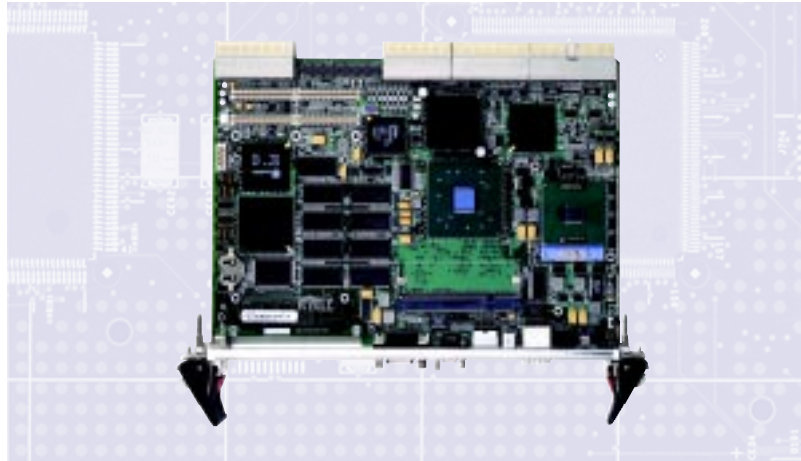## CPCI-745 Family of Intel® Pentium® M Processor Based SBCs for Compute-Intensive Telecom/Control-Plane Applications

CPCI-745 SBCs offer high-performance Intel Pentium M processor performance and PICMG 2.9 System Management support.

■ **Telecommunications**

■ **Datacommunications**

■ **Industrial Control**

■ **Defense & Aerospace**

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Features

■ 1.6GHz Intel® Pentium® M processor

■ 400MHz front-side bus (FSB)

■ E7501 dual channel 3.2Gigabit/s memory controller

■ 2GBytes ECC-protected DDR-SDRAM

■ Dual onboard Gigabit Ethernet interfaces

■ PICMG 2.16 support for CompactPCI Packet-Switching Backplanes (cPSB)

■ Full Hot Swap specification compliance (PICMG 2.1, R2.0)

■ PICMG 2.9 System Management support (IPMI)

■ Single 64bit/66MHz PCI mezzanine card (PMC) slot

■ Onboard SVGA at front panel

■ Fast Ethernet at front panel

■ Optional onboard CompactFlash or hard-disk-drive (HDD) accessory kits

■ Optional rear transition boards (RTB) in PICMG 2.16 and rear I/O variants

■ Force's Sentinel64 PCI-to-PCI bridge (PPB) technology—for implementing a single board computer (SBC) in either the system or peripheral slot of a CompactPCI host ("universal-mode" capability)

Highlights

With the latest Intel® Pentium® M processor and E7501 chipset, the CPCI-745 family of single board computers (SBCs) offers high-speed server-class performance for advanced telecom and control-plane applications. The single-slot CPCI-745 is ideal for thermally constrained environments and includes dual Gigabit Ethernet (GigE) interfaces and dual channel 3.2Gigabit/s high-speed, double-data-rate SDRAM (DDR-SDRAM).

This family of low-power, high-performance SBCs offers full Hot Swap compliance per PICMG 2.1 and supports the PICMG 2.9 System Management and PICMG 2.16 CompactPCI Packet-Switching Backplane (cPSB) open specifications. In addition to the cPSB variants, the CPCI-745 offers other value-added features including Force's 64bit/66MHz Sentinel64 PCI-to-PCI bridge for "universal" CompactPCI system- or peripheral-slot functionality.

Also, CPCI-745 products support the Intelligent Platform Management Interface (IPMI) architecture for full board remote system and platform management as well as BMC and peripheral mode.

Overall, with the value-added Sentinel64 and GigE/cPSB features, the CPCI-745 a superior choice for telecom applications like softswitches, control-plane media-transport nodes, wireless gateways and control-plane CPCI/cPSB systems.

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S P E C I F I C A T I O N S

Processor/Memory
Processor

- 1.6GHz Intel® Pentium® M processor
- 1GByte internal full-speed
  L2 Cache (on-die)
- 400MHz front-side bus (FSB)
- Intel E7501/ICH3-S sever-class chipset
- High-performance P64H2 bridge with two independent 64bit PCI busses
    - 133MHz PCI-X bus to GigE
    - 64bit/66MHz to Sentinel64 CompactPCI interface

Memory

- Dual channel 3.2Gbit/s memory architecture
- 2GBytes ECC-protected DDR-SDRAM

User Flash memory

- 8MBytes User Flash

I/O capabilities

- Two Gigabit Ethernet interfaces
    - Variants with PICMG 2.16 and rear I/O routing
- Fast Ethernet interface at front panel
- One 64bit/66MHz PMC slot
- IPMI remote Platform and System Management support (PICMG 2.9)
- Dual ATA-66/100 interfaces
- Two USB 1.1, 2.0 interfaces
- Two COM interfaces
- Keyboard/mouse interface
- FDD interface

CompactPCI interface

- Universal Sentinel64 PCI-to-PCI bridge
    - System and peripheral-slot capability (64bit/66MHz)

Other features

- Watchdog unit
- Status and user LEDs
- Reset switch
- Locking ejector handles
- Power-up ramping and in-rush current protection
- Hot Swap support (PICMG 2.1, R2.0)
- Optional onboard CompactFlash or 2.5-inch HDD

Power requirements

- TBD

Environmental requirements

- Operating temperature: 0 to +55°C
- Relative humidity: 5% to 95% at +40°C (non-condensing)
- Operating altitude: -300 to +3000m
- Product complies with flammability ratings according to UL-94V0
- Airflow: 300LFM = 1.54 m/s
- Designed for Network Equipment Building System (NEBS) Level 3 and ETSI requirements

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Force Computers is the leading designer and worldwide supplier of standard and custom systems, board-level computer platforms and services for the embedded market

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