

IBC 2804

6U cPCI Single-Slot Intel Pentium-M System Master CPU Board

PICMG 2.16 Compliant



Ordering Information

IBC 2804 - M0

1.6GHz Pentium-M, 512MB on-board memory

IBC2804 - M1

1.6GHz Pentium-M, 1GB on-board memory

IBC2804 - M2

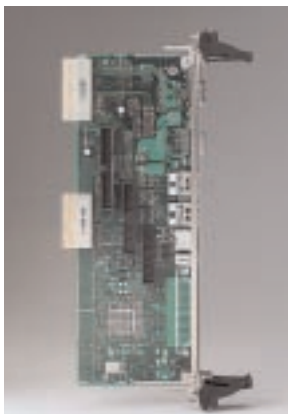
1.6 GHz Pentium-M, 2GB on-board memory

IBC2704

Rear I/O Transition Board for IBC2804

IBC2704 - S

IBC2704 with SCSI option



IBC2704



Specifications

Microprocessor

- Single Pentium-M processor at up to 1.6 GHz
- Supports future Intel speed upgrades

Cache

- 32KB L1 Instruction and Data Cache
- 1MB L2 Advanced Transfer Cache

Chipset

- E7501/ICH4 chipset
- 3.2GB/s bandwidth across 400 MHz system bus

Memory

- 512MB/1GB/2GB DDR200 SDRAM on-board with ECC
- No on-board SO-DIMM connector

PCI Mezzanine Card (PMC) Extension

- 64-bit/66MHz PCI site on-board
- PICMG 2.3 compliant

CompactPCI Bus Master

- 64-bit/66 MHz CompactPCI Bus Interface
- Stand-alone mode to operate in Peripheral slot

Optional On-Board Storage

- 2.5" HDD up to 80GB
- Ultra II CompactFlash up to 1GB

SCSI Interface (Options available on RIO board)

- Ultra320 SCSI support with Adaptec 7901 controller chip
- Rear accessible only

BIOS

- Award BIOS
- Customized BIOS available

Watchdog Timer

- Software controlled with reset, interrupt and NMI support

Ethernet Interface

- Intel 82546EB provides dual 10/100/1000Base-Tx Ethernet ports
- 64-bit/133 MHz on-board bus interface

- Front GbE /Rear GbE/PICMG 2.16 routing selectable in BIOS

Video Interface

- ATI Rage XL with 8MB SDRAM VRAM
- Up to 1600x1200 2D and 1280x1024 3D resolution, 24-bit color supported
- Front/rear access jumper-selectable

Enhanced IDE (Dual)

- Primary interface dedicated to optional on-board 2.5" HDD
- Secondary interface accessible via RIO
- Supports PIO mode 4, ATA 33/66/100 mode

System Monitoring

- Winbond W83782D controller monitors CPU temperature
- PICMG 2.9 compliant

USB

- Two USB ports with fuse protection comply with USB 2.0/1.1

Standard I/O

- Floppy drive interface
- Dual 16C550 Serial Ports
- Bi-directional Parallel Port with EPP and ECP
- PS/2 Mouse Port and PS/2 Keyboard Interface

Mechanicals

- 1-Slot (4HP) x 6U **CompactPCI®** Compliant
- **CompactPCI®** compliant Rear I/O board

Operating Environment

- Operating temperature: 0 ~ 55 degree C
- Storage temperature: -20 ~ 80 degree C
- Shock: 20G (operating), 50G (non-operating)
- Random vibration: 1.5Grms (operating), 2.0Grms (non-operating)
- Weight: 0.8kg

Max Power Consumption

- +5V/4.19A, +3.3V/5.18A, +12V/38mA

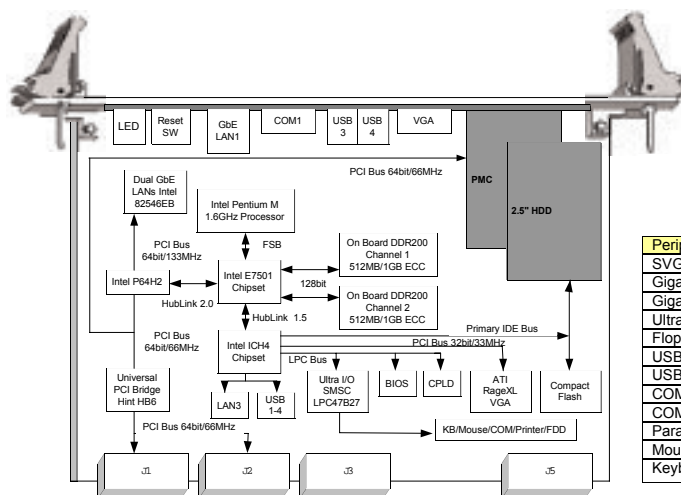
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The IBC-2804 is a compact PCI server blade with the Intel Pentium M processor CPU on board to comply with CompactPCI Packet Switching Backplane (cPSB) systems. Supporting the PICMG 2.16 specification, it is an ideal platform for the emerging switch-fabric applications blade server, mission critical and computing intensive applications such as third-generation (3G) wireless, voice over internet protocol (VoIP), networking image processing, and other demanding telecom/data communication applications.

The new IBC-2804 has been optimized for the Intel Pentium M processor and Intel E7501 Chipset. It represents the next step in high performance cPCI platforms, delivering compelling performance with a high performance micro architecture which includes 32 KB L1 instruction and data caches, 1MB L2 Advanced Transfer Cache, and dual high performance DDR memory channels across a 400 MHz Front Side System Bus achieving up to 3.2 GB/s of bandwidth. It also provides dual Gigabit Ethernets that may be configured in BIOS to be front, rear accessible, or fully conforming to PICMG2.16. IBUS is ready, with the IBC 2804 architecture to meet customer's high performance requirements for both CPUs and I/Os. With on-board 2.5" HDD, each blade server may include up to 80GB of high performance disk storage for operating system and applications. As a RIO board option, an Ultra320 SCSI interface controller may be added to the system platform connecting to an external large capacity RAID subsystem.

As the mission-critical demand increases in the next generation networking and telecommunication equipments, the IBC 2804 has been optimized to play as a master card in a cPCI system. It could also plug into a peripheral slot as a standalone server blade, isolated from the cPCI bus, commuting with other blades in the system through Gigabit Ethernet switching fabric on the back plane. IBC-2804 is designed in compliance with PICMG 2.9 specification supporting remote system and platform management.



Peripheral Map

Peripheral	Front Panel	Rear Panel	Comment
SVGA Video	x	x	Configurable in BIOS
Gigabit Ethernet 0	x	x	Configurable in BIOS to comply to PICMG 2.16
Gigabit Ethernet 1		x	Configurable in BIOS to comply to PICMG 2.16
Ultra IDE		x	Via RIO on-board connector
Floppy		x	Via RIO on-board connector
USB 0	x	x	Configurable in BIOS
USB 1	x		
COM 1		x	Also available via RIO on-board connector
COM 2			
Parallel port		x	Via RIO on-board connector
Mouse		x	Shared with keyboard on a single PS/2 connector
Keyboard		x	Shared with mouse on a single PS/2 connector



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For Further Information