CB, 802.1Qbu • Integrated timing: VeriTime™ (1588v2) and SyncE • Ethernet Ring Protection Switching (ERPS)
Ports	**36 Total Switching Ports** • 12x 10G SERDES Ports ◦ SFP+/SFP/PHY Capable: • 10G-SFI/5G-SGMII/2.5G-SGMII/1G-SGMII ◦ Backplane Capable: • 10GBASE-KR/5GBASE-KR/2.5GBASE-KX/1000BASE-KX • 24x 2.5G/1G Copper Ports - 2.5GBASE-T/1000BASE-T - Integrated PHYs (No External Copper PHY's Required)
Layer 2 & Layer 3 Forwarding	• IEEE 802.1Q VLAN switch with 32K MACs and 4K VLANs • Secure MAC addressing • Push/pop/translate up to two VLAN tags on ingress and egress • Policing with storm control and MC/BC protection • RSTP and MSTP support • Independent and shared VLAN learning (IVL, SVL) • Hardware-based and software-based learning • TCAM-based classification and VCAP-II security • Layer 3 unicast and multicast routing
Security	• Vitesse Content Aware Processor (VCAP™) packet filtering engine using ACLs for ingress and egress packet inspection • Storm controllers for flooded broadcast, flooded multicast, and-flooded unicast traffic • Per-port, per-address registration for copying/redirecting/discard-ing 32 VCAP single-rate policers
I/O Connectors	High-Density 440-pin Board-to-Board Connector
Memories	• 2GB DDR4 SDRAM • 128Mb Serial NOR Flash • 32GB eMMC Flash
Quality of Service	• Four megabytes of integrated shared packet memory • Eight QoS classes with a pool of up to 32K queues • TCAM-based classification with pat tern matching against Layer 2 through Layer 4 information • Dual- rate policers selected by VCAP IS2, eight single-rate priority policers per port, and four single-rate port police-rs for each port • Flexible 4K ingress QoS mappings and 8K egress QoS mappings for VLAN tags and DSCP values • Up to 4K egress VLAN tag operations • Audio/ video bridging (AVB) with support for time-syn-chronized, low- latency, and video streaming services • Priority-based f low control (PFC) (IEEE 802.1Qbb)
Layer 2 Switching Parameters	• Packet Buffer: 32Mb • MAC Table Size: 32k • Layer 2 Multicast Port Masks: 1k • Super VCAP blocks: 8 • VCAP CLM entries: 4k • VCAP LPM entries: 4k/1k (IPv4/IPv6) • VCAP IS2 entries: 4k/1k (IPv4/IPv6)

RoHS

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MANAGED ETHERNET SWITCH/ROUTER

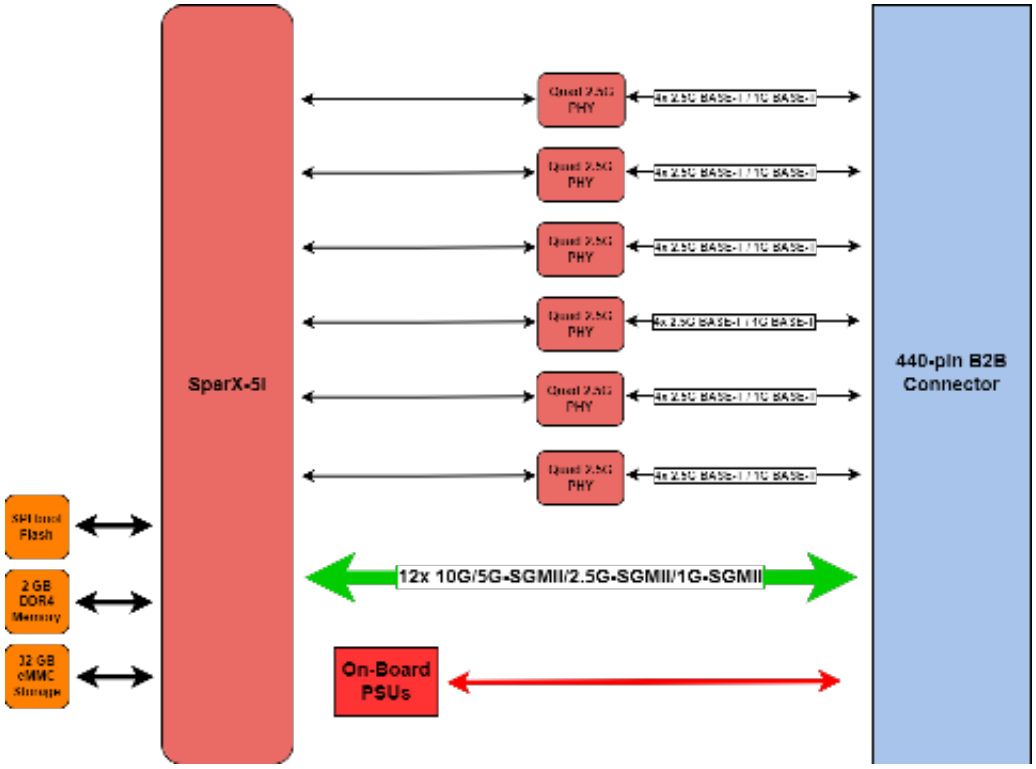
HARDWARE SPECIFICATIONS

Layer 3 Switching Parameters	• Router Legs: 128 • IP unicast routes/hosts: 4k/1k (IPv4/IPv6) • Next -hop/ ARP table entries: 2k • IP multicast groups: 2k/512 • Multicast router leg masks: 1k • ECMPs: 16	**Management Access**	• Web Interface • CLI via UART • Software API • SMNP
Operating Temperature	-40°C to +85°C (chipset rated to +125°C thermals) (-40°F to +185°F)	**Warranty and Support**	Limited One-Year Warranty and Free Technical Support

XDG205-01 - XDG205 Switch with XHG201 Heatplate installed
Also Shown: XBG301 Development Breakout Board (Sold separately)

XBG301 SPECIFICATIONS

Dimensions	125.84mm x 167.07mm x 49.10mm (4.95" x 6.58" x 1.93") (When XDG201-01 + XBG301 are integrated)
Connects to XDG205 to provide	• 8x SFP+ • 24x RJ-45 • RS232 Console port
Power Input	+5V to +14V DC
Custom Design Available	



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