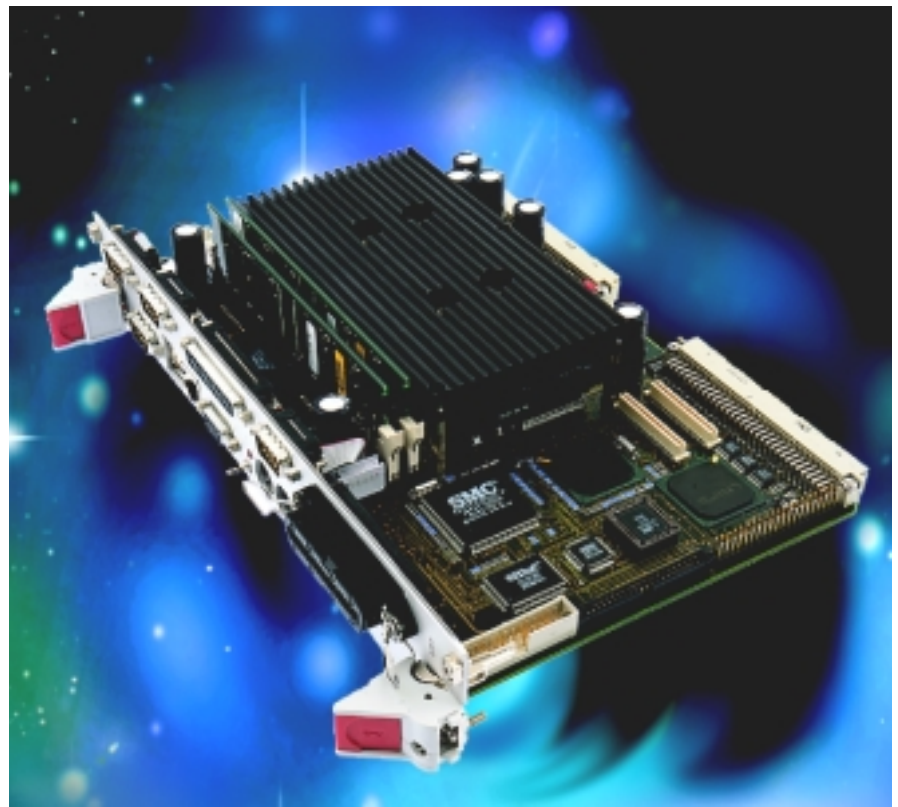


Features

- High Performance
Pentium® III, 500-600 MHz
Celeron-A, 366-433 MHz
- **Ultra compact** all-in-one PC
Occupies **2 VMEbus slots only**
- Windows **NT**, Windows **98**,
QNX, **VxWorks**, **Solaris**,
MS-DOS, ...
- **VME-64 - Tunda Universe-2**
- Up to **512 MB SDRAM**
100 MHz with ECC
- **FlashDrive** up to 220 MB
- **VGA** and **LCD** up to **1600x1200**
2(4) MB high speed SDRAM
- **Fast+ Ethernet**
- **Wide SCSI** up to 40 MB/sec
- PCIbus enhanced **IDE**
- **PMC** extension slot
- **4x serial** I/O with FIFOs
RS-232 or **RS-422/485** interf.
- **2x IEEE 1284 parallel** ports
- **2x USB**
- **Watchdog**, **NMI ticker**,
temperature sensor
- Single **+5 volt** supply **only**
- Optional **-40°/+75°C**
- **Custom specific, low cost**
assembly versions



The *VP7* VMEbus all-in-one 6U single board computer is designed to meet the needs of embedded application developers addressing markets like telecommunication (high bandwidth, broadband data or intelligent network switching), industrial automation, military and aerospace, medical, scientific, and imaging. Supported operating systems are Windows NT, Windows 98, MS-DOS, QNX, VxWorks, Solaris and others.

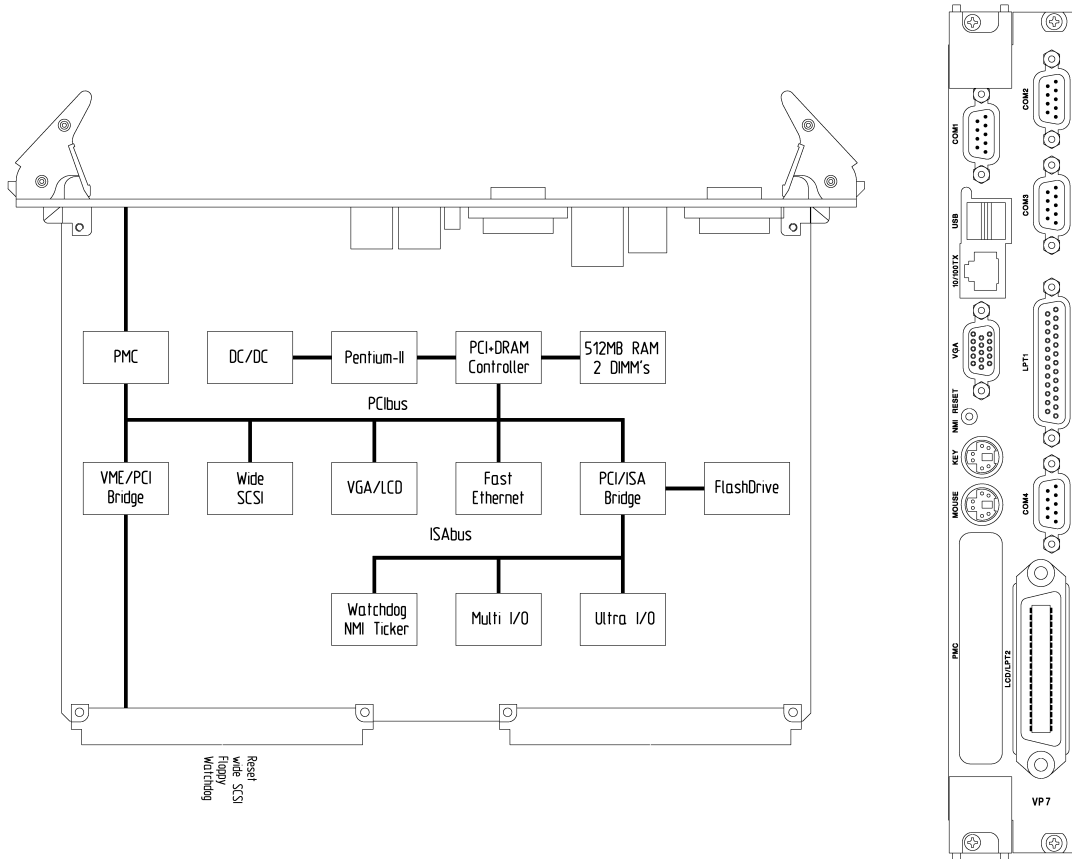
The ultra compact all-in-one concept with flexible processor and RAM configurations, and an impressive array of on-board peripherals

Includes video interface, Ethernet, SCSI, and PMC extension. This combined with a custom specific assembly service provides optimized price / performance for all kinds of OEM applications.

Rugged and military needs are addressed with extended temperature range of up to -40°C to $+75^{\circ}\text{C}$, and features like LCD supporting a large variety of rugged flat panels.

Special features include four serial channels with flexible RS-232 or RS-422/485 interfacing and single +5V supply.

Block Diagram and Front Panel I/O



Specifications

VME-64 - Tundra Universe-2

Industry standard CA91C142 Universe-2 PCI to VMEbus controller
 60-70 Mbytes/sec transfer rate, full VMEbus system controller
 FIFOs for write posting, DMA controller with linked list support
 Master/slave transfer modes: BLT, ADOH, RMW, LOCK, RETRY
 A32 / A24 / A16 and D64(MBLT) / D32 / D16 / D8

Processor - scaleable

Scaleable processing power with flexible Slot 1 design
 Intel Pentium®III: 500 - 600 MHz and faster frequencies
 Intel Celeron-A: 333 - 433 MHz
 Please see price list for latest CPU versions
 High efficiency on-board switching regulator (DC/DC)
 Fanless cooling with heatsink

Performance

CPU	Frequency	Winstone 98 business/high	SPEC 95 int/fp
Celeron-A	366 MHz	27.3/34.2	
	433 MHz	28.1/37.0	
Pentium®III	500 MHz	31.6/41.7	
	600 MHz	33.3/45.2	

(128 MB RAM, 1024x768 256 color, ST34502LW HD)

Chipset - long term availability

Intel 82443BX PCI chipset with 82371EB (PIIX4) ISA-bridge
 100 MHz system bus with Pentium®III (66 MHz with Celeron-A)
 PCI burst mode transfers faster than 110 Mbytes/sec
 32-bit wide PCIbus (33 MHz)

Cache

	level 1	level 2
Pentium®III	32 KB	512 KB, half speed
Celeron-A	32 KB	128 KB, full speed

Memory - high-speed 100 MHz SDRAM

2 DIMM sockets for 32 to 512 Mbytes 64-bit wide 100 MHz SDRAM
 Optional with error correction (ECC)

FlashDrive - up to 220 Mbytes

Optional 4 to 220 Mbytes on-board SanDisk ATA FlashDrive
 Higher capacities on request



VP7

Pentium® III All-In-One PC

6U VMEbus Embedded Computer

VGA and LCD - 1600 x 1200, 2 MB SDRAM
 CT69000: 64-bit Windows accelerator and LCD flat panel interface
 On-chip high speed 2 Mbytes synchronous DRAM (83 MHz)
 Resolution up to 1600x1200 (60 Hz), 1280x1024 (75 Hz), 135 MHz
 1600x1200 (75 Hz, 170 MHz) with 4 Mbytes SDRAM on request
 Monochrome and color TFT or STN panel support
 Flexible 9, 12, 15, 18 or 24-bit panel interface (also dual-scan)
 Up to 16.7 million true colors on STN panels with HiQColor

Fast+ Ethernet - 10/100 Mb/sec with DMA
 AMD 79C972 controller
 12 Kbytes FIFO buffers and DMA for max. PCIbus offload
 10BaseT and 100BaseTX auto-negotiation interface

Wide-SCSI - up to 40 Mbytes/sec
 53C875 controller with PCI local bus DMA
 Active low power termination on-board

EIDE - with PCIbus DMA, 33 Mbytes/sec
 Ultra DMA/33 sync. DMA mode up to 33 Mbytes/sec
 PIO mode 4 and bus master IDE up to 14 Mbytes/sec
 2 devices supported, on-board FlashDisk or 2.5" hard disk

PMC Extension Slot
 32-bit PCIbus interface with front panel I/O

4x Serial I/O - RS-232 and RS-422/485
 Four async. 16550 compatible full duplex serial channels
 High-speed transfer up to 115.2 kbaud with 16 byte FIFOs
 COM 1+2 user selectable RS-232 or RS-422/485 interface
 COM 3+4 with RS-232 interface, RS-422 on request

2x Parallel Port
 Two bi-directional, IEEE 1284 compatible enhanced parallel ports
 (including EPP and ECP) for printer or general purpose I/O

Floppy One channel 3.5" floppy drive controller
 720 KB and 1.44 MB

2x USB Two 12 Mb/sec universal serial bus channels

Keyboard PS/2 compatible, separate front connector

Mouse PS/2 compatible, separate front connector

Real-time clock RTC 146818 compatible, on-board Li-battery

CMOS RAM 114 bytes non-volatile CMOS RAM

EEPROM 4 kbit serial EEPROM for non volatile user data

Watchdog Activates reset under software control (550 ms)

Temp. Sensor SW readable from -55°C to +125°C,
 0.5°C increments

NMI-Ticker User programmable NMI timer 0.3 to 18 ms
 for real-time applications

LED Front panel LED (red) user programmable

BIOS Features

AMI BIOS, in-system programmable Flash ROM
 CPU, memory and IDE auto-detection/selection
 Integrated VGA, Ethernet and SCSI BIOS
 Supports various LCD panels (see www. for detailed information)
 Password protection, BIOSpost, system and video BIOS shadowing
 Extensive setup with remappable serial/parallel ports
 Diskless, keyboardless and videless operation

Front and Rear I/O

Function	Front I/O	On-board I/O	Rear I/O
VGA	HD-15	-	-
10/100BaseTX	RJ-45	-	-
PMC slot	yes	-	-
Keyboard	mini-DIN	-	-
Mouse	mini-DIN	-	-
2x USB	2x USB	-	-
Reset	switch	-	yes
LED	LED	-	-
COM 1	D-09	-	-
COM 2-4	3x D09	3x 10-pin	-
LPT 1	D-25	26-pin	-
LPT 2	(36-pin)	26-pin	-
LCD	36-pin	40-pin	-
Speaker	-	speaker	-
EIDE	-	44-pin, 2.0 mm - FlashDisk/ 2.5" HD	-
Wide SCSI	-	-	50-pin, 68-pin
Floppy	-	-	34-pin, 26-pin
Watchdog	-	-	yes

The pinouts of the transition module connectors (rear I/O) corresponds to standard PC connectors (press-fit cables).

Power Requirements - +5 volt only (under MS-DOS)

CPU	Frequency	Idle	Operating
Celeron-A	366 MHz	1.9 A	4.4 A typ.
	433 MHz	1.9 A	4.9 A typ.
Pentium®III	500 MHz	2.3 A	5.9 A typ.
	600 MHz	2.3 A	6.3 A typ.

Mechanical

6U, 2 slot wide (233 x 160 x 40 mm) including FlashDrive
 Most external I/O on front-panel using standard PC connectors only

Temperature	Operating	Storage
C-Style	0°C to +55°C	-40°C to +85°C
I-Style (Celeron-A)	-40°C to +75°C	-40°C to +85°C
I-Style (Pentium®III)		-40°C to +55°C -40°C to +85°C

Humidity	5 - 90% @ 40°C	5 - 95% @ 40°C
Altitude	15,000 ft. (4.5 km)	40,000 ft. (12 km)

Shock TBD G, TBD ms
Vibration TBD G @ 5 to TBD Hz
MTBF TBD hours according MIL-HDBK-217, 20°C, GB approx. TBD hours based on field test
Safety All PCBs are manufactured with a flammability rating of 94V-0 by UL recognized manufacturers

VP7

Pentium® III All-In-One PC

6U VMEbus Embedded Computer

Ordering Information

V P 7 0 0 0 0 - H 0 1 C		
0		no VGA
3		VGA/LCD (PCI) 2 MB SDRAM
0		no LAN
2		10BaseT and 100BaseTX
0		no SCSI
2		Wide Ultra Fast SCSI-2 (PCI)
0		no COM3+4
1		0+ COM3+4 = RS-232, LPT2
2		0+ COM3+4 = RS-422, LPT2
	J	32 Mbyte DRAM
	L	64 Mbyte DRAM
	N	128 Mbyte DRAM
	P	256 Mbyte DRAM
	Q	512 Mbyte DRAM
	0	no Flash
	G	4 Mbyte Flash
	J	10 Mbyte Flash
	K	20 Mbyte Flash
	L	40 Mbyte Flash
	M	80 Mbyte Flash
	N	140 Mbyte Flash
	P	220 Mbyte Flash
	4	2.1 Gbyte hard disk
	8	8.4 Gbyte hard disk
	E	Celeron-A, 366 MHz
	G	Celeron-A, 433 MHz
	8	Pentium®III, 500 MHz
	K	Pentium®III, 600 MHz
	C	0°/+55°C
	I	-40°/+75°C(+55°C)

Hardware Accessories

SPC-R422C	RS-422/485 driver for one channel (max. 2)
VP6-TM	I/O transition module
SC304F	Floppy disk 3.5 inch, 19"-box: 3U/4HP, cable
SC306HS04G	SCSI hard disk 3.5", 4.3 GB, 3U/6HP-box, cbl.
YLBSCSI304A	Flatcable for external SCSI drive, 60 cm, 3U/4HP front panel, 50-pin Centronics conn.
XCARD10C	PMC module: PCcard adapter
DOS-CARD	MS-DOS PCcard driver for XCARD10

Operating Systems

DOS-SETUP2	Default setup (BIOS) modification tool
DOS-MD600x	MS-DOS operating system
WIN-98xC	Windows 98 operating system
WIN-NT4xC	Windows NT 4.x operating system
QNX-11252	QNX4 operating system
QNX-11294	QNX4, Photon microGUI
SOL-x	Solaris (on request)

VMEbus Software

DOS-VME	VME driver for MS-DOS
W98-VME	VME-DLL and I/O driver for Windows 98
WNT-VME2	VME-DLL and I/O driver for Windows NT
QNX-VME	VMEbus driver for QNX
VXW-BVX7	VxWorks BSP with VMEbus driver

Chassis

SC-784TV13000B	7U/84HP, EMI-chassis, 13 slot 6U VMEbus backplane 110/220 VAC supply 250 watts, 3x fan
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Special chassis, supplies, backplanes and drives on request.

Please ask for your complete starter-kit including, CPU module, pre-installed operating system and chassis.



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