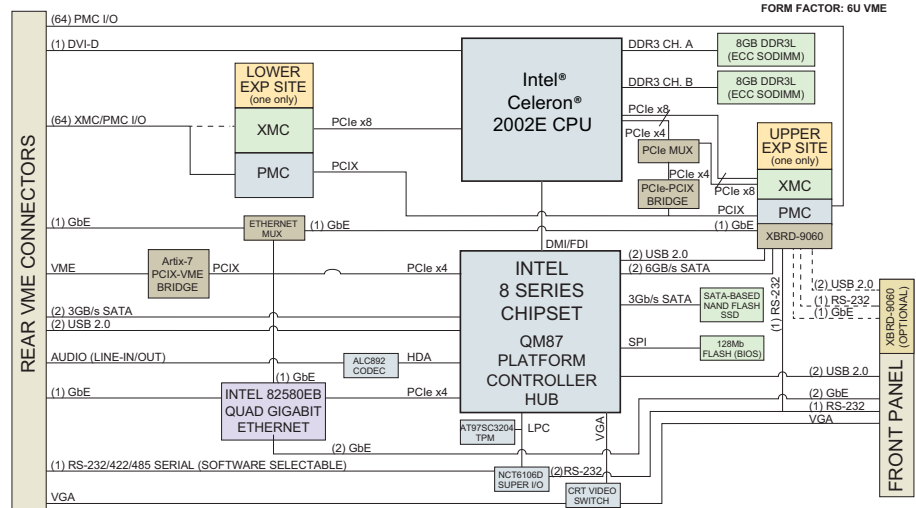


Single Board Computers

XVME-6700 6U VME Intel® Celeron® 2002E Air-Cooled Processor Board



ARTIX™-7 FPGA-Based VMEbus Interface



Intel® Celeron CPU ◆ 8GB DDR3L ECC RAM ◆ BIOS Selectable Byte Swapping

Description

If you're one of the thousands who depends on the continued use of your VMEbus systems you can feel confident that Acromag is there for you. This single board computer updates your legacy systems with an Intel processor that will deliver an enhanced microarchitecture, integrated graphics, and expanded memory performance with 8 GB of high-bandwidth DDR3L memory and ECC memory controllers.

The XVME-6700 will add 7 to 10 years of life to your system with modern technology. This high-performance SBC features a FPGA-based VME to PCIe-bridge that solves the end of life issue with the TSI148 VME interface chip.

Ruggedized SODIMM removable memory is surrounded by heat sink material to provide a robust hold-down mechanism. **The SODIMM is secured with four screws so it is easy to replace faulty memory.**

Operating System Software

Linux, VxWorks and Windows 7+

Advanced Vector Extensions 2.0 for enhanced performance on floating point-intensive applications and Hyper-Threading Technology that enables each core to use two software threads for more efficient use of the CPU.

Expansion Capabilities

In addition to a comprehensive range of front panel and backplane I/O features, the XVME- 6700 offers increased expansion capabilities through two PMC/ XMC sites on the board.

In lieu of one PMC/XMC module, the optional XBRD-9060 expansion I/O carrier module may be installed.

The XBRD-9060 allows for two SSD mSATA drives, as well as another Gigabit Ethernet port, RS-232 port, and two USB 2.0 ports.

The XVME-9640 rear transition module is also available for storage, networking, and easy access to the P2 connector I/O.

Extensive Support

With over 60 years' experience, more than 35 of those years working with defense and military contracts, we are committed to providing embedded solutions for the best long term value in the industry.

Designed and manufactured in the USA, this product comes with a 2-year warranty.

Key Features & Benefits

- Celeron-based board for cost-sensitive applications
- FPGA-based VME to PCIe bridge
- Intel 8-Series QM87 PCH chipset
- 8GB of high-speed DDR3L memory with SODIMM lock-down mechanism standard (16GB optional)
- Front panel I/O includes:
 - dual USB 2.0 ports
 - VGA (switched w/ rear)
 - dual Gb Ethernet ports thru RJ Point 5 connector
 - RS-232 port
- Backplane I/O includes:
 - dual Gigabit Ethernet (on optional P0)
 - dual SATA ports & dual USB ports
 - DVI-D
 - RS-232/422/485
 - VGA (switched with front)
- XBRD-9060 expansion module adds:
 - dual USB 2.0 ports
 - Gigabit Ethernet port (switched with one of the rear ports)
 - RS-232 port
 - dual mSATA drives
- Power-on self-test (POST) code LCD display



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Performance Specifications

Processor and Memory

Processor

Intel® Celeron® Processor 2002E (2M Cache, 1.50 GHz).

Chipset

Intel 8-Series QM87 PCH chipset.
Intel DH82QM87 Platform Controller Hub.

Memory

8GB of 1600 DDR3L ECC memory.

Flash Memory

8GB standard.

Software Support

VxWorks, Linux and Windows 7+.

Bus Compliance

VMEbus Interface

P1 and P2 connectors are compatible with VME67x VME Master/Slave using FPGA-based VME to PCIe bridge. A32/A24/A16/D32/D16/D8, MBLT64, 2eVME/2eSST.

Dual PMC/XMC Sites

32/64-bit, 33/66/133MHz sites (IEEE P1386/P1386.1).

Front panel I/O bezel and P4 module user I/O on optional P0 rear connector and P2 connector.

(XMC module P16 connector I/O optionally available on P0 connector, please consult the factory).

XMCs are PCIe x8.

Option to replace PMC/XMC #2 with the XBRD-9060.

System Integrity

A two-digit LED display is available for power-on self test (POST) codes for problems during the boot operation. It can then be used for application software user codes to aid in software debugging.

Form Factor

6U VMEbus 9.2" (233mm) x 6.3" (160mm).

Optional Expansion

XBRD-9060

Allows more I/O to the front panel, as well as mSATA SSD modules to be added for storage. Front panel I/O available are Gb Ethernet, RS-232 serial port, and two USB ports.

The XBRD-9060 also contains two mSATA sockets that allow two SSD drives to be added while still remaining within a single VME slot. Using the software RAID functionality of the QM87 PCH, these drives can even be setup as a RAID 0/1 array if redundancy or extra speed is desired.

XVME-9640

Installed onto the rear slot directly behind the XVME-6700 to easily access all of the available I/O on the P2, and optionally P0 connectors, as well as allow mSATA SSD modules to be added for storage. Front panel I/O available are two Gb Ethernet ports, one VGA port, one DVI-D port, and two USB ports. Internal connectors are also available. Please see the user manual for more information.

Environmental

Operating temperature

Standard temperature models: 0 to 70°C*.
Extended temperature models: -40 to 75°C*.

* application dependent - see manual for details.

Storage temperature

-55 to 85°C.

Relative humidity

5% to 95% at 60°C non-condensing.

Power Inputs from backplane:

Dual Core Celeron.

5V (5V only backplane): 53W typical to 53W maximum, 37.5W typical.

5V (5V +3.3V backplane): 50W typical to 50.5W maximum, 35W typical.

3.3V (optional): 3W.

+/-12V: Used only for PMC/XMC.

Ordering Information

[XVME-6700-7080-LF](#)

6U VME SBC, P0

[XVME-6700-7082-LF](#)

6U VME SBC, P0, no battery

[XVME-6700-7080E-LF](#)

6U VME SBC, P0, extended operating temperature

[XVME-6700-7082E-LF](#)

6U VME SBC, P0, ext. operating temp., no battery

[XVME-6700-7081-LF](#)

6U VME SBC, no P0

[XVME-6700-7083-LF](#)

6U VME SBC, no P0, no battery

[XVME-6700-7081E-LF](#)

6U VME SBC no P0, extended operating temperature

[XVME-6700-7083E-LF](#)

6U VME SBC no P0, ext. operating temp., no battery

Note: Please contact the factory regarding conduction-cooled models.

Accessories

For more information, see www.acromag.com.

[XBRD-9060-LF](#)

Expansion I/O Carrier Module

[XVME-9640-1-LF](#)

6U VMEbus Rear Transition Module with P0 connector

[XVME-9640-2-LF](#)

6U VMEbus Rear Transition Module without P0 connector

Cable Set

[5028-568](#)

Cable adapter: RJ Point 5 Male to RJ45 Female, 6 in

[5028-572](#)

Cable adapter: 26-pin to 2 USB, VGA, Serial, 18 in

Software Development Tools

Board support package includes driver and integration directions.

[XVME-6500/6700-BSP-LNX](#)

Linux board support package

[XVME-6500/6700-BSP-VXW](#)

VxWorks board support package

[XVME-6500/6700-BSP-WIN](#)

Windows board support package

[IPSW-A7VME-LNX](#)

Linux example libraries.

[IPSW-A7VME-VXW](#)

VxWorks® 7.0 64-bit, software support package.

[IPSW-A7VME-WIN](#)

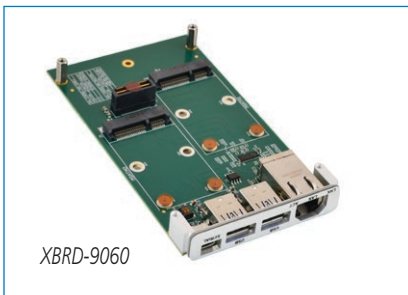
64-bit and 32-bit Windows software package.

Related Products

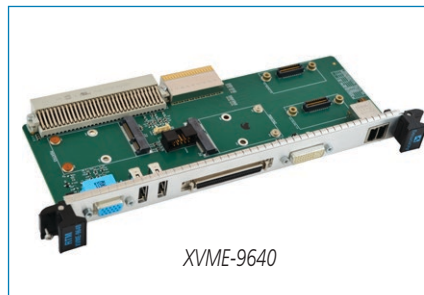
[XMC FPGA modules](#)

[PMC FPGA modules](#)

ISO9001
AS9100



XBRD-9060



XVME-9640

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