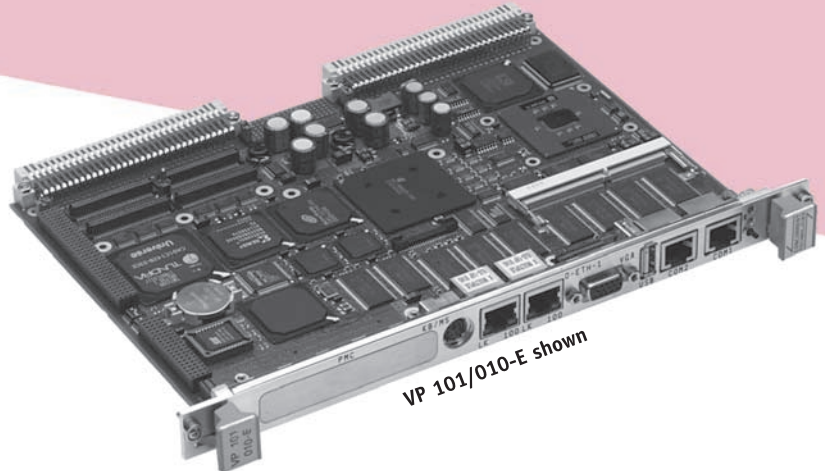


Intel® Pentium® III Processor - Low Power Single Board Computer



APPLICATIONS

The VP 101/01x-E and VP 101/01x-K are PC-compatible high performance, high functionality one-slot VME single board computers supporting the 800 MHz Intel® Pentium® III Processor - Low Power. The board also features up to 1.5 Gbytes synchronous DRAM and a variety of interfaces including an option for an on-board CompactFlash™ module. Both boards are suitable for a

range of demanding applications within the industrial control, telecomms, telemetry, scientific and aerospace markets. Their functionality can be further increased through the use of PMC modules. To simplify the board's integration many popular industry standard operating systems are supported.

HIGHLIGHTS

- Operation over ambient temperature range:
 - E version, -25°C to +70°C
 - K version, -40°C to +85°C (includes humidity seal)
- 800 MHz Intel® Pentium® III Processor - Low Power:
 - 32 Kbytes L1 cache
 - 512 Kbytes L2 cache
 - no CPU fan needed; low power processor
- Up to 1.5 Gbytes of 133 MHz ECC SDRAM
- High performance EIDE interfaces with optional CompactFlash (in a single slot)
- Ultra Wide SCSI interface
- 2 x 10/100Mbps Ethernet interfaces
- PMC module interfaces(32/64-bit and 33/66 MHz):
 - Expansion carrier for 2 more PMC sites
- Graphics interface
- PS/2 Keyboard and Mouse port
- 512 Kbytes of BIOS Flash EPROM
- 2 x asynchronous RS232 serial channels
- Floppy disk interface, parallel printer interface
- Watchdog timer, Long Duration Timer
- 2 x Universal Serial Bus (USB) ports
- VME-64 Interface supporting A32/A24/A16/D64/D32/D16/D8(E0), MBLT64 and with support for fast hardware byte-swapping
- Single slot
- Commercial temperature version available:
 - see VP 101/01x datasheet
- Support for VxWorks®, Windows NT®, Windows® 2000, Windows® XP, Windows® XP Embedded, RTX®, Linux®, QNX® and MS-DOS®

Extended Temperature

Central Processor

- 800 MHz Intel® Pentium® III Processor - Low Power:-
 - 32 Kbytes internal (L1) on-die cache
 - 512 Kbytes of secondary (L2) on-die cache
 - no CPU fan; low power processor
- utilizes 64-bit ServerWorks' ServerSet™ III LE chipset:-
 - supports 133 MHz bus frequency
- Intel Pentium III processor (ITP) debug port

DRAM

- supporting up to 1.5 Gbytes of 133 MHz ECC SDRAM:-
 - 512 Mbytes or 1 Gbyte soldered on the board
 - up to 512 Mbytes provided via a SODIMM socket
 - single bit error correction; double-bit error detection
- accessible from Intel Pentium III processor or VME bus

Hard Disk Interfaces

- Ultra-SCSI 8-bit and Ultra Wide SCSI 16-bit:-
 - accessed via P2 connector
 - single-ended asynchronous or synchronous, with active termination and signal negation
 - utilizing LSI Logic® 53C895A SCSI I/O Processor
 - synchronous SCSI data rates up to 40 Mbytes/sec
- EIDE interface:-
 - supports up to Ultra-DMA 100 for high performance drives
 - two channels (primary and secondary)
 - primary channel is accessible via P2 connector
 - secondary channel used for on-board CompactFlash carrier

Ethernet Interface

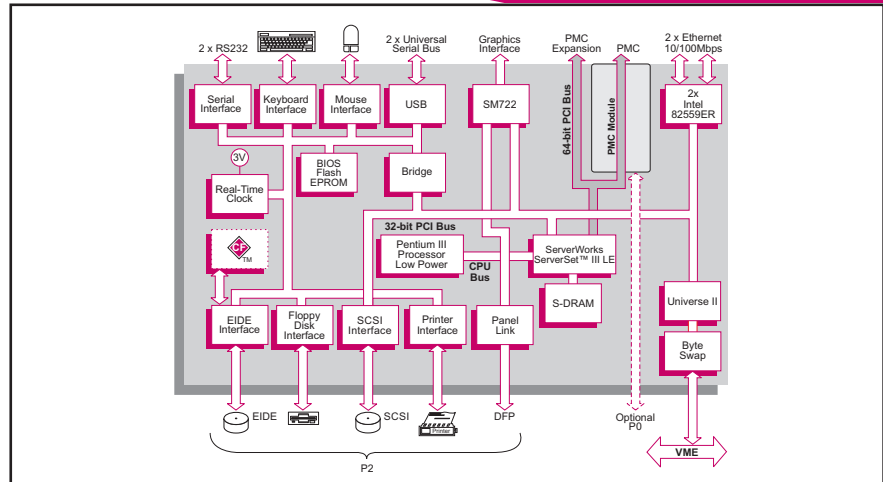
- 2 x 10Base-T and 100Base-Tx channels for UTP CAT-5
- implemented by 2 x 82559ER LAN Controllers
- accessed via 2 x RJ45 front panel connectors
- programmable station ID

Graphics Interface

- implemented by a Silicon Motion® SM722 providing:-
 - 8 Mbytes video memory
 - resolutions up to 1280 x 1024
 - supporting up to 16M colors
- accessed by front panel connector
- DFP (Digital Flat Panel) interface via P2 connector

PMC Interface

- one PMC site with I/O via front panel or optionally via P0:-
 - supports 64-bit PCI bus
 - supports up to 66 MHz
 - site still available with AD 100/001 option fitted
- provides expansion connector to a PMC carrier board with two additional PMC sites



Serial Interface

- 2 x RS232 serial channels
- 16550 compatible UARTs
- accessed via 2 x RJ45 connectors on the front panel

Other Peripheral Interfaces

- keyboard and mouse interfaces via a single PS/2™ type connector on front panel
- PC-compatible Real Time Clock (Year 2000 compliant)
- floppy disk interface via P2 connector
- parallel port interface (ECP, EPP and IEEE1284) via P2 connector
- 2 x USB interfaces: via front panel, 3 via P2 connector
- Watchdog timer
- 1 x 32-bit Long Duration Timer with processor interrupt capability

Flash EPROM

- 512 Kbytes of BIOS Flash EPROM

Firmware Support

- PhoenixPICO™ BIOS
- comprehensive Power-On Self-Test (POST)
- option to enable to boot-up without on-board battery fitted

Software Support

- Support for VxWorks, Windows NT, Windows 2000, Windows XP, Windows XP Embedded, RTX, Linux, QNX and MS-DOS

VME Interface

- implemented using Tundra® Universe II™ device
- VME Master/Slave
- A32/A24/A16/D64/D32/D16/D8(E0)/MBLT64
- fast hardware byte swapping
- auto system controller detect
- full interrupter / interrupt handler support
- bus error interrupt hardware

Electrical Specification

- +5V@6A (typical at 800 MHz with 1 Gbyte DRAM)
- +12V@0.0A; -12V@0.0A
- +12V and -12V routed to PMC expansion slot

Environmental Specification

- E version:-
 - -25°C to +70°C (operating)
 - 10% to 90% Relative Humidity, non condensing (operating)
 - -40°C to +70°C (storage)
 - 10% to 90% Relative Humidity, non condensing (storage)
- K version:-
 - -40°C to +85°C (operating)
 - 0% to 100% Relative Humidity, non condensing (operating)
 - -40°C to +85°C (storage)
 - 0% to 100% Relative Humidity, non condensing (storage)
 - humidity sealed
- for commercial temperature version see VP 101/01x

Mechanical Specification

- 6U form-factor
- single VME slot - front panel width 0.81inch (20.3mm)
- utilizes a 160-way DIN connector for P1 and P2:-
 - compatible with normal 96-way DIN connectors
- optional P0 (optional for VME64x backplanes only)
- shock:
 - 20g, 11ms, 1/2 sine (operating);
 - 30g, 11ms, 1/2 sine (non-operating)
- vibration:
 - 5Hz-2000Hz at 2g (0.38mm peak displacement) (operating);
 - 5Hz-2000Hz at 5g (0.76mm peak displacement) (non-operating)

ORDERING INFORMATION

Order Number Product Description (Hardware)

VP 101/010-xyE 800 MHz Pentium III processor - Low Power, E version, -25°C to +70°C
 VP 101/010-xyK 800 MHz Pentium III processor - Low Power, K version, -40°C to +85°C, humidity sealed

AD 100/001-xx CompactFlash Carrier
 AD CR2/PMC-xx PMC Carrier Board for 2 PMC modules

For details of xy combinations available please contact your local sales office

For commercial temperature version see VP 101/01x