



ZIATECH PRODUCT FAMILY

ZT 5087

4U General Purpose Platform



This high-performance CompactPCI® platform features seven computer board slots, transversely mounted in a 4U enclosure, providing extremely high computing density for the designer of carrier-grade telecom and Internet applications. The distinctive fan-tray assembly supports this high-density environment with efficient side-to-rear cooling. Hot-swappable system components, including

CPU boards, fan tray and power supplies, provide built-in redundancy to simplify replacement and minimize service time. An eighth slot is reserved for a single-slot media carrier alarm board (MCAB) featuring a CD-ROM and Slimline® floppy disk drive, optional hard drive, and advanced alarming.

The ZT 5087 platform offers a selection of high-performance Pentium® III processor boards for applications requiring exceptional computing bandwidth and increased system reliability. A core set of embedded features, modular off-the shelf components, and support for major operating systems and real-time software speed application development.

Key Design Elements

The ZT 5087 features extremely high-density computing, with one System Master and up-to-six Peripheral Masters transversely mounted in a 4U platform. A choice of processor boards provides a selection of high-performing and low-power Pentium III processor options. The side-to-rear cooling system supplies ample volume and velocity for cooling the high-density computing environment.

A single-slot, removable media carrier alarm board contains the CD-ROM, optional hard drive and alarming circuitry, with no cabling or hard wiring of these components into the enclosure. This feature combines the system's high platform MTBF (Mean Time Between Failure) components on a single card, thus simplifying maintenance and replacement. The ZT 5087 platform is designed to perform at less than 5 minutes MTTR (Mean Time To Replacement).

Standard Features

Modular Configuration

A typical ZT 5087 4U platform configuration includes an enclosure (with replaceable fan tray, Slimline floppy disk drive and H.110 telephony bus backplane), System Master board, media carrier alarm board (with CD-ROM drive, alarming features and optional hard drive), and two AC or DC 47-pin connector modular power supplies. Configurable options include:

Highlights

Platform

- 4U, 19-inch rack-mount enclosure
- Efficient side-to-rear cooling
- 7-slot, 6U CompactPCI backplane
- Choice of general purpose or H.110 computer telephony bus support
- N+1 hot-swappable 200W AC or DC power supplies

Computing Core

- Selection of Pentium III processor-based System Master boards
- Slimline floppy drive
- Replaceable media carrier alarm board with CD-ROM, advanced alarming features and optional hard drive
- Compactnet multi-computing option
- Support for Windows® 2000, Linux®, and VxWorks®

Standard Features (cont.)

Configurable options include:

- A selection of Pentium III processor-based System Masters, ranging from the 850 MHz Pentium III processor—Low Power to an 733/866 MHz single or dual processor with up-to-1 Gbyte ECC SDRAM
- General purpose 7-slot backplane (custom option)
- Third power supply for N+1 configuration

Compactnet Multicomputing

Up-to-12 optional Peripheral Master processor boards (ZT 5541) may be ordered to facilitate a multicomputing environment. Options for the ZT 5541 include a 500 MHz or 700 MHz Pentium III processor—Low Power (BGA2), 256 or 512 Mbyte ECC SDRAM, IDE hard drive and SVGA. Compactnet allows multiple CPU boards, running a variety of operating systems, to coexist on the same backplane. The completely integrated, "network-in-a-box" multicomputing environment increases system performance and consolidates system space by utilizing the CompactPCI bus infrastructure.

Backplane Configuration

Seven usable CompactPCI slots are available. Slots 1 through 6 support 32- or 64-bit peripheral cards, while slot 7 is dedicated for the System Master and slot 8 for the media carrier alarm board. Connectors P3 and P5 are configured for rear-panel I/O, while connector P4 on slots 1 through 6 is configured for the ECTF H.110 computer telephony bus (TDM telephony busing). The system accepts CompactPCI peripheral cards complying with IEEE® 1101.10.

The backplane may be configured for +3.3 volt or +5 volt V(I/O) CompactPCI device support. A jumper is provided on the backplane to select the desired V(I/O) voltage.

Rear-Panel I/O

Seven slots of rear-panel I/O are provided directly behind the backplane for IEEE 1101.11-style, 80 mm-deep transition cards. Slot 7 is available for transitioning I/O signals from the System Master board, while slots 1 through 6 are available for additional rear-panel I/O cards.

System Alarming

An advanced alarm system resides on the media carrier alarm board, and thresholds are user-configurable via the serial port. The alarming feature monitors four voltages of the power supplies, fan tach outputs on all three chassis fans, all eight temperature sensors on the backplane slots, and status signals of the power supplies.

All monitoring functions have customer-configurable MAJOR, MINOR, and CRITICAL thresholds.

Software and Support

All CPU boards include an embedded BIOS loaded in on-board flash. The BIOS is user-configurable to boot an operating system residing in local flash memory, from a fixed or floppy drive, or over the network. The ZT 5087 platform runs major PC operating systems. Enhanced support is provided for Windows 2000, Linux and VxWorks, with additional drivers for select peripherals and flash drives.

Specifications

The ZT 5087 is compliant with the following specifications:

- CompactPCI Core Specification, PICMG® 2.0, R2.1
- CompactPCI Hot Swap Specification, PICMG 2.1, R2.0
- CompactPCI Computer Telephony Specification, PICMG 2.5, R1.0
- CompactPCI System Management Specification, PICMG 2.9, R1.0

Power

- Input: 110 or 220 VAC (50 to 60 Hz)
- Output*:
 - 60A @ +3.3VDC
 - 50A @ +5VDC
 - 11A @ +12VDC
 - 1A @ -12VDC
- Input: 36 to 60 VDC
- Output†:
 - 80A @ +3.3VDC
 - 80A @ +5VDC
 - 11A @ +12VDC
 - 3A @ -12VDC

* = Assumes that two of three power supplies are operating (N+1)

Physical and Environmental

- Height: 7.0" (178mm)
- Width: 17.2" (436mm) without rack-mount flanges. (Rack-mount flanges allow mounting in 19"racks)
- Depth: 12.5" (311mm)
- Weight: 30.5 lbs. (13.7 Kg) in standard configuration

Warranty

- 2 years

Order Information

The ZT 5087 4U General Purpose Platform may be configured with a selection of the following options:

Enclosure

- 19984: H.110 Telephony Backplane (standard configuration)
- 20185: General Purpose Backplane (custom configuration)

Power Supplies (three for N+1 configuration)

- ZT 6302: 200W AC Power Supply
- ZT 6313: 200W DC Power Supply

System Master Processor Board

(Please see individual data sheets for details)

- ZT 5503A-1A/1B: 850 MHz Intel Pentium III processor—Low Power (BGA2), 512 Mbytes to 1 Gbyte ECC SDRAM, EIDE 10 Gbyte hard drive, on-board Fast Ethernet, and SVGA
- ZT 5523A-1A/1B: 733/866 MHz single or dual Pentium III processor, 33/66 MHz CompactPCI bus, 1 Gbyte ECC SDRAM

Peripheral Master Processor Boards (Up-to-six)

- ZT 5541-A-1B: 500 MHz Pentium III processor—Low Power (BGA2), 256 Mbyte ECC SDRAM, EIDE hard drive and SVGA

Rear-Panel Transition Boards

- ZT 4804B or ZT 4806A: (for use with ZT 5503/ZT 5523)
- ZT 4805: (for use with ZT 5541)

Operating Systems

- Windows 2000
- VxWorks
- Linux

Media

- CD-ROM drive
- Floppy disk drive
- Optional hard drive
- IDE CompactFlash® Carrier (custom configuration)

Accessories

- ZT 90231: PS/2 to XT keyboard adapter

Custom configuration options and additional operating system support may be available. Please contact Performance Technologies Sales Support for information.

Regulatory Compliance

Designed for NEBS/ETSI

CE Certification

The ZT 5087 4U General Purpose Platform meets intent of Directive 89/336/EEC for Electromagnetic Compatibility & Low-Voltage Directive 73/23/EEC for Product Safety. Compliance was demonstrated to the following specifications as listed in the Official Journal of the European Communities:

Safety

- UL/cUL 60950 Safety for Information Technology Equipment
- EN/IEC 60950 Safety for Information Technology Equipment
- CB Report Scheme CB certificate and Report

Emissions Test Regulations

- FCC Part 15, Subpart B
- EN 55022
- CISPR 22
- Bellcore GR-1089

EN 50081-1 Emissions

- GR-1089-CORE Sections 2 and 3
- EN 55022 Class A Radiated
- EN 55022 Power Line Conducted Emissions
- EN 61000-3-2 Power Line Harmonic Emissions
- EN 61000-3-3 Power line Fluctuation and Flicker

EN 55024 Immunity

- GR-1089-CORE Sections 2 and 3
- EN 61000 4-2 Electro-static Discharge (ESD)
- EN 61000 4-3 Radiated Susceptibility
- EN 61000 4-4 Electrical Fast Transient Burst
- EN 61000 4-5 Power Line Surge
- EN 61000 4-6 Frequency Magnetic Fields
- EN 61000 4-11 Voltage dips, Variations, & Short Interruptions

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