



Features

- Intel® Pentium® M processor with the Intel® E7501 chipset
- PICMG® 2.16 Packet Switching Backplane and PICMG® 2.1 (Hot Swap) support
- Optional PICMG® 2.9 (IPMI)
- Ability to turn off the CompactPCI® bus
- Optional plug-in CompactFlash™ or Microdrive® storage
- Dual Gigabit Ethernet
- Supports up to 2GB of DDR200/266 plug-in memory modules
- Enhanced ATI® video
- Optional Rear Transition Module available with or without Dual Ultra320 SCSI

Specification

PROCESSOR

Intel® Pentium® M processor at speeds of 1.6GHz to 2.0GHz*
*Higher speeds as available

FORM FACTOR

The ICCP16 is a single-slot module (4HP width) with a 6U height and is fully compliant with the CompactPCI® Core Specification: PICMG® 2.0, R3.0.

CHIPSET

The ICCP16 uses the Intel® E7501 chipset which provides support for DDR200/266 memory with ECC and a high-speed Hub Link 2.0 interface. Intel® Pentium® M processors support a 400MHz FSB

CompactPCI® BUS

The ICCP16 provides direct support for up to seven expansion CompactPCI slots at 32-bit/33MHz and up to four expansion slots at 64-bit/66MHz. Each slot provides support for PCI Bus mastering. The CompactPCI bus can be turned off via the ICCP16's CompactPCI bus switches for server blade applications.

PMC OPTION CARD SLOT

PMC 32/64-bit, 33/66MHz option cards are supported by the ICCP16 via an access slot in the SBC's front panel.

BUS SPEED

CompactPCI® Bus	32-bit/33MHz, 32-bit/66MHz, 64-bit/33MHz, 64-bit/66MHz
PCI-X Local Bus	64-bit/100MHz
PCI Local Bus	32-bit/33MHz & 64-bit/100MHz
Hub Link 2.0*	1GB/s
System/FSB	400MHz

* Hub Link D is routed to J4 for high-speed interface usage on the optional RTM25

PACKET SWITCHING BACKPLANE SUPPORT

Channel B of each Ethernet controller provides a redundant 10/100/1000Base-T Ethernet interface via connector J3 to the CompactPCI backplane. This allows Ethernet communication and control between the ICCP16 and other boards in the CompactPCI chassis. The interface implementation is fully compatible with the PICMG® 2.16, R1.0 specification

HOT SWAP & OPTIONAL IPMI SUPPORT

The ICCP16 supports the Hot Swap (PICMG® 2.1, R2.0) and Hot Swap Infrastructure (PICMG® 2.12, R2.0) specifications. Optional support is available for the Intelligent Platform Management Interface (IPMI. PICMG® 2.9, R1.0) specification.

DUAL ETHERNET INTERFACES - 10/100/1000BASE-T

An internal 64-bit/100MHz PCI-X bus connects to the ICCP16's Ethernet controllers, ensuring full-speed Gigabit Ethernet in applications using 1000Base-T Ethernet communications. Channel A on each controller supports 10/100/1000Base-T Ethernet connectivity to the RJ-45 connectors located on the ICCP16's front panel. Channel B on each controller enables the SBC's Packet Switching Backplane capability.

REAR TRANSITION MODULES (OPTIONAL)

The ICRTM25 and ICRTM26 are available for use in ICCP16 applications where rear access I/O panel connectors are required. An RTM is not required for the ICCP16 to function. The ICRTM25's optional Ultra320 SCSI interfaces utilize the high-speed, 1GB/s Hub Link 2.0 interface from the ICCP16's E7501 Memory Controller Hub. The RTM26 provides rear chassis I/O connections for; four SATA/300, two USB1.1, four USB 2.0 and optional dual Gigabit interfaces.

UNIVERSAL SERIAL BUS (USB)

A total of four (4) USB ports are available on the ICCP16. USB ports 0 and 1 are located on the ICCP16's front panel and USB ports 2 and 3 are available at connector J5. The ICCP16's chipset supports USB revision 1.1.

EIDE ULTRA ATA/100 INTERFACES (DUAL)

Dual high-performance PCI EIDE interfaces are capable of supporting up to two IDE disk drives each in a master/slave configuration. The interfaces support Ultra ATA/100 with synchronous ATA mode transfers up to 100MB per second. The interfaces are routed through backplane connector J5. Dual EIDE connectors are available on the optional ICRTM25 rear transition module.

ULTRA XGA VIDEO INTERFACE

The ATI® M6-C16H video controller enables 2D/3D video acceleration and provides 16MB of integrated video DDR memory. The video controller supports pixel resolutions up to 1600 x 1200 (UXGA). Software drivers are available for most popular operating systems.

SERIAL INTERFACE

The Super I/O controller supports two full-function serial ports with independently programmable baud rates. The controller has two high-speed, NS16C550 compatible, UARTs with Send/Receive 16-Byte FIFOs. The IRQ for each serial port has BIOS selectable addressing. Serial port 1 is located on the ICCP16's front panel and serial port 2 is routed to the ICRTM25 via backplane connector J5. Serial devices may be attached to the front panel and to the ICRTM25.

LOCAL STORAGE OPTION

The ICCP16 offers a choice of three different local storage options. The Hard Drive Adapter Kit (HDAK) or Compact Media Daughter Card (CMDC) plugs into connector P11A on the ICCP16 and provides support for either a standard IDE laptop hard drive, a CompactFlash™ or Microdrive® storage device. The HDAK supports a customer-supplied IDE laptop hard drive and the CMDC supports either a CompactFlash™ or Microdrive® storage device. The laptop hard drive used with the HDAK must have a hard drive height of .435in. (11.05mm) or less. In server blade applications, these options are useful for storing the operating system and application software.

BIOS (FLASH)

The ICCP16's BIOS is AMIBIOS8® with IPMI extensions. The flash BIOS resides in the 82802 Firmware Hub (FWH). Some of the key features of the BIOS are:

- Boot from network, USB mass storage devices, IDE, ATAPI or SCSI
- Serial port console redirection to support headless operation
- IPMI v1.5 Baseboard Management Controller (BMC) support
- BMC console (text) redirection
- Intel SpeedStep® support
- Optional CompactPCI bus support
- Supports either system board or blade card applications

CACHE MEMORY (L2)

Intel® Pentium® M processors 1.8GHz and above have a 2MB on-die, Level 2 (L2) cache memory with Advanced Transfer Cache architecture. Processors below 1.8GHz have a L2 cache of 1MB. The processors also have a Level 1 (L1) 32K instruction and data cache.

DDR200/266 MEMORY

The ICCP16 provides a single channel DDR memory interface terminating at a DIMM socket. The memory interface supports up to 2GB of memory and has an interface bandwidth of 1600MB/s. The SBC accepts a single ECC, registered PC1600 or PC2100 DIMM.

PCI-X and PCI LOCAL BUS INTERFACES

The ICCP16's on-board PCI-X bus, which runs at 64-bit/100MHz, supports the SBC's dual Ethernet controllers to provide full-speed Gigabit functionality to the module's LAN ports and backplane connector J3.

Primary PCI Interface: The Primary PCI interface runs at 32-bit/33MHz and supports the on-board video interface.

Secondary PCI Interfaces: Two secondary PCI interfaces are 32/64-bit, operating at 33/66MHz and drive the local PMC slot and CompactPCI passive backplanes. The ICCP16 features CompactPCI bus switches for turning off the bus in applications not requiring CompactPCI bus support.

Ordering Information

ICCP16/2.0-NI	2.0GHz	Without IPMI and With J4 I/O
ICCP16/1.8-NI	1.8GHz	Without IPMI and With J4 I/O
ICCP16/1.6-NI	1.6GHz	Without IPMI and With J4 I/O
ICCP16/2.0-NJI	2.0GHz	Without IPMI and No J4 I/O
ICCP16/1.8-NJI	1.8GHz	Without IPMI and No J4 I/O
ICCP16/1.6-NJI	1.6GHz	Without IPMI and No J4 I/O

FLOPPY DRIVE INTERFACE

The ICCP16 supports up to two floppy disk drives. Drives can be 360K to 2.88MB, in any combination. The floppy drive interface is routed to the ICRTM25 via backplane connector J5.

KEYBOARD AND PS/2 MOUSE INTERFACES

The keyboard and mouse interfaces are routed to the ICRTM25 via backplane connector J5. A mini DIN connector located on the ICRTM25 provides an external interface for a PS/2 mouse and keyboard. A "Y" adapter plugged into the mini DIN connector allows the PS/2 mouse and keyboard to share the same port. Internal PS/2 mouse and keyboard headers are also available on the ICRTM25. A self-resetting fuse on the ICRTM25 protects the +5V line of the keyboard and the mouse.

POWER REQUIREMENTS

Typical Values

CPU	+5V	+12V	+3.3V
2.0GHz*	6.25A	0.20A	4.20A
2.0GHz**	4.06A	0.20A	6.12A
1.8GHz*	6.25A	0.20A	4.10A
1.8GHz**	4.03A	0.20A	5.69A
1.6GHz*	6.20A	0.20A	3.99A
1.6GHz**	4.00A	0.20A	5.80A

-12V @ <100mA

*5V(I/O) configured backplane

**3.3V(I/O) configured backplane

The system power supply must conform to the power sequencing specifications of ATX compliant power supplies. Voltage levels must be regulated within a range of +/- 5%.

BATTERY

Built-in lithium battery for data retention of CMOS memory.

TEMPERATURE/ENVIRONMENT

Operating Temperature 0° to 55° C. with 350 LFM of airflow

Storage Temperature -20° to 70° C.

Humidity 5% to 90% non-condensing

Cooling Solution Passive Heat Sink

AGENCY APPROVALS & INDUSTRY COMPLIANCE

- Designed for UL 1950, CAN/CSA C22.22 Number 950-95, EN55022:1994/A2:1997, CLASS A, EN55024, EN6100-6-2:1999, EN61000-3-2:2001
- The ICCP16 is designed for NEBS/ETSI compliance.

MEAN TIME BETWEEN FAILURES (MTBF)

164,040 POH (Power-On Hours) at 40 °C., per Bellcore