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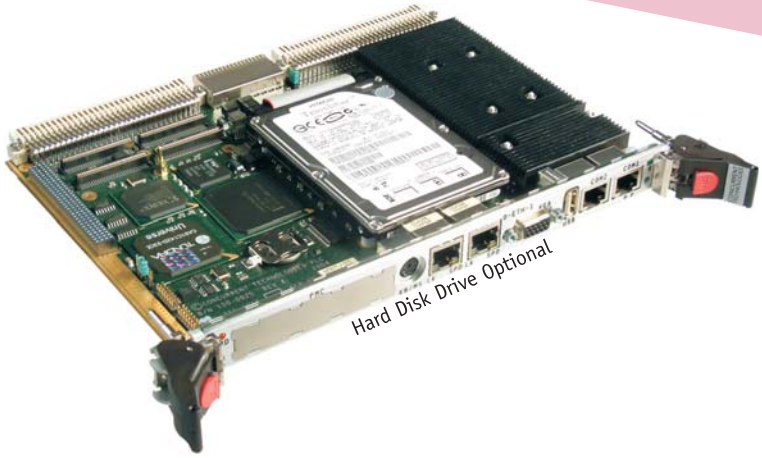
Find the *Concurrent Technologies VP 325 02x* at our website: ***Click HERE***

VME

VP 325/02x-U

N - Series

Intel® Pentium® M Processor Single Board Computer



RoHS 2002/95/EC

END OF LIFE

APPLICATIONS

The VP 325/02x-U is a PC-compatible high performance, high functionality one-slot VME single board computer. Supporting the 1.6 GHz Intel® Pentium® M processor, the board features up to 2 Gbytes of 333 MHz DDR DRAM and a variety of interfaces including an option for an on-board Hard Disk Drive, CompactFlash™ or Hitachi GST Microdrive™. The VP 325/02x-U is suitable for a range of demanding applications within the industrial control, defense, telecomms, telemetry, scientific and aerospace markets. Its 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. The VP 325/02x-U is the RoHS compliant version of the VP 325/02x family.

HIGHLIGHTS

- 1.6 GHz Intel Pentium M processor:
  - 64 Kbytes L1 cache
  - 1 Mbyte L2 cache
  - no CPU fan needed; low power processor
- 1.8 GHz or 1.4 GHz processor versions (2 Mbytes L2 cache) also available; see VP 327/02x-U datasheet
- Single slot (for all option combinations)
- Up to 2 Gbytes of 333 MHz DDR DRAM (with ECC)
- High performance EIDE interfaces with optional on-board disk drive or CompactFlash™/Microdrive™ interface (in a single-slot)
- 2 x Serial ATA150 (SATA150) channels
- 2 x Gigabit Ethernet interfaces
- PMC module interface (32/64-bit at 33/66 MHz)
- Expansion connector for dual site PMC carrier board
- 1 Mbyte of BIOS Flash EPROM
- Graphics interface
- PS/2 keyboard and mouse port
- Line level stereo audio:
  - input and output
- 4 x RS232 serial channels
- 4 x USB 2.0 ports
- Floppy disk interface
- 1 x Parallel Printer Port (ECP, EPP and IEEE1284)
- Watchdog timer
- Long Duration Timer
- VME-64 Interface supporting A32/A24/A16/D64/D32/D16/D8(EO), MBLT64 and with support for fast hardware byte-swapping
- Support for VxWorks®, Windows NT®, Windows® 2000, Windows® XP, Windows® XP Embedded, RTX®, Linux®, Solaris™, LynxOS®, QNX® and MS-DOS®

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Specification

Central Processor

- 1.6 GHz Intel® Pentium® M processor:-
  - uses µFC-PGA 478 (micro Flip-Chip Pin Grid Array) package
  - 64 Kbytes of primary (L1) on-die cache
  - 1 Mbyte of secondary (L2) on-die cache
  - 400 MHz Front Side Bus (FSB)
  - no CPU fan
- 1.8 GHz or 1.4 GHz processor versions (2 Mbytes L2 cache) available; see VP 327/02x-U datasheet
- utilizes 64-bit Intel® 855GME chipset:-
  - supports 400 MHz bus frequency
  - uses Intel® 6300ESB I/O Controller Hub
- ITP debug port

DRAM

- supporting up to 2 Gbytes 333 MHz DDR ECC SDRAM:-
  - 1 Gbyte soldered onboard
  - up to 1 Gbyte provided via SODIMM socket
  - single bit error correction
- accessible from processor or VME bus

Hard Disk Interfaces

- EIDE interface:-
  - accessed via P2 connector
  - supports up to Ultra-DMA 100 for high performance drives
  - two channels (primary and secondary)
  - primary channel accessible via P2 connector
  - secondary channel can be used for on-board 2.5 inch disk drive or CompactFlash module or Microdrive Type II drive (the board still fits in a single slot). Does not use PMC site
  - connects to an optional Mass Storage Module (DS MSS/IFP, DS MSS/00x)
- 2 x Serial ATA150 channels:-
  - both via optional P0 connector
  - transfer rate up to 150 Mbytes/s

Ethernet Interfaces

- 2 x channels supporting 10 Base-T, 100 Base-TX, 1000Base-T:-
  - implemented by Intel® 82546GB LAN Controller via 64-bit PCI bus
- accessed via front panel RJ45 connectors

Graphics Interface

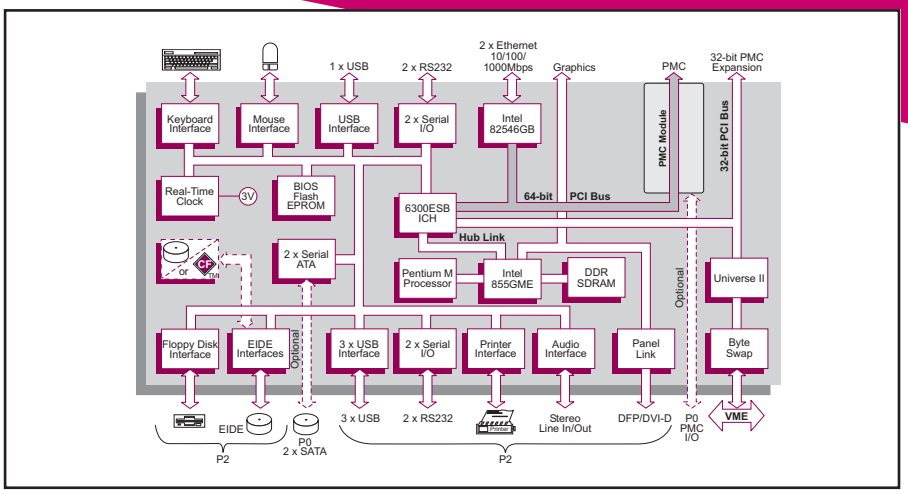
- implemented by the Intel® 855GME GMCH:-
  - resolutions up to 2048 x 1536 @75Hz
  - up to 16M colors
- accessed via a front panel connector
- flat panel supported using DVI via P2 connector:-
  - when ordered for a 3-row backplane the supplied breakout uses a DFP connector
  - when ordered for a 5-row backplane the supplied breakout uses a DVI-D connector

Stereo Audio (See Note 2)

- line level output pair via P2 connector
- line level input pair via P2 connector
- independent legacy speaker output via P2

Serial Interfaces

- 4 x RS232 serial interfaces:-
  - 2 x RS232 via RJ45 connectors on front panel
  - 2 x RS232 via P2 connector (see Note 2)
  - 16550 compatible UARTs



PMC Interface

- one PMC slot with I/O via front panel and optionally via P0:-
  - 32/64-bit, 33/66 MHz PCI operation
  - 3.3V or 5V signaling levels
  - still available when EIDE drive option fitted
- provides expansion connector to a PMC carrier board with two additional 32-bit, 33MHz PMC sites

Other Peripheral Interfaces

- 4 x USB 2.0 (Universal Serial Bus) interfaces:-
  - 1 x USB via front panel connector
  - 3 x USB via P2 connector (see Note 2)
- 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 printer port interface (ECP, EPP and IEEE1284) via P2 connector
- watchdog timer
- 1 x 32-bit Long Duration Timer with processor interrupt capability

VME Interface

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

Flash EPROM

- 1 Mbyte of BIOS Flash EPROM

Firmware Support

- Phoenix® BIOS
- comprehensive Power-On Self-Test (POST)
- LAN boot firmware included

Software Support

- support for VxWorks®, Windows® NT, Windows® 2000, Windows® XP, Windows® XP Embedded, RTX®, Linux®, Solaris™, LynxOS®, QNX® and MS-DOS®

Electrical Specification

- +5V@4.8A (typical at 1.6 GHz with 1 Gbyte DRAM)
- +12V@0.0A; -12V@0.0A
- +12V and -12V routed to both PMC sites and PMC expansion connector

Environmental Specification

- operating temperatures:-
  - 0°C to +55°C (N-Series: 1.6 GHz)
- 10% to 90% Relative Humidity, non condensing (operating)
- -40°C to +85°C (storage)
- 10% to 90% Relative Humidity, non condensing (storage)

Mechanical Specification

- 6U form-factor
- single slot - width 0.8inch (20.3mm)
- utilizes 160-way DIN connectors for P1 and P2:-
  - compatible with 96-way DIN connectors
- optional P0 (for VME64x backplanes only)
- shock:
  20g, 11ms, ½ sine (operating);
  30g, 11ms, ½ sine (non-operating)
- vibration:
  5Hz-2000Hz at 2g, 0.38mm peak displacement (operating);
  5Hz-2000Hz at 5g, 0.76mm peak displacement (non-operating)

Note 1: selected variants are supplied with VME64x handles

Note 2: 5-row backplane is required to provide P2 access to RS232, USB, stereo audio line input, stereo audio line output and legacy speaker interfaces

ORDERING INFORMATION

Order Number	Product Description (Hardware)
VP 325/022-xyU	1.6 GHz Pentium M Processor
AD CP1/DR1-z0	2.5 inch Hard Disk Drive (HDD) assembly
AD 200/001-00	Dual CompactFlash Carrier
AD CR2/PMC-zzU	32-bit PMC Carrier Board for 2 PMC modules
AD VP2/014-10U	5-row P2 Transition Module with P0 (see Note 3)
DS MSS/IFP-zz	Options for HDD, CD, Floppy Disk Drive (FDD)
DS MSS/00z-zzU	Options for HDD, CD-RW/DVD, CompactFlash, FDD

For z options please contact your local sales office

Replace the order number suffix (xy) with selections from the following:

Where x = P2/P0 Breakout combinations	Where y =
1 - reserved	1 - reserved
2 - 3-row: P2 = EIDE, floppy, printer	2 - reserved
3 - reserved	3 - 1 Gbyte
4 - 5-row: P2 = EIDE, floppy, printer, 3xUSB, 2xRS232, DVI-D, audio	4 - 1.5 Gbytes
5 - 5-row: P2 = as for x = 4; P0 = PMC I/O, 2xSerial ATA (see Note 3)	5 - 2 Gbytes

Note 3: For P2/P0 Breakout option x = 5, if a transition module is required then please order AD VP2/014-10. For options x = 2 and 4 modules are supplied.

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Specification subject to change; E and OE. RoHS 2002/95/EC compliant

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