

PXI-3800 Series

3U PXI Intel® Pentium® M System Controller with VGA/GbE/CF

Features

- PICMG 2.1 CompactPCI specifications R3.0 compliant
- PXI specifications Rev. 2.2 compliant
- PICMG 2.1 R1.0 CompactPCI Hot Swap specifications compliant
- Design for Pentium® M processor, FSB 400 MHz, CPU frequency up to 2.0 GHz
- Two 200-pin DDR SO-DIMM sockets supporting up to 2 GB RAM
- One 44-pin EIDE (primary IDE) with build-in 2.5 low-profile HDD (40 GB, min.)
- Two CompactFlash interfaces for HDD and FDD replacement; CF2 supports hot swappable CF card functionality
- Built-in two USB 2.0 ports, two serial ports (RS-232/422/485) and one parallel port on the front panel
- One AC97 stereo audio output on the front panel
- One TRIG I/O on the front panel for advanced PXI trigger function
- VGA output on the front panel supporting 2048 x 1536 resolution
- One 10/100/1000 Mb Ethernet port by Intel® 82545EM controller
- Supports 7 bus-master PCI devices on PXI/CompactPCI bus
- Programmable watchdog timer

Introduction

ADLINK PXI-3800 is the state-of-the-art 3U PXI controller in the ADLINK PXI product line. This product is designed to meet the highest performance requirements for embedded computing. The PXI-3800 system controller complies with PXI specifications Rev. 2.2 and features many new technologies such as up to 2.0 GHz Pentium® M CPU support, hot swappable CompactFlash card, USB 2.0 ports, and gigabit Ethernet.

By using an Intel® Embedded Pentium® M CPU and Intel® 855GME chipset, the PXI-3800 provides both long life and excellent driver support to meet the majority of industrial applications. The PXI-3800 supports mainstream operating systems such as Windows 2000/XP/2003 and Linux. In addition to its rugged, industrial package, the PXI-3800's extraordinary reliability, high computing performance, and low power consumption make it ideal for test and measurement applications in harsh environments.

Notice:

The PXI-3800 is compliant with PXI Specification Rev. 2.2 and supports a rear I/O module for internal signal transmission. To use PXI-3800 with an unmatched rear I/O transition module may cause damage to the system. We strongly recommend that the ADLINK PXI chassis with rear I/O support should be used with PXI-3800 if you need rear I/O functions.



PXI-3800



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Specifications

General PXI/CompactPCI features

- PICMG 2.1 CompactPCI specifications R3.0 compliant
- PXI specifications Rev. 2.2 compliant
- PICMG 2.1 R1.0 CompactPCI Hot Swap specifications compliant

CPU/Cache

- Supports Intel® Pentium® M or Celeron® M processors
CPU frequency up to 2.0 GHz
- Front side bus (FSB) frequency: 400 MHz
- Cache size:
 - 1 MB for Pentium® M processor
 - 512 KB for Celeron® M processor

Chipset

- Intel® 855 GME chipset (in Intel® Embedded Roadmap, long life cycle)

VGA

- Up to 64 MB of dynamic video memory allocation
- 3D graphics visual enhancement
- 24-bit 350 MHz RAMDAC
- Up to 2048x1536 resolution at 75 Hz and 1600x1200 at 85 Hz

BIOS

- Award PnP BIOS advanced by ADLINK
- Write protection and anti-virus capabilities
- DMI BIOS Support Intel pre-boot execution environment (PXE)

Host Memory

- Two 200-pin DDR SO-DIMM sockets support up to 2 GB

IDE Ports

- Primary IDE channel: one 44-pin ATA-100 EIDE interface on board to support one slim type hard disk drive and one 50-pin CompactFlash type II socket (CF1: jumper-selectable as master or slave)

USB Interface

- Two ports on the front panel, USB Rev. 2.0 compliant
- Over-current protection, with polyswitch resettable fuse @ 500 mA

Onboard Ethernet

- One RJ-45 Gigabit Ethernet port on the front panel
- LAN controller: Intel 82545EM
- Supports Intel pre-boot execution environment (PXE) for remote booting in Windows 2000

Onboard Super I/O

- Chip: Winbond W83627HF
- LPT: one high-speed bi-directional SPP/EPP/ECP parallel port
- FDD: one high-density FDD connector
- COM Ports
 - Two 16C550 UARTs compatible COM ports
 - COM1/COM2 available on front faceplate, COM1 is RS-232/422/485 jumper selectable (With RS-485+ Auto-Direction Technology)
 - ESD protection to 2 kV
- Keyboard and Mouse interface: one PS2 keyboard/mouse connector
- Watchdog Timer
 - Programmable intervals: 1-255 second
 - The watchdog timer time out will generate an interrupt request or system RESET, by BIOS option
- Hardware Monitoring: Winbond W83627HF, monitors CPU temperature, system temperature and DC Voltages

Flash Disk Supporting

- Supports two CompactFlash type II sockets. CF1 socket is based on internal primary IDE interface. CF2 socket is hot-swappable interface on the front panel

LED

- System active LED: Green LED will light after POST, and turns dark when system power-off
- IDE LED: YELLOW LED flashes when accessing IDE ports
- WDT LED: RED LED is dark when power on. After enabling the WDT via software, the LED will flash. When WDT timeout occurs, the LED will stay on
- GP LED: This is a programmable BLUE LED.

Form factor

- Standard 3U PXI/CompactPCI, 12 HP wide (3-slot)

Environment

- Operating ambient temperature: 0 to 50°C
- Storage temperature: -20 to 80°C
- Relative humidity: 5 to 95%, noncondensing
- Shock: 15 G_{peak-to-peak}, 11 ms duration, non-condensing
- Vibration
 - Non-operation: 1.88 GRMS, 5 Hz to 500 Hz
 - Operation: 0.5 GRMS, 5 Hz to 500 Hz

Certificate

- EMC/EMI: CE, FCC Class A

Ordering Information

- **PXI-3800**
3U PXI system controller with Intel® Pentium® M 1.6 GHz, 512 MB DDR RAM, 40 GB HDD
- **PXI-3800/CM13**
3U PXI system controller with Intel® Celeron® M 1.3 GHz CPU, 512 MB DDR RAM, 40 GB HDD
- **PXI-3800/PM18**
3U PXI system controller with Intel® Pentium® M 1.8 GHz Dothan CPU, 512 MB DDR RAM, 40 GB HDD
- **PXI-3800/PM18+**
3U PXI system controller with Intel® Pentium® M 1.8 GHz Dothan CPU, 2 GB DDR RAM, 80 GB HDD (5400RPM)

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