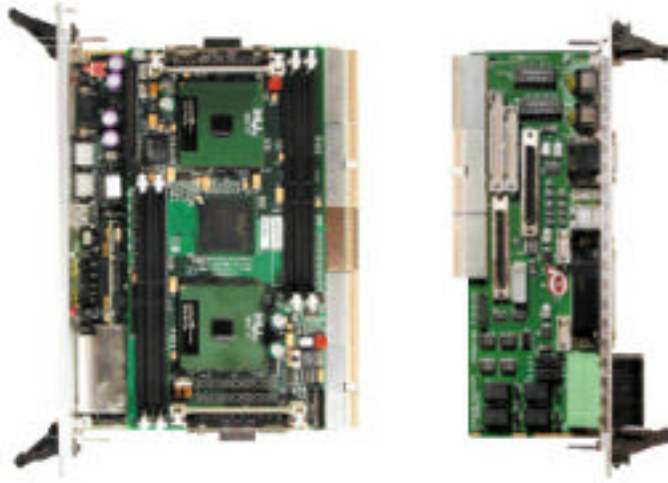


CompactPCI Single Board Computer

CPC8629



- Intel Dual Pentium III FC-PGA Processors up to 1 GHz
- Intel 840 Chipset with 100/133MHz FSB
- 64-bit / 66MHz PCI Bus
- Up to 2GB of RAMBus Memory
- AGP Video with Flat Panel Support
- Dual PCI 10/100 Base-T Ethernet
- PCI EIDE
- Flash Disk Support
- PCI Ultra-2 SCSI
- 2 Floppy, 2 Serial, 1 Parallel, and 2 USB Ports
- System Monitor

SPECIFICATIONS:

PROCESSOR

Dual Pentium III with support for 100MHz or 133MHz front side bus speeds.

MEMORY

Up to 2G (2048MB) using RDRAM

MEMORY ORGANIZATION

2 Rambus Channels with 2 RIMMS per channel

PCI BUS SPEED

33 or 66MHz - 32 or 64 bits

BIOS

DTI Enhanced PHOENIX BIOS, Plug-n-Play compliant

PCI IDE

EIDE support, Ultra ATA, bootable CD-ROM

PCI SCSI

LSILogic 53C1010 SCSI
Ultra 160 and Fast SCSI Channels

PCI ETHERNET

Dual 10/100 Base-T auto-negotiating Intel 82559 Controllers

AGP VIDEO with FLAT PANEL SUPPORT

C&T 69030 with 4MB video memory

USB

UHCI compatible host controller front port + support for rear USB port

COMPACT FLASH MEMORY CARD

Support for True-IDE Mode only

REAL TIME CLOCK

Includes 114 bytes CMOS RAM with long life battery

PHYSICAL

6U size board (160mm x 233.35mm). Support for rearpanel I/O connections using DTI's CPI606 rear-panel I/O module.

POWER

TBD

KEYBOARD/MOUSE PORTS

Front PS/2 Ports and support for Rear ports.

MEMORY

The CPC8629 supports up to 2GB of system memory using 168-pin RIMMS. 600MHz or 800MHz RAMBUS module is supported.

COMPACT PCI BUS

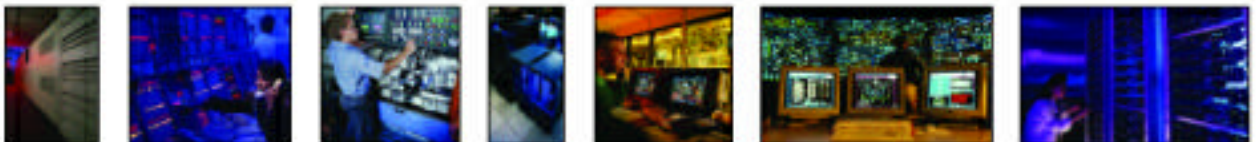
The CPC8629 provides direct support for up to 7, expansion CompactPCI slots. Each of these slots provide support for PCI mastering devices.

SYSTEM MONITOR

The CPC8629 includes DTI's standard CompactPCI system monitor. This System Monitor monitors CPU temperatures and chassis fan speeds. User software can also be controlled through the use of the System Monitor's watchdog timer. The System Monitor also features external fan/switch monitoring, alarm reporting, two stage watchdog timer, and a dedicated serial port for remote communication through a modem or CPU-CPU connection.

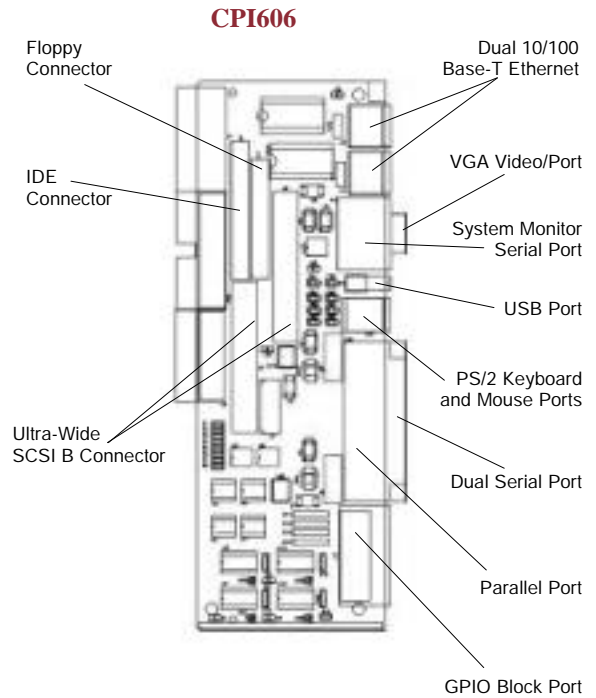
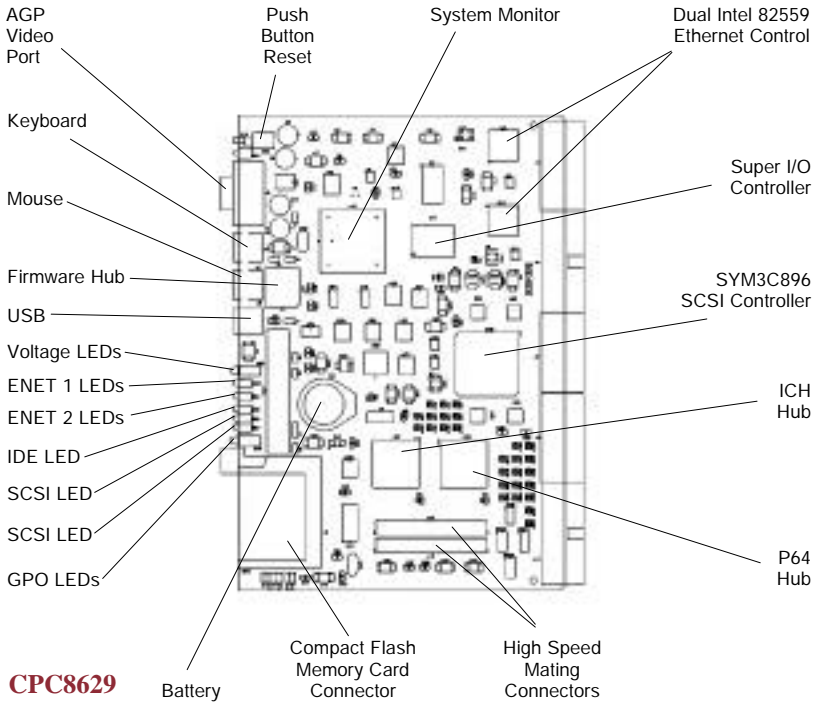
I/O

All CPC8629 I/O connections are routed to the P3, P4, and P5 connectors for connection to DTI's rearpanel I/O board, the CPI606.



CPC8629

CompactPCI Single Board Computer



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The CPC8629 is a dual Pentium®III FC-PGA single board computer which is offered in a full-size /AT PCI CompactPCI card form factor. The CPC8629 is based on Intel's 100MHz/133MHz front side bus Pentium®III FC-PGA processor with the 840 chipset. The Pentium®III processor, like its predecessors in the P6 family of processors, implements a Dynamic Execution microarchitecture—a unique combination of multiple branch prediction, data flow analysis, and speculative execution. This enables these processors to deliver higher performance than the Intel® Pentium® processor, while maintaining binary compatibility with all previous Intel® Architecture processors. The processor also executes Intel® MMX™ technology instructions for enhanced media and communication performance just as its predecessor, the Intel® Pentium®III processor. Additionally, the Pentium®III processor executes Streaming SIMD (single-instruction, multiple data) Extensions for enhanced floating point and 3-D application performance. The concept of processor identification, via CPUID, is extended in the processor family with the addition of a processor serial number. Refer to the Intel® Processor Serial Number application note for more detailed information.

The processor includes an integrated on-die, 256 KB, 8-way set associative level-two (L2) cache. The L2 cache implements the new Advanced Transfer Cache Architecture with a 256-bit wide bus. The processor also includes a 16 KB level one (L1) instruction cache and 16 KB L1 data cache. These cache arrays run at the full speed of the processor core. As with the Intel Pentium®III processor for the SC242 connector, the Pentium®III processor for the PGA370 socket has a dedicated L2 cache bus, thus maintaining the dual independent bus architecture to deliver high bus bandwidth and performance. Memory is cacheable for 4 GB of addressable memory space, allowing significant headroom for desktop systems. The CPC8629 also supports up to two processors at FSB frequencies of 100/133 MHz. The CPC8629 directly supports two channels of Direct Rambus memory operating in lock-step using Rambus Signaling Level (RSL) technology. Only 300 MHz and 400 MHz Direct Rambus devices are supported in any of 64, 128 or 256Mb technology. The 64 and 128 MBit RDRAMs use page sizes of 1 KB, while 256Mb devices target 1 KB or 2 KB pages. A maximum of 64 Rambus devices

(64Mb technology implies 512 MB maximum in 16 MB increments, 256Mb technology implies 2 GB maximum in 64 MB increments) are supported on the paired channels.

The CPC8629 provides enhanced 3D graphics performance by utilizing a C&T 69030 video controller. The video controller provides desktop graphics with full featured high end performance up to extended VGA mode. It also provides support for various flat panels such as VGA, XGA, SVGA, and SXGA active matrix TFT panel displays. Passive matrix flat panels like DSTN and SSTN are also supported. Some of its more notable features are its advanced frame rate control (FRC) for STN panels, auto-expansion and centering for text and graphics modes on high resolution panels, and advanced power sequencing techniques for the panel power and control/data signals. The CPC8629 can support simultaneous display on a CRT and a flat panel.

The CPC8629 implements a 32-bit or 64-bit PCI interface which provides burst transfer speeds up to 132MB or 264MB per second. It is designed to support up to seven CompactPCI expansion slots.

The CPC8629 provides a high performance Ultra-Wide LVD SCSI interface. 16-bit (wide) devices are supported. Ultra 2 operation is supported, allowing data rates to reach 80MB/s. The SCSI interface is based on the SymbIOS SYM53C896 controller.

Integrated onboard are two of Intel's 82559 ethernet controllers. This PCI ethernet interface provides a fully auto-negotiating 10/100 Base-T connection over a standard UTP-5 data grade twisted pair up to 100 meters in length. Support for Remote-Boot operation for diskless workstations can also be provided. Drivers are available for many of today's popular operating systems.

A PCI based, enhanced IDE Ultra ATA interface on the CPC8629 provides excellent performance with all modern high speed IDE drives. It supports 32-bit access, LBA mode, and bootable CD-ROMs. This interface supports enhanced speeds up to PIO mode 3. One or two devices can be supported through this interface. Also, fast DMA modes can be utilized with device drivers in advanced operating systems such as Windows 95 and Windows NT.

The CPC8629 also features DTT's standard System Monitor for

monitoring of system critical variables like voltage, temperature, and fan operation. The system monitor provides four inputs that can be configured as switch closure inputs or strobed inputs useful for monitoring the rotational speed of fans with strobe outputs. A two-stage programmable watchdog timer is built into the system monitor providing a timeout in the case of a software failure. A dedicated serial port is also included, allowing the System Monitor to transfer data and diagnostic information through a modem or a CPU-to-CPU connection.

Standard peripheral support like a PS/2 Keyboard/Mouse Controller, Real Time Clock, floppy controller, RS-232 serial port, and field upgradeable flash BIOS are also integrated on to the CPC8629.

DTI's enhanced Phoenix BIOS, which includes ROM based SETUP and CONFIGURATION, is year 2000 (Y2K) compliant. An onboard Compact flash memory card is also provided. Once enabled, this device acts like a hard drive and uses standard OS partitioning, formatting and copying utilities, without cables and external devices. This allows the CPC8629 to boot to OS without any floppy or hard drive connected to the system.

The CPC8629 is designed for operation in CompactPCI passive backplane systems. For completely cableless chassis, all CPC8629 I/O connections are routed to the P4 and P5 connectors for connection to DTT's rear-panel I/O board, the CPI606. DTT offers several CompactPCI backplane choices.

Contact DTT Sales to inquire about the latest speed increases.



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