



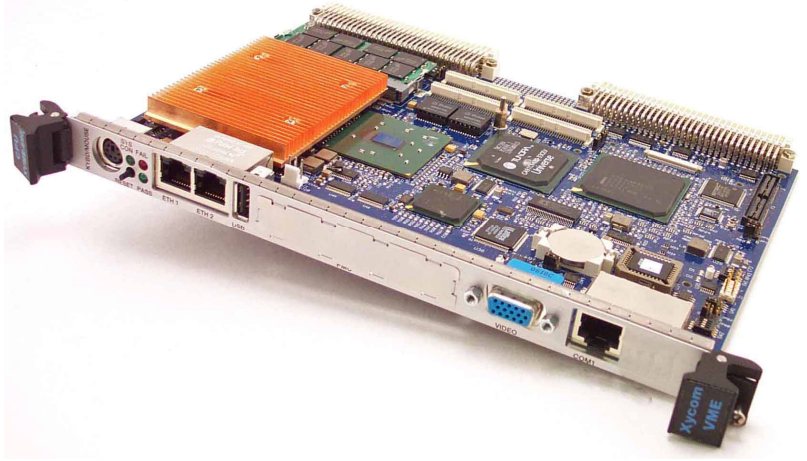
XVME-689-VR7

Very Low Power Intel® Celeron® M VME Processor Module

Overview

The XVME-689-VR7 is a powerful, very low power VMEbus PC compatible processor module from Xembedded, the pioneer and leader in VMEbus PC technology.

The XVME-689-VR7 VMEbus processor integrates an Intel® Celeron® M processor running at 1.0GHz with a PCI-to-VMEbus interface. This VME processor module allows users to take advantage of the low power, multiprocessing capability of the VMEbus while using standard off-the-shelf PC software, operating systems and VMEbus I/O modules. It is a drop in replacement for the VR7 VMEbus processor.



Features

- Same P1 and P2 pin out as the VR7 processor
- Single Slot 6U single board computer
- Intel® Celeron® 1.0GHz processor with up to 512KB of level 2 cache
- 855GME and 6300ESB chipset
- VGA Graphics out front panel or rear video support (Pixel resolution up to 1600 X 1200 at 85Hz)
- 256MB, 512MB and 1GB of ECC or Non-ECC DDR, 266/333MHz SDRAM
- EIDE Ultra-100 DMA controller supports up to three EIDE devices
- Optional EIDE On-board 1.8" hard drive or optional Compact Flash carrier
- One Serial ATA150 (SATA150) external devices
- Floppy disk interface
- Optional SCSI interface available with rear I/O
- 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-976-209
- 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
- Four serial ports
 - COM1 RS-232/422/485 on front
 - COM2 RS-232 out rear connector
 - COM3 RS-232 out rear connector
 - COM4 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®, VxWorks and MS-DOS® (others available on request)



XVME-689-VR7 Intel® Celeron® M Processor Module



CPU

CPU versions available
373 Intel® Celeron® M 1.0 GHz (512KB of L2 Cache)

Memory

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

Mass Storage

EIDE Ultra-DMA 100 interface-
- Two channels via P0
- One channel on-board for optional 1.8" EIDE or our Compact Flash carrier
- Serial ATA150 channels via P2
- Floppy Drive interface via P2

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 (COM2) port via P2
One RS-232 (COM3) port via P2
One RS-232 (COM4) port via P2

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.

USB 2.0 (Universal Serial Bus)

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

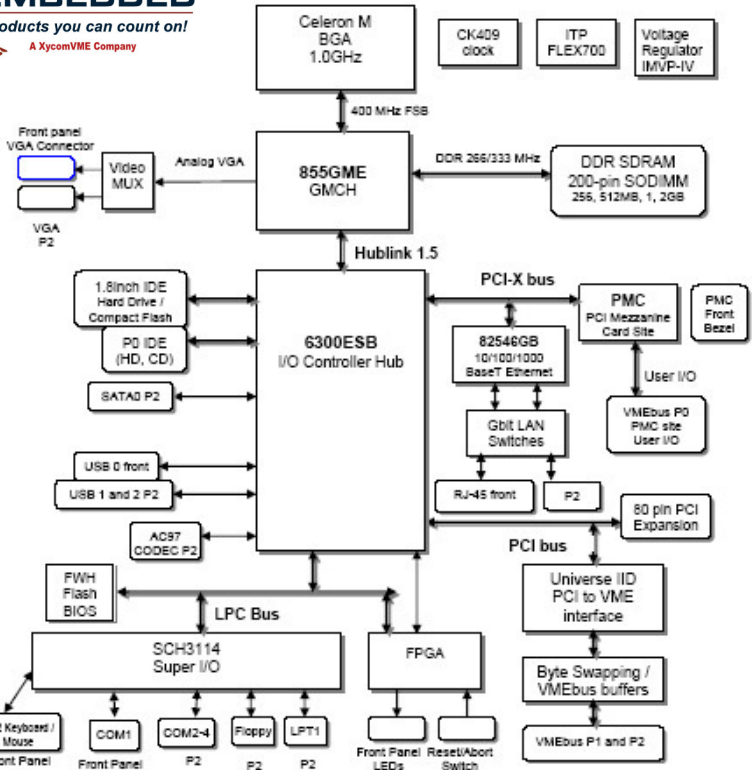
Keyboard and Mouse port

- Via front panel

PC-Compatible Real Time Clock

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

Long Duration Watchdog timer



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 1 (I1)-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@5A typical (using 1.0 GHz Celeron M w/ 1Gb DRAM)

Environmental

RoHS Compliant module

Thermal Operating 0 to 55° **

Thermal Non-Operating -40 to 85°

Thermal Operating Extended -25 to 70° **

Thermal Non-Operating Extended -40 to 85°

Humidity Operating/Non-Operating

10-95% RH, non-condensing

Shock Operating

30g Peak acceleration, 11mSec duration

Shock 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-689-VR7 requires 300LFM of air flow during operation.

Order Information

Industrial Temperature (0 to 55°)

XVME-689-VR7/1YX • 1.0 GHz Intel® Celeron® M CPU

Extended Temperature (-25 to 70°)

Accessory Products

XVME-976/209	Single Slot dual PMC carrier module for use with the XVME-689-VR7, provides two 32/64-bit/33/66MHz 3.3V or 5V PMC sites with front panel I/O cutout.
XVME-912/01	Compact Flash mounting kit for XVME-689-VR7. (Flash module not included)
XVME-913/01	On-Board 1.8" hard drive kit for XVME-689-VR7.

Contact our Application Engineering group by phone or Email: support@xembedded.com with any questions.

Note: The optional P0 connector is used to implement IDE Hard Drive and PMC rear I/O functions

Y = 1 VME-64 IEEE 1101.0 handles (Standard VME type handles)	X = 1 for 256MB ECC DRR SDRAM
Y = 2 VME-64x IEEE 1101.10 handles (cPCI type handles)	X = 2 for 512MB ECC DRR SDRAM
Y = 3 VME-64 IEEE 1101.0 handles and optional P0 (Vita 31.1 and PMC rear I/O)	X = 3 for 1GB ECC DRR SDRAM
Y = 4 VME-64x IEEE 1101.10 handles and optional P0 (Vita 31.1 and PMC rear I/O)	