cPCI-3970 Series

3U CompactPCI 2nd Generation Intel® Core™ i7 Processor Blade with ECC

Features

- Quad/dual-core 2nd Generation Intel® Core™ i7 processor
- Up to 16GB DDR3-1333 SDRAM with ECC in 2x SODIMM
- IPMI for system health monitoring
- DisplayPort, VGA, DVI, HDMI graphics interfaces
- System/Peripheral slot operation

CompactPCI®

EXTENDED TEMPERATURE





cPCI-3970 cPCI-3970D cPCI-3970G cPCI-3970L cPCI-3970M

Specifications

Processor & System

CPU

µFC-BGA quad-core Intel® Core™ i7-2715QE Processor 2.1GHz (Turbo boost to 3.0GHz), 6MB LLC cache, 45W TDP

µFC-BGA dual-core Intel® Core™ i7-2655LE Processor 2.2GHz (Turbo boost to 2.9GHz), 4MB LLC cache, 25W TDP

µFC-BGA dual-core Intel® Core™ i7-2610UE Processor 1.5GHz (Turbo boost to 2.4GHz), 4MB LLC cache, 17W TDP

Supports Intel® Hyper-Threading and Turbo Boost Technology

Chipset

Intel® QM67 PCH

Memory

Dual channel DDR3-1067/1333 SDRAM with ECC via two SODIMM sockets, up to 16GB capacity (dependent on availability of memory modules)

BIOS

AMI EFI BIOS, 64Mbit SPI flash memory

CompactPCI Bus

PCI 32-bit/33 MHz, 3.3V or 5V universal V(I/O)

Supports operation in system slot as master or in peripheral slot as stand-alone blade without connectivity to CompactPCI bus (Satellite mode)

PICMG Standards

PICMG 2.0 CompactPCI R3.0

PICMG 2.1 Hot Swap R2.0

PICMG 2.9 System Management R1.0

Connectivity

PMC/XMC

One optional PCI 32-bit/66 MHz PMC site or PCI-Express x1 XMC site on 2nd or 3rd layer

Ethernet

Four PCIe Intel® 82574L Gigabit Ethernet controllers on SBC for four 10/100/1000BASE-T ports on front panel

RTM cPCI-R3P00: two GbE on I/O panel switched from SBC

RTM cPCI-R3P00T: two GbE on I/O panel from onboard Intel® 82580DB GbE controller

Graphics

Integrated in Intel® processor, 3D engine

DB-15 VGA port on front panel, switchable to rear, supports up to QXGA 2048x1536 pixels @75Hz, 32-bits

Two DisplayPorts on front panel, support up to 2560×1600 pixels @60Hz; DVI, VGA and HDMI interfaces available by adapter cable (cPCI-3970G only)

Dual independent display

Serial Port

Up to four serial ports

One RS-232/422/485 port on front panel

One RS-232/422/485 10-pin header on DB-3970L2

Two serial ports on rear panel: one with Tx, Rx signal only, one converted from USB port supporting RS-232/422/485

PS/2

Front panel PS/2 Keyboard Mouse port (8/12 HP version only)

USB

Up to four USB 2.0 front panel ports

Three USB ports to rear, two on RTM panel

Audio

Line-in and Line-out ports on front panel (cPCI-3970D only)

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Specifications

Storage

Blade

One SATA 6 Gb/s direct connector for 2.5" onboard HDD (8HP & 12HP version only)

CompactFlash socket

Optional CFast socket (site shared with CF adapter board)

RTM

Three 7-pin SATA signal connectors

Supports SATA RAID 0/1/5/10

Operating System

OS

Microsoft Windows XP Professional

Microsoft Windows 7, 64bit version

Red Hat Enterprise Linux 6 32/64-bit

Fedora 14

Wind River VxWorks 6.8, 6.9

(Please contact ADLINK for other OS support)

Miscellaneous

LED

Power (green/red), WDT (amber), HDD (blue), Overheat (red)

Battery

Coin cell lithium battery onboard for RTC CMOS RAM

Watchdog Timer

System Reset and NMI, with programmable interval, 1-65535 sec or 1-65535 minutes

Hardware Monitor

Monitors CPU temperature, system temperature, and DC voltages by IPMI

TPM

Infineon SLB 9635 TT1.2 (optional by request)

Mechanical and Environmental

Form Factor

3U 4HP/8HP/12HP CompactPCI

100mm x 160mm (LxW)

Operating Temperature

0°C to +60°C

-20°C to +70°C extended temperature (cPCI-ET3970, CPUs with TDP 25W or lower)

-40°C to +80°C extreme extended temperature (cPCI-EX3970, Core i7-2610UE only)

Storage Temperature

-40°C to +85°C

Rel. Humidity

95% non-condensing

Shock

20g peak-to-peak, 11ms duration, non-operating

Vibration

2g random vibration, 5 to 500Hz in 3 axes, operating

Power Consumption Core i7-2655LE, 4GB DDR3-1333 SODIMM under Windows XP with 100% CPU loading:

0.71A@3.3V, 6.97A@5V, total 37.2W

Weight

Net weight 389g with heatsink

Certifications

CE/FCC

I/O Table

		GbE	USB 2.0	COM	Display	PS/2 KB/MS	Storage	CFast	Audio	PMC/XMC
cPCI-3970 (4HP)	Faceplate	2 (RJ-45)	2		1 (VGA)					
	Onboard						1 (CF)	Optional[3]		
cPCI-3970D (8HP)	Faceplate	2 (RJ-45)	4	1 (DB9)	1 (VGA)	1			1 (Line-in) 1 (Line-out)	
	Onboard						1 (SATA) 1 (CF)	Optional[3]		
cPCI-3970G (8HP)	Faceplate	2 (RJ-45)	3	1 (RJ-45)	1 (VGA) 2 (DP)	1				
	Onboard			1 (10-pin)			1 (SATA) 1 (CF)	Optional[3]		
cPCI-3970L (8HP)	Faceplate	4 (RJ-45)	3	1 (DB9)	1 (VGA)					
	Onboard						1 (SATA) 1 (CF)	Optional[3]		
cPCI-3970M (8HP)	Faceplate	2 (RJ-45)	4[4]	2 (DB9)[4]	1 (VGA) 2 (DVI-D)	2 [4]			1 (Line-in) 1 (Line-out)	
	Onboard						1 (SATA) 1 (CF)			
cPCI-3970P (12HP)	Faceplate	2 (RJ-45)	4	1 (DB9)	1 (VGA)	1			1 (Line-in) 1 (Line-out)	
	Onboard						1 (SATA) 1 (CF)	Optional[3]		1
cPCI-3970Q (8HP)	Faceplate	2 (RJ-45)	2		1 (VGA)					
	Onboard						1 (CF)	Optional[3]		
cPCI-3970U (12HP)	Faceplate	2 (RJ-45)	3	1 (RJ-45)	1 (VGA) 2 (DP)	1				
	Onboard			1 (10-pin)			1 (SATA) 1 (CF)	Optional[3]		1
cPCI-R3P00 (T)	Faceplate	2 (RJ-45)[1]	2	2 (DB9)	1 (VGA)					
	Onboard						3 (SATA) (7-pin)			

(1) Switched from front ports for cPCI-R3P00, independent ports for cPCI-R3P00T
(2) Switched from front port
(3) Available by replacing CF socket adapter board with CFast socket adapter board (DB-3CFAST)
(4) Two USB Type A connectors, two COM RS-232/422/485, two DVI-D, two PS/2 KB/MS, Line-in/Line-out are integrated in 100-pin high density connector on layer two daughter board.

Ordering Information

Processor Blades

- **cPCI-3970/655L/M4**
  1-slot (4HP) 3U CompactPCI blade with Intel® i7-2655LE processor and 2x 2GB DDR3-1333, 2x GbE, VGA, 2x USB 2.0, CF socket
- **cPCI-3970D/655L/M4**
  2-slot (8HP) 3U CompactPCI blade with Intel® i7-2655LE processor and 2x 2GB DDR3-1333, 2x GbE, VGA, 4x USB 2.0, Line-in, Line-out, PS/2 KB/MS, COM, SATA connector, CF socket
- **cPCI-ET3970D/610U/M4**
  -20°C to +70°C extended temperature cPCI-3970D/610U/M4G (no TPM)
- **cPCI-3970D/610U/M4**
  2-slot (8HP) 3U CompactPCI blade with Intel® i7-2610UE processor and 2x 2GB DDR3-1333, 2x GbE, VGA, 4x USB 2.0, Line-in, Line-out, PS/2 KB/MS, COM, SATA connector, CF socket
- **cPCI-3970G/610U/M4**
  2-slot (8HP) 3U CompactPCI blade with Intel® i7-2610UE processor and 2x 2GB DDR3-1333, 2x GbE, VGA, 3x USB 2.0, PS/2 KB/MS, COM, 2x DP, SATA connector, CF socket (one DP to DVI cable is included)
- **cPCI-EX3970G/610U/M4**
  -40°C to +80°C extreme extended temperature cPCI-3970D/610U/M4G (no TPM)
- **cPCI-3970L/655L/M4**
  2-slot (8HP) 3U CompactPCI blade with Intel® Core™ i7-2655LE processor and 2x 2GB DDR3-1333, VGA, 4x GbE, 3x USB 2.0, COM, CF socket and SATA connector
- **cPCI-3970M/610U/M8**
  2-slot (8HP) 3U CompactPCI blade with Intel® i7-2610UE processor and 2x 4GB DDR3-1333, 2x GbE, VGA, 2x USB 2.0, SATA connector, CF socket; additional high density 100-pin connector with Line-in/Line-out, 2x DVI, 2x type A USB, PS/2 KB/MS, 2x DB-9 COM
- **cPCI-3970P/655L/M4**
  3-slot (12HP) 3U CompactPCI blade with Intel® i7-2655LE processor and 2x 2GB DDR3-1333, 2x GbE, VGA, 4x USB 2.0, Line-in, Line-out, PS/2 KB/MS, COM, SATA connector, CF socket, PMC/XMC
- **cPCI-3970Q/715Q/M8**
  2-slot (8HP) 3U CompactPCI blade with Intel® i7-2715QE processor and 2x 4GB DDR3-1333, 2x GbE, VGA, 2x USB 2.0, CF socket
- **cPCI-3970U/655L/M4**
  3-slot (12HP) 3U CompactPCI blade with Intel® i7-2655LE processor and 2x 2GB DDR3-1333, 2x GbE, VGA, 2x DP, 3x USB 2.0, PS2 KB/MS, COM, CF socket, SATA connector, PMC/XMC

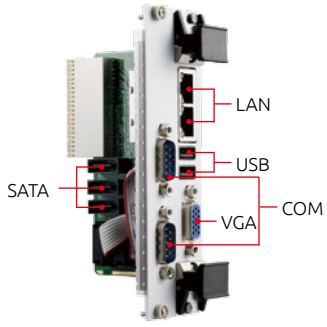
Rear Transition Modules

- **cPCI-R3P00**
  8 HP Rear I/O module for cPCI-3970 with 2x GbE, 2x COM, 2x USB 2.0, 3x SATA connectors, VGA, 50mm depth
- **cPCI-R3P00T**
  8 HP Rear I/O module for cPCI-3970 with 2x GbE, 2x COM, 2x USB 2.0, 3x SATA connectors, VGA, 80mm depth

Accessories

- **DB-3CFAST**
  CFast socket adapter board
- **DP-DVI cable***
  DisplayPort to DVI adapter cable
- **DP-VGA cable**
  DisplayPort to VGA adapter cable
- **DP-HDMI cable**
  DisplayPort to HDMI adapter cable

Contact us for different CPU, memory, HDD and CFast combinations.
*One DP-DVI cable is included with the cPCI-3970G.



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