

Quad MPC8640 Processor Board

PRODUCT DESCRIPTION

The Quad 8640 Processor Board is designed to meet the needs of a variety of applications and deployed environments, the SBC can be used for image processing, data processing and digital signal processing. High speed interfaces are used for communication with other boards. The board can be used for computing in: Sonar, Radar, Electronic warfare and cluster computing scenarios.

KEY FEATURES

- Quad MPC8640 VPX Single Board Computer has four MPC8640 Processors for high performance computing
 - 6U VITA46 VPX compliant multiprocessor board
 - The board can be used as a multi node cluster
 - XMC expansion slot
 - PMC expansion slot
 - Available as air cooled and conduction cooled board



SPECIFICATIONS

Processor Node

- MPC8640 : 1067 MHz
- DDR2 SDRAM : 1 GB per Node
- Boot Flash : 128 MB per Node

Interfaces

- Four 4x SRIO links to back plane
- Two GigE ports to both front & rear
- I2C Interface on SMO, 1 Lines

Expansion Slots

- PMC Site
 - PCI Support : 33 and 66 MHz
 - PCI-X Support : 66, 100 and 133 MHz
- XMC Site
 - As per VITA 42.3 standard
 - PCIe : x4, x2 or x1 lane @2.5 Gbps

Input Output

- 4 RS232 ports to both front & rear
- 2 RS422 port to rear
- 2 USB 2.0 ports to both front & rear
- Two Gigabit Ethernet ports to both front & rear

Software

- U-Boot Loader 03-2011
- Linux Kernel 2.6.xx

Additional Resources

- COP connector for CPU debug
- Real Time Clock (RTC)
- Watch Dog Timer
- Thermal and voltage monitors
- Onboard SRIO switch, PCIe switch & GigE switch



MECHANICAL

- 6U air-cooled board and conduction-cooled variants
- VPX form factor

POWER CONSUMPTION

- The board consumes 80W

ENVIRONMENTAL

- Operating temperature: -20°C to +70°C

PART NUMBER(S)

The following variants of this board are available:

Part Numbers	Variants
CB1090	Air-Cooled Quad MPC8640 Processor Board
CB1091	Conduction-Cooled Quad MPC8640 Processor Board
CB1092	RTM Module for Quad MPC8640 Processor Board