ZT 5087e

4U General Purpose Platform

PERFORMANCE TECHNOLOGIES

Highlights

>> **4U, 19-inch Rack-Mount Enclosure**

>> **Efficient Side-to-Rear Cooling**

>> **7-Slot, 6U CompactPCI® Backplane**

>> **H.110 Computer Telephony Bus Support**

>> **N+1 Hot-Swappable**

>> **AC or DC Power Supplies**

>> **Selection of Intel® Pentium® III Processor-Based System Master Boards**

>> **Slimline Floppy Drive**

>> **Replaceable Media Carrier**

>> **Alarm Board with CD-ROM, Advanced Alarming Features**

>> **Compactnet® Multi-Computing Option**

>> **Support for Windows® 2000, Linux® and VxWorks®**

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. Included with the ZT 5087e is a single-slot media carrier alarm board (MCAB) featuring a CD-ROM located in the eighth slot and a Slimline® floppy disk drive located under the power supplies.

The ZT 5087e platform offers a selection of high-performance Intel® 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 5087e 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 5087e platform is designed to perform at less than five minutes MTTR (Mean Time To Replacement).

Standard Features

Modular Configuration

A typical ZT 5087e 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.

ZT 5087e
4U General Purpose Platform

Configurable options include:
- A selection of Pentium III processor-based system masters, ranging from the 850 MHz Intel® Pentium® III processor - Low Power to a 1GHz Intel Pentium III processor with 2GB PC133 SDRAM memory
- 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 integrated to facilitate a multicomputing environment. The ZT 5541 Peripheral Master features 700MHz Intel Pentium III processor - Low Power (BGA2), 512MB ECC SDRAM memory, 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 one through six support 32- or 64-bit peripheral cards, while slot seven is dedicated for the System Master and slot eight for the media carrier alarm board. Connectors P3 and P5 are configured for rear panel I/O, while connector P4 on slots one through six 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 seven is available for transitioning I/O signals from the System Master board, while slots one through six 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 5087e 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.

Contact Information

Performance Technologies
205 Indigo Creek Dr.
Rochester, NY 14626
Tel: 585-256-0200
Fax: 585-256-0791
E-mail: sales@pt.com

www.pt.com

Warranty

One year

Product Interoperability (Please see individual datasheets for details)

System Master Processor Board
- ZT 5503C-1B: 850 MHz Intel® Pentium® III processor - Low Power (BGA2), 512MB to 1GB ECC SDRAM, EIDE 10GB hard drive, onboard Fast Ethernet, and SVGA
- ZT 5551: 1GHz Intel Pentium III processor, 512MB or 1GB SDRAM memory options, EIDE hard drive option, IPMI

Peripheral Master Processor Boards (Up-to-six)
- ZT 5541 Peripheral Master features 700MHz Intel Pentium III processor - Low Power (BGA2), 512MB ECC SDRAM memory

Rear-Panel Transition Board
- ZT 4804B or ZT 4806A: (for use with ZT 5503/ZT 5551)
- ZT 4805: (for use with ZT 5541)

Operating Systems
Windows® 2000, VxWorks®, Linux®

Accessories
ZT 90231: PS/2 to XT keyboard adapter

Contact Information

Performance Technologies
205 Indigo Creek Dr.
Rochester, NY 14626
Tel: 585-256-0200
Fax: 585-256-0791
E-mail: sales@pt.com

www.pt.com

ZT 5087e
4U General Purpose Platform

Ordering Information

The ZT 5087e may be ordered with the following options:

>> **Base Enclosure**
E1: 4U PICMG® 2.16 enclosure with ZT 5981 media/alarm card

>> **Power Input Panel**
C1: AC input panel
C2: DC input panel

>> **Power Supplies** (Three for N+1 configuration)
P3: Two ZT 6303 250WAC power supplies
P4: Three ZT 6303 250WAC power supplies
P5: Two ZT 6313 250WDC power supplies
P6: Three ZT 6313 250WDC power supplies

Contact Information

Performance Technologies
205 Indigo Creek Dr.
Rochester, NY 14626
Tel: 585-256-0200
Fax: 585-256-0791
E-mail: sales@pt.com

www.pt.com

Specifications

The ZT 5087e 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 60Hz)
- 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 congifuration

Note: To provide proper cooling to the ZT 5087e, each unused slot in the chassis should be populated with an air management blade. All rear slots should be populated with a rear filler panel. See the list below for orderable components:

- To cover a single rear panel slot, use a filler panel that is 6U x 4HP (horizontal pitch=0.2") (Performance Technologies PN 18299).
- To cover six rear panel slots, use a filler plate that is 6U x 24HP (Performance Technologies PN 20434).
- To fill a front slot, use an air management blade that is 6U x 4HP (Performance Technologies PN 20456).
- To fill a power supply bay, use an air management blade that is 3U X 8HP (Performance Technologies PN 20455).
- To fill an SM slot, use a filler panel that is 3U X 4HP (Performance Technologies PN 18309).

Regulatory Compliance
Designed for NEBS/ETSI

CE Certification
The ZT 5087e 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