EMBEDDED
Products you can count on!
A XycomVME Company.

XVME-689-VR7 Very Low Power Intel® Celeron® M VME Processor Module

Overview

The XVME-689-VR7 is a powerful, very low power VME-bus PC compatible processor module from XycomVME, 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, multi-processing 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.

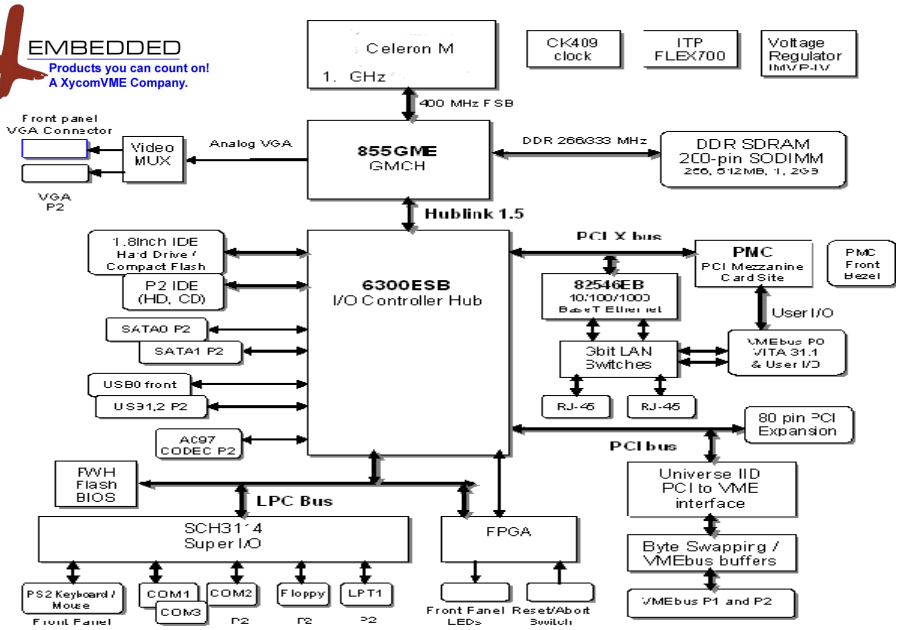
Features

- Drop in replacement for 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, 1GB and 2GB 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
- Two Serial ATA150 (SATA150) external devices
- Floppy disk interface
- 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
  - COM2RS-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)**

Xembedded, LLC. 1050 Highland Dr. Suite E, Ann Arbor, MI 48108 Toll free 877.944.1942 Ph. 734-975-0577 Fax 734.975-0588 See us at www.Xembedded.com

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

EMBEDDED
Products you can count on!
A XycomVME Company.



CPU
- CPU versions available
  - 373 Intel® Celeron® M 1.5 GHz (512KB of L2 Cache)

Memory
- 256Mb, 512Mb, 1Gb and 2Gb 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 carriers can be stacked to provide a total of 5 PMC sites. XVME-976-209 is 33/66MHz, 32/64-bit 3.3V or 5V 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 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@2.4A typical (using 1.0 GHz Celeron M w/ 1Gb DRAM)
- +/- 12V@ .1A typical also routed to PMC site

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
Emmisions 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°)

XVME-689-VR7/5YXE • 1.0 GHz Intel® Celeron® M CPU

Note: If the user backplane is only a 96-Pin J1/J2 VMEbus the I/O functions on the outer rows of the

XVME-990/01	Rear Transition Module used to connect external devices to the P2 and P0 connectors of the XVME-689-VR7. 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 *VR7*	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-689-via a 96 pin ribbon cable provided with the XVME-979.*
XVME-976/209 two	Single Slot dual PMC carrier module for use with the XVME-689-VR7, provides 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.
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.

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)	**X = 4 for 2GB ECC DRR SDRAM**

P1/P2 160-pin VMEbus connector from the XVME-689-VR7 are not available via the rear transition module. All functions on the XVME-689-VR7 P2 and P0 connectors are supported via connectors on the optional XVME-990 rear transition module. The optional P0 connector does not allow the XVME-689-VR7 module to be inserted into some legacy (non VME 64X) chassis. To assure that your chassis supports this feature contact our Application Engineering group at 734.944.1942 (toll free 877-994-1942) or Email: support@xycomvme.com *Note: The optional P0 connector is used to implement Vita 31.1 and PMC rear I/O functions*

Xembedded, LLC. 1050 Highland Dr. Suite E, Ann Arbor, MI 48108 Toll free 877.944.1942 Ph. 734-975-0577 Fax 734.975-0588 See us at www.Xembedded.com