TVME7100 SystemPak

Appplication Ready Development Platform

ELMA
Your Solution Partner

Move your development time line into high gear and reduce your time to market with this application ready platform from Elma.

Description

This fully integrated 6U VME64x application development platform features the newest VME board from Emerson Network Power; the MVME7100 single board computer featuring the MPC8641 dual core processor with a 2eSST VMEbusr interface which combined offer significant performance improvement. The MVME7100 SystemPak provides a powerful pre-configured subsystem for migrating current VMEbus applications to the latest in PowerPC technology or for rapid development and deployment of new applications. It offers increased performance and features over legacy systems while protecting legacy VMEbus related technology investments.

Supporting this processor card is a PMC SATA storage module with 640GB or more (inquire about higher available capacities) of rotating drive capacity ready to meet application data storage requirements. A 12-port front panel Gigabit Ethernet switch and routing engine provides the network bandwidth and configuration capability necessary to handle most application development needs.

The powerful, payload resides in the industry's most popular tower featuring a 500W power supply. A convenient carrying handle allows easy transport of this desktop system.

The subsystem is loaded with a VxWorks boot image and run time license and fully tested prior to shipment. A range of component options allows users to configure a system designed to meet specific requirements. For a list of chassis and payload options see Configuration Options.

Standard Configuration Includes:

The S32V6NP4NPCXNVN-711 comes as a ready to run unit with:

- Single board computer - model MVME7100-0163
- Ethernet switch - model T4001a-740
- SATA PMCDisk - model 9262G-640GB-54-SD
- Type 32 chassis – model 32V05OPX48Y3VGE0
- VxWorks boot image, run time license and driver set

ACT/Technico™ brand of Embedded Computing Products


SBCs

I/O


Software

Design & Documentation

Chassis


Ethernet Switches

TVME7100 SystemPak

Below is a description of every board that ships with the standard configuration of the TVME7100 SystemPak.

Standard Configuration Components

Single Board Computer: MVME7100-0163

- System-on-chip Freescale 1GHz MPC8641D with dual PowerPC® e600 processor cores, dual integrated memory controllers, DMA engine, PCI Express interface, Ethernet, and local I/O
- Two GB of DDR2 ECC memory, 128MB Nor flash GB Nand flash
- Four Gigabit Ethernet ports
- USB 2.0 controller
- 2eSST VMEbus protocol offers interoperability with MVME6100 and MVME3100 at higher bandwidths
- Dual 33/66/100MHz PMC-X sites for expansion via XMC or PMC modules (supports PrPMC)
- 8x PCI Express connector for PMC-X and XMC expansion using Emerson XMCSpan
- RS232 front panel serial port
- VxWorks boot image, run time license and driver set
- IEEE handles

Ethernet Switch / Layer 3 Routing Engine: Model T4001a-740

- Twelve 10/100/1000 front panel copper RJ45 ports
- Fully managed, Layer 2 switching and Layer 3 routing
- Full wire speed operation
- Auto negotiation, auto crossover and auto polarity
- Eight priority queue levels per port
- Minimal bandwidth guarantee per traffic class

Storage: Model 9262G-640GB-54-SD SATA PMCDisk

- 640GB 2.5" SATA rotating hard drive on a PMC module mounted on the MVME7100 SBC
- Ideal for high capacity, high bandwidth data storage requirements
- PCI680 chipset supports UDMA-6 ATA, 133 MB/sec transfer rates
- Suitable for any Single Board Computer with an industry standard IEEE P1386.1 PMC site
- Device driver included

Portable Tower: Model 32V050PX48Y3VGE0

- Type 32 portable chassis
- 5 VME64X slot backplane – vertical orientation
- Airflow: lower front air intake / top rear exhaust
- 500W Power One Plug in power supply with +5V@50A, +3.3V@60A, +12V@12A, -12V@4A outputs located in PS slots 6 and 7
- AC input 85-264VAC input with PFC
- Measures 4U wide by 17"H x 13.38"D (excluding handles)
- Flush front card cage and flush rear card cage (80mm for rear optional transition module)
- 12VDC fan below card cage
- Lower front-to-upper rear airflow
- On/Off switch, AC inlet/filter/fuses in rear of chassis
- Air blockers for unused slots

Standard Configuration Environmental Specifications

Temperature:	0°C to +50°C operating
	-20°C to +70°C storage
Humidity:	5% to 95% non-condensing operating and storage
Shock:	5 Gs @ 11ms, operating
	10 Gs @ 11ms (per ASTM 0775) storage
Vibration:	1.0 Gs @ 10 to 330 Hz operating
	1.2 Gs @ 5 to 330 Hz storage

TVME7100 SystemPak

Elma Electronic offers a wide range of embedded storage products to help you build a system capable of meeting your requirements. Consider the following selection of options and work with one of our Embedded Computing Architects to help you build the system you need, using the Custom Configuration Key on the back page.

Single Board Computers

- SBCs are available featuring the latest in Intel and Freescale processors in 6U Eurocard form factors
- Rear transition modules for rear I/O connectivity – direct attach RTMs available

Ethernet Switches

- Ethernet switches are available featuring from 8 to 30 ports in front and back panel combinations via RJ45 ports and via the backplane
- 6U Eurocard form factors.
- 10/100/1000 copper ports or fiber ports
- Layer 3 managed and Layer 2 unmanaged switches
- Rear transition modules for rear I/O connectivity – direct attach RTMs available

Storage

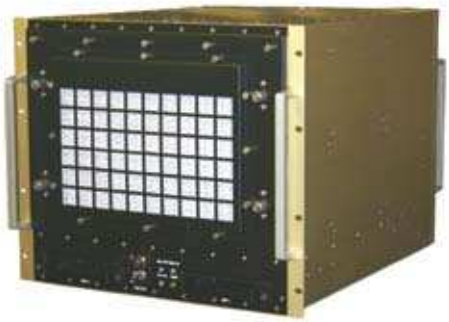
- Solid state drive based storage for rugged environmental requirements and rotating drives for benign environments
- 6U Eurocard and PMC form factors.
- PATA (IDE), SATA and SCSI drive options
- 6U network attached (NAS) RAID storage

Portable Tower

- 2U, 3U, 4U or 6U x 84HP (card cage width & height)
- 3, 5, 7 and 12 slot VITA-Based System Platforms (VME, VME64x VPX and VXS)
- Advanced EMC shielding (optional) to meet CE and FCC
- Wide range of PSU inputs (90 - 264 VAC, 48 VDC)
- Fixed-mount or front pluggable PSUs with redundant hot swap options
- System monitoring for DC voltages, fan fail and over temp (optional)
- Connector options: 3 Row (96 PIN), 5 Row (160 PIN), 5 Row + P0

Rugged Options

- All Elma chassis and payload products are available in rugged versions including conduction cooled models, extended temperature and extended shock and vibration models
- Conformal coating
- Rugged systems can be tested to meet specified environmental requirements under full application load



I/O Options

- PMC based I/O options including:
  - Fast and Gigabit Ethernet ports
  - SCSI, Audio, Video, DI/O, A/D, D/A, Data Acquisition, Motion Control
  - Mil-Std 1553, Arinc 429, AFDX
- RTM based I/O options
  - Async serial ports: Four, RJ-45, labeled as COM 2-5
  - 10/100/1000 Ethernet BaseTX, RJ-45 ports
- PMC carrier cards for added I/O capability

TVME7100 SystemPak

Software

• Linux or VxWorks boot image, run time license and drivers fully integrated and tested prior to shipment

Linux™

WIND RIVER

VxWorks

TVME7100 Order Information

To order this configuration, described in the box, please use the order number listed at right.

Description	Order Number
• Single board computer • Ethernet switch • SATA PMCDisk • Type 32 chassis • VxWorks boot image, run time license and driver set	S32V6NP4NPCXNVN-711

Custom Configuration Key

Different configurations are possible, although not all options are compatible. Please contact one of our Embedded Computing Architects to discuss specific requirements and learn about other embedded system solutions, or visit our website at www.acttechnico.com.

__ __ __ __ __ __ __ __ __ __ __ __ __ __ __ - __ __ __ * (16-18 Project Spec.)

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18

1,2, 3) System Type
• SAV = ATR Convection
• SAD = ATR Conduction
• SR2 = 12R2
• SR1 = 12R1
• S11 = Type 11
• S12 = Type 12
• S14 = Type 14
• S15 = Type 15
• S32 = Type 32
• S39 = Type 39
• SEF = E-Frame

4) Bus Architecture
• V = VITA
• C = CPCI
• A = ATCA
• M = MTC
• X = No Architecture
• Y = Hybrid
• Z = Custom

5) Board Size
• 3 = 3U
• 6 = 6U
• 8 = 8U
• F = Full size
• M = Mid size
• Z = Custom

6) BP Bare board
• B = CPCI
• C = H110
• E = 2.16
• K = VITA 31.1
• T = VXS
• N = VME64X
• P = VPX
• Q = J1 only
• X = No Architecture
• Y = Hybrid
• Z = Custom

7) Storage
• R = RAIDStor NAS
• E = Eurocard Direct Attached
• P = PMC
• M = Multiple / Combination
• X = No Storage
• Z = Custom

8) Size
• 1 = 1U
• 2 = 2U
• 3 = 3U
• 4 = 4U
• 5 = 5U
• 6 = 6U
• 7 = 7U
• 8 = 8U
• 9 = 9U
• A = 10U
• B = 11U
• C = 12U
• D = 13U
• E = ½ ATR
• F = ¾ ATR
• G = 1 ATR
• H = 1 ½ ATR
• Z = Custom

9) RTMs
• N = No
• Y = Yes

10) SBC
• P = PowerPC
• I = Intel
• O = Other
• M = Multiple / Combination
• X = No SBC

11) Switch
• C = Copper ports
• F = Fiber ports
• B = Copper / Fiber
• M = Multiple / Combination
• X = No Switch

12) I/O PMC
• S = SCSI
• R = Serial
• E = Ethernet
• O = Other
• X = No I/O PMC
• M = Multiple / Combination
• Z = Custom

13) Adapters / Carriers
• Y = Yes
• N = No

14) Operating Systems
• V = VxWorks
• L = Linux
• W = Windows
• S = Solaris
• O = Other
• X = No OS

15) Application Software
• Y = Yes
• N = N

Elma Electronic | 215.956.1200 | sales@elma.com | www.elma.com | www.acttechnico.com

ELMA
Your Solution Partner