



EMBEDDED

Products you can count on!

XVME-690

Intel® Pentium® M Processor

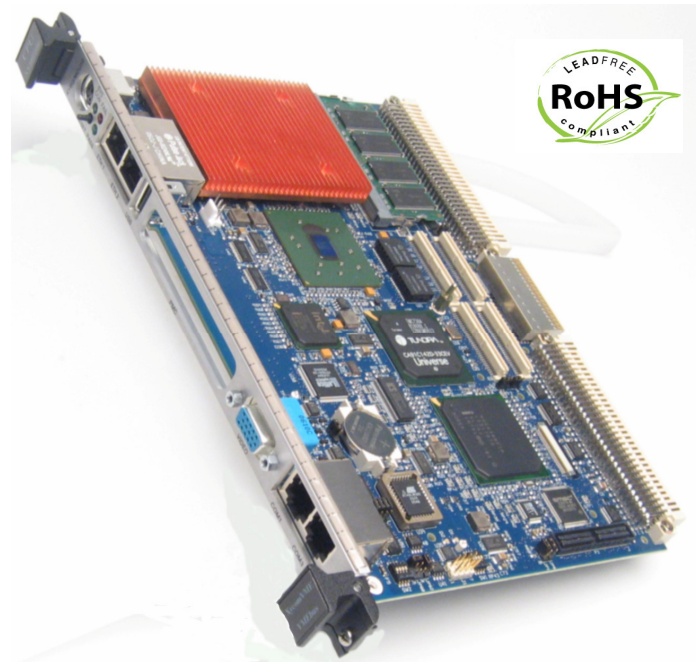
Overview

The XVME-690 is a powerful VMEbus PC compatible processor module from Xembedded, the pioneer and leader in VMEbus PC technology.

The XVME-690 VMEbus processor integrates an Intel® Pentium® M or Celeron® M processor running in a range of 1.5GHz to 1.8 GHz with a PCI-to-VMEbus interface. This VME processor module allows users to take advantage of the powerful multiprocessing capability of the VMEbus while using standard off-the-shelf PC software, operating systems and VMEbus I/O modules.

Features

- Single Slot 6U single board computer
- Intel® Pentium® 1.8GHz or Celeron 1.5GHz processor with up to 2MB of level 2 cache
- Enhanced Intel® SpeedStep®
- 855GME and 6300ESB chipset
- VGA Graphics out front panel or rear video support (Pixel resolution up to 1600 X 1200 at 85Hz)
- 256MB, 512MB, 1GB of ECC or Non-ECC DDR, 266/333MHz SDRAM
- EIDE Ultra-100 DMA controller supports up to three EIDE devices (compatible with XVME-977 and XVME-979 Mass Storage Modules)
- Optional EIDE On-board 1.8" hard drive or optional Compact Flash carrier
- Two Serial ATA150 (SATA150) external devices
- Floppy disk interface (compatible with XVME-977)
- Dual 10/100/1000BaseT out front or Vita 31.1 on optional P0 rear connector
- One PMC 32/64-bit 33/66MHz site (IEEE P1386/ P1386.1) with front panel I/O bezel and user I/O on optional P0 rear connector
- PMC expansion for two additional PMC sites using the XVME-976



- Headless operation using serial console mode including BIOS setup
- Rear operation using USB keyboard/mouse and rear video options
- VME-64 support with Tundra Universe IID A32/A24/A16/D64/D32/D16/D8, MBLT64 and fast hardware byte-swapping
- Parallel Printer Port (ECP, EPP and IEEE1284)
- USB 2.0 Ports, one on front two out rear connector
- Three serial ports (BIOS selectable)
 - COM1 RS-232/422/485 on front
 - COM3 RS-232 on front
 - COM2 RS-232 out rear connector
- Long duration watchdog timer
- Front panel reset switch and status LEDs
- Audio - line level stereo input and output
- Software support Libraries for **Windows® XP, Windows® XP Embedded, RTX®, Linux®, QNX® and MS-DOS®** (others available on request)
- Optional IEEE1101.10 (VME64x Compact PCI type) handles available at order time.

XVME-690 Intel® Pentium® M Processor Module

CPU

- Two CPU versions available
- 745 Intel® Pentium® M 1.8 GHz (2MB of L2 Cache)
- 370 Intel® Celeron® M 1.5 GHz (1MB of L2 Cache)

Memory

- 256Mb, 512Mb, 1Gb memory sizes available using one 200-pin, 266/333MHz ECC DDR SODIMM

Mass Storage

- EIDE Ultra-DMA 100 interface-
- Two channels via P2 or XVME-977/979 Modules
- One channel on-board for optional 1.8" EIDE or our Compact Flash carrier
- Two Serial ATA150 channels via P2
- Floppy Drive interface via P2 works with XVME-977

Graphics Interface

- Intel® 855GME 2D/3D graphics Controller
- Resolutions up to 1600x1200 at up to 16 million colors
- Analog video via front panel or P2

Ethernet

- Using Intel® 82546GB, dual 10/100/1000Mbps ports via the RJ-45 front panel or Vita 31.1 support out the P0

Stereo Audio

- AD1981B AC97 audio CODEC
- Line level stereo input and output via P2

Serial Ports

- One RS-232/422/485 (COM1) ports via front panel
- One RS-232 (COM3) port via front panel
- One RS-232 (COM2) port via P2 (XVME-990)

PMC Site

- One PMC site with I/O via front panel or optional P0 connector
- 32/64-bit, 33/66MHz PCI operation
- On board PMC site is 3.3V interface levels
- Use our XVME-976-209 to expand to three PMC sites.

Two XVME-976-209s can be stacked to provide 5 PMC sites.

USB 2.0 (Universal Serial Bus)

- One USB 2.0 port via front panel
- Two USB 2.0 ports via P2 connector

Keyboard and Mouse port

- Via front panel

PC-Compatible Real Time Clock

Parallel Port interface (ECP, EPP and IEEE1284) via P2

Long Duration Watchdog timer

Environmental

RoHS Compliant module

Thermal

Operating 0 to 55°

Non-Operating -40 to 85°

Operating Extended

-25 to 70°

Non-Operating Extended

-40 to 85°

Humidity

Operating/Non-Operating
10-95% RH, non-condensing

Shock

Operating

30g Peak acceleration, 11mSec duration

Non-operating

50g Peak acceleration, 11mSec duration

Vibration 5-2KHz

Operating 0.015" (0.38 mm) Peak to Peak displacement, 2.5g max. acceleration

Non-Operating 0.030" (0.76 mm)

Peak to Peak displacement, 5.0g max. acceleration

Altitude

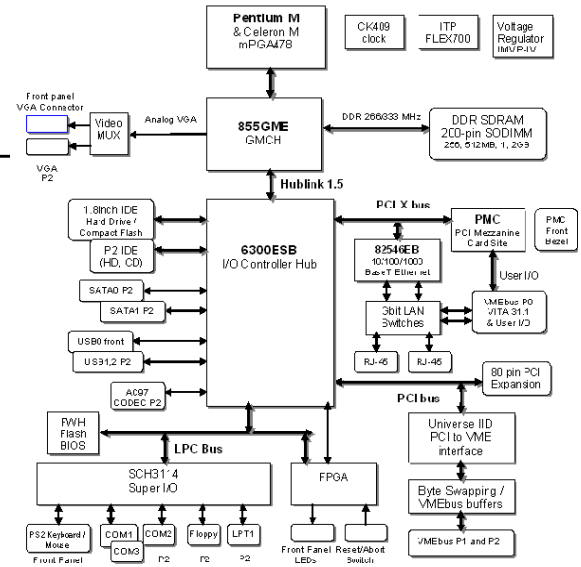
Operating Sea level to 10K feet (3Km)

Non-Operating Sea level to 40K feet (12Km)

EMI/EMC

Emmissions EN 55022 Immunity EN 50082-2

NOTE: The XVME-690 requires 300LFM of air flow during operation.



VMEbus Interface

Using Tundra Universe II D

- Complies with VMEbus Specification, VME-64X (ANSI/VITA 1.1-1997)
- A32/A24/A16:D64/D32/D16/D08 (EO) DTB Master
- A32/A24/A16:D64/D32/D16/D08 (EO) DTB Slave
- R(0-3) Bus Requester
- Interrupter I (1)-I(7) DYN
- IH(1)-IH(7) Interrupt Handler
- SYSCLK and SYSRESET Driver
- PRI, SGL, RRS Arbiter
- RWD, ROR bus release
- Form factor: Double 233.7 mm X 160.0 mm (9.2" X 6.3")

Electrical Specification

- +5V@6.8A typical (using 1.8GHz w/ 1Gb DRAM)
- +/- 12V routed to PMC site only, not required for normal operation.

Order Information

XVME-690/8YX • 1.8 GHz Intel® Pentium® M CPU
XVME-690/5YX • 1.5 GHz Intel® Celeron® M CPU

XVME-690/8YXE • 1.8 GHz Intel® Pentium® M CPU
XVME-690/5YXE • 1.5 GHz Intel® Celeron® M CPU

Y=1 VME-64 (Standard VME type handles)	X=1 for 256MB ECC DRR SDRAM
Y=2 VME-64x (cPCI type handles)	X=2 for 512MB ECC DRR SDRAM
Y=3 VME-64 VME handles P0 (Vita 31.1/ PMC rear I/O)	X=3 for 1GB ECC DRR SDRAM
Y=4 VME-64x CompactPCI handles P0 (Vita 31.1/PMC rear I/O)	E= Extended Temperature

Accessory Products

XVME-990/01 Rear Transition Module used to connect external devices to the P2 and P0 connectors of the XVME-690. Mounts on back side of the VMEbus chassis.

XVME-990/02 Same as XVME-990/01 but without the P0 connector and 68-pin PMC I/O. **XVME-977/xx** Single slot mass storage module with 2.5" hard drive and 3.5" 1.44Mb floppy drive. Connects to the P2 of the XVME-690 via a 96 pin ribbon cable.

XVME-979/0xx Single slot mass storage module with 2.5" hard drive and CD-ROM R/W drive (optional DVD/CD-ROM R/W available). Connects to the P2 of the XVME-690 via a 96 pin ribbon cable provided with the XVME-979.

XVME-976 Single Slot dual PMC carrier module for use with the XVME-690, provides two 32/64-bit/33/66MHz 3.3V or 5V PMC sites with front panel I/O cutout. Two carriers can be stacked to provide a total of 5 PMC sites. (Available with Standard VME or CompactPCI handles)

XVME-912/1 Compact Flash mounting kit for XVME-690. (Flash module not included)

XVME-913/60 On-Board 1.8" hard drive kit for XVME-690.