



SBC612

6U VPX QorIQ P4080-based Single Board Computer

Features

- 6U VPX Single Board Computer
- P4080 processor
 - Eight e500mc cores @ up to 1.5GHz
- Dual-channel DDR3 (up to 8GB)
- 512MB NOR Flash
- 4GB NAND Flash Solid-State Drive
- 512kB non-volatile MRAM
- 4off x4 SRIO links from VPX P1
- 4off x4 PCIe Gen2 links from VPX P2
- 2x PMC/XMC Sites
- AFIX site (SCSI/VGA/1553/Flash drive)
- 2x 10/100/1000BASE-T Ethernet + 2x 10/100/1000BASE-T / 1000BASE-X
- 2x or 4x RS232 Debug
- 4x RS232/422/485 sync/async
- 2x Serial ATA (3 Gbit/s)
- 2x USB 2.0
- 19x Single-Ended GPIO (5V tolerant)
- Front I/O (air-cooled variants only)
- IPMI Baseboard Management Controller
- VITA65 OpenVPX Compatible
 - MOD6-PAY-4F1Q2U2T-12.2.1-2
 - MOD6-PAY-4F2T-12.2.2-1

The SBC612 is the first Freescale QorIQ-based product to join GE Intelligent Platform's VPXtreme6 family of rugged 6U VPX Single Board Computers.

Based on the P4080, the SBC612 offers a huge leap in processing performance, providing up to eight processing cores within the power envelope of previous dual core boards. Combined with an extensive and flexible range of I/O options, the SBC612 is ideal for a wide range of high performance Mil/Aero applications.

Features of the QorIQ P4080 processor:

- System on Chip (SoC) processor with eight high-performance e500mc cores built on Power Architecture Technology
- 45 nanometer technology delivers unprecedented performance per watt enabling power-efficient designs
- Quad and Octal-core options

Fully compatible with OpenVPX (VITA 65), the SBC612 offers dual high speed fabric connectivity (SRIO and PCI Express) enabling a range of scalable solutions from single host to large multiprocessor systems.

In addition the SBC612 supports a diverse I/O set that includes Gigabit Ethernet, fast serial COM ports, USB 2.0, SATA and GPIO. Further incremental system resource expansion is provided by two mezzanine

sites, both of which are XMC/PMC capable, and offer the option of having XMC I/O and/or PMC I/O routed to the VPX backplane connectors.

In addition an AFIX site is available for yet more plug-on system expansion. The AFIX site not only allows access to the current range of standard AFIX modules (graphics, SCSI, 1553, digital I/O, Flash memory) but also offers the opportunity to add customer-specific features at minimum cost and in the shortest timescales.

Designed specifically for harsh environments the SBC612 is ideal for Mil/Aero applications where high reliability and survivability are a must. Available in five air- and conduction-cooled ruggedization levels, the SBC612 also offers VITA48 formats for two-level maintenance (2LM) requirements.

For existing VPXtreme users, the SBC612 also offers a 'Technology Insertion' configuration which matches the pin-out of the existing SBC610 (no P2 connector).

The SBC612 is fully supported by comprehensive Deployed Test Software (BIT and BCS) with OS support planned for VxWorks®, LynxOS®, Open Source Linux®, and Integrity.



