PXI-3710

3U PXI Intel® Pentium® III System Controller with VGA/DVI/Ethernet/CF

Features

- PICMG 2.0 CompactPCI specifications R3.0 compliant
- PICMG 2.8 PXI specifications Rev. 2.2 compliant
- PICMG 2.1 R1.0 CompactPCI Hot Swap specifications compliant
- Design for socket370, Pentium III CPU, FSB 100/133, CPU frequency up to 1.4 GHz
- Supports up to 512MB SO-DIMM SDRAM
- One 44-pin EIDE (primary IDE) and one 40-pin EIDE (secondary IDE) connector on front panel
- Two CompactFlash Interface for HDD and FDD replacements; CF2 supports hotswappable CF card functionality
- Build-in two USB ports, one serial port (COM1), and one parallel port on front panel
- VGA output on front panel supporting 1600x1200 resolution
- One 10/100 Mb Ethernet port by Intel ICH2 controller with 82562 PHY
- Supports 7 bus-master PCI devices on PXI/CompactPCI bus
- Programmable watchdog timer
- Build-in 2.5" low profile HDD (40 GB, min)
- Optional floppy disk drive (PXI-3710F)

PXI-3710

Introduction

ADLINK PXI-3710 series is the most cost-effective 3U PXI controller in ADLINK PXI product line. This product is designed to meet the high-performance requirements for embedded computing. The PXI-3710 system controller complies with PXI specifications Rev. 2.2 and features mature technologies such as up to 1.4 GHz Pentium III CPU support, and hot swappable CompactFlash cards. The extraordinary reliability and high performance of the PXI-3710 provides the most cost-effective choice for test and measurement applications.

By using an Intel Embedded Socket-370 Pentium III CPU and Intel 815E chipset, the PXI-3710 provides both long life cycleand complete driver support to meet the needs of the majority industrial applications. The PXI-3710 architecture supports the following operating systems: Windows NT, Windows 2000/XP, Linux, and VxWorks. With its rugged and industrial package, the PXI-3710 is ideal for harsh environments.

The PXD-3710/F supports rear I/O and is compatible with PXI-3710. There are one DVI/LVDS/TTL FPD video output, one USB port and one com port on the rear I/O transition module (PXD-R3000).

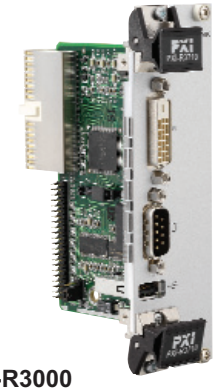
Notice:

This PXI controller implements rear I/O. PXI controllers with rear I/O are designed to operate with a matching rear transition module which provides internal or external chassis I/O.

Warning:

If this PXI controller is used with a chassis that contains a rear transition module that does not match the controller, the rear I/O functionality may not operate and may cause damage to the PXI controller or the rear transition module.

PXI-3710F



PXD-R3000

Specifications

General PXI/CompactPCI features
- PICMG 2.0 CompactPCI specifications R3.0 compliant
- PXI specifications Rev. 2.2 (PICMG 2.8) compliant
- PICMG 2.1 R1.0 CompactPCI Hot Swap specifications compliant

CPU/Cache
- Support Socket370 CPU, include the following models: Intel socket370 Pentium III, Celeron or VIA C3 CPU, CPU frequency up to 1.4 GHz
- Front side bus (FSB) frequency: 100/133 MHz

Chipset
- Intel 815E Chipset (in Intel Embedded Roadmap)

VGA
- 3D graphics visual enhancement
- 24-bit 230 MHz RAMDAC
- Up to 1600x1200 resolution (256 colors at 85 Hz refresh rate)

BIOS
- Award PnP BIOS advanced by ADLINK
- Write protection and anti-virus capabilities
- DMI BIOS supports Intel pre-boot execution environment (PXE)
- Optional remote console, upon OEM request
- Optional customized power-on screen, upon OEM request

Host Memory
- Supports up to 512MB SO-DIMM SDRAM
- Standard package: 512 MB SDRAM

IDE Ports
- Primary IDE bus: one 44-pin ATA-100 EIDE interface on board to support one slim type EIDE hard disk drive
- Secondary IDE bus: provides one 50-pin CompactFlash type II connector (CF1: jumper-selectable as master or slave) and one 40-pin ATA-100 IDE connector on the front panel

USB Interface
- Two USB ports on the front panel, Specification Rev. 1.1 compliant
- Over-current protection, with polyswitch resetable fuse @ 500 mA

On-board Ethernet
- One RJ-45 ethernet port on the front panel
- LAN controller integrated in ICH2 and Intel 82562EM PHY
- IEEE 802.3 10Base-T/100Base-TX compatible
- Supports Intel pre-boot execution environment (PXE) for remote booting in Windows NT/2000

On Board Supper I/O
- Chip: Winbond W83627HF
- LPT: one high-speed bi-directional SPP/EPP/ECP parallel port
- FDD: one high density FDD connector
- COM Ports
  - 16C550 UARTs compatible COM port
  - COM1 available on front panel, RS-232/422/485 jumper selectable (With RS-485+ Auto-Direction Technology)
  - ESD protection to 2 kV
- Keyboard and Mouse interface: one PS2 keyboard connector and one PS2 mouse connector
- Watchdog Timer
  - Programmable intervals: 1-255 seconds or 1-255 minutes
  - The watchdog timer time out will generate an interrupt to NMI or RESET, selectable in BIOS menu
- 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 secondary 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
- General purpose LED: This is a programmable BLUE LED

Form Factor
- PXI-3710: Standard 3U PXI/CompactPCI, 12 HP wide (3-slot)
- PXI-3710F: Standard 3U PXI/CompactPCI, 16 HP wide (4-slot)
- PXD-3710: Standard 3U PXI/CompactPCI with rear I/O, 12 HP wide (3-slot)
- PXD-3710F: Standard 3U PXI/CompactPCI with rear I/O, 16 HP wide (4-slot)

Rear I/O for PXD-3710/3710F
- Form factor: 3U PXI Rear I/O with cPCI-J2 connector, 8 HP wide (2-slot)
- Rear panel
  - One USB connector
  - One DB-9 connector for COM2
  - One DVI output connector
  - Reserve one 20-pin connector to support LVDS pixel data transmission output, LVDS supports resolution from flat panel display up to UXGA
  - Reserve one 44-pin connector to support 24-bit TTL FPD output

Environment
- Operating ambient temperature: 0 to 50˚C
- Storage temperature: -20 to 80˚C
- Humidity: 5 to 95% noncondensing
- Shock: 15 $G_{peak\text{-}to\text{-}peak}$, 11 ms duration, non-operation
- Vibration
  - Non-operation: 1.88 G_{RMS}, 5-500 Hz
  - Operation: 0.5 G_{RMS}, 5-500 Hz

Certificate and Test
- CE, FCC Class A
- HALT (temperature and vibration stress)

Power Consumption

Configurations	+5 V	+3.3 V	+12 V	-12 V
Pentium III 1.4 G	7 A	3.5 A	560 mA	10 mA
Celeron 600	4.2 A	3.5 A	560 mA	10 mA

OS Board Support
- Windows2000/XP/NT/9x, Linux, and VxWorks (For VxWorks BSP, please contact ADLINK.)

Ordering Information

- **PXI-3710F**
  3U PXI system controller with Intel® Pentium® III 1.26 GHz, 512 MB SDRAM, 40 GB HDD and slim-type FDD (4-slot version)
- **PXI-3710**
  3U PXI system controller with Intel® Pentium® III 1.26 GHz, 512 MB SDRAM, 40 GB HDD (3-slot version)
- **PXD-3710F**
  3U system controller with Intel® Pentium® III 1.26 GHz, 512 MB SDRAM, 40 GB HDD and slim-type FDD (4-slot version)
- **PXD-3710**
  3U system controller with Intel® Pentium® III 1.26 GHz, 512 MB SDRAM, 40 GB HDD (3-slot version)