

# cPCI-6840 Series

6U CompactPCI® Highly Integrated Intel® Pentium® M Processor PCI™ 64-bit/66 MHz Universal Blade



The cPCI-6840 universal blade is designed with versatile features. The CPU options include the low power Intel® Pentium® M or the Ultra Low Voltage Intel® Celeron® M processor. The product incorporates an embedded Intel® 855GME chipset, which supports up to 2 GB DDR RAM. It also includes CRT, DVI, and LVDS display interface options. Additional features of the cPCI-6840 are three Gigabit Ethernet ports, two 64-bit/66 MHz PMC sites, and a PCI™ 64-bit/66 MHz capable universal CompactPCI® bus to achieve high communications bandwidth. The cPCI-6840 series offers an optimal balance between computing performance, communications bandwidth, and power consumption.

## Features

- Low power consumption, supports Intel® Pentium® M and Celeron® M Processors
- Universal operation on either system or peripheral slots
- 64-bit/66 MHz CompactPCI® bus, compliant PICMG® 2.1, 2.9 and 2.16
- Two 64-bit/66 MHz PMC sites, optional SCSI on PMC2 rear I/O
- Up to 2 GB PC2700 DDR SDRAM
- Three Gigabit Ethernet ports
- Multiple storage options: IDE, Serial ATA, CompactFlash® and SCSI
- Display interfaces: CRT, DVI, and LVDS

## Ordering Information

cPCI-6840/P18/M1G	6U cPCI Pentium® M 1.8 GHz universal blade, with 1 GB DDR and two PMC
cPCI-6840/V/P18/M1G	6U cPCI Pentium® M 1.8 GHz universal blade, with VGA, KB/MS, 1 GB DDR, and one PMC
cPCI-6840/ NI/ PM18/ M1G	6U cPCI Pentium® M 1.8 GHz universal blade, with 1 GB DDR and two PMC, without IPMI
cPCI-6840V/ NI/ PM18/ M1G	6U cPCI Pentium® M 1.8 GHz universal blade, with VGA, KB/ MS, 1 GB DDR, one PMC, without IPMI
cPCI-R6840	6U cPCI RTM with DVI, SCSI, LVDS, Dual-GbE, VGA, USB, SATA, CF, COM, and IDE connectors for cPCI-6840/V
cPCI-R6841	6U cPCI RTM with PIM LVDS, Dual-GbE, VGA, USB, SATA, CF, COM, and IDE for cPCI-6840/V
DB-6840CF	CompactFlash® Daughter Board for cPCI-6840 series
PMC-8631	Ultra SCSI-320 PMC card

Note: Contact us for more CPU and memory options.

## Specifications

### CPU / Chipset / RAM

CPU	μ-FCPGA Intel® Pentium® M / Celeron® M Processors: Pentium® M 1.6 GHz with 1 MB L2 cache Pentium® M 1.8 GHz with 2 MB L2 cache Pentium® M 2.0 GHz with 2 MB L2 cache Celeron® M 1.3 GHz with 512 KB L2 cache
FSB	400 MHz
Chipset	Intel® 855GME with 6300ESB I/O Controller Hub
RAM	Two 200-pin SODIMM sockets. Up to 2 GB PC2700 DDR SDRAM.

### Bus

Standards	PICMG® 2.0 R3.0, PICMG® 2.1 R2.0, PICMG® 2.3 R1.0, PICMG® 2.16 R1.0 Optional PICMG® 2.9 System Management Bus with IPMI v1.5
CompactPCI® Bus	64-bit/66 MHz CompactPCI® bus Operating in system slot or peripheral slot
PMC Slot	Two PCI™ 64-bit/66 MHz capable slots The upper PMC2 slot offers J24 rear I/O connection

### BIOS

Chip	Award® 4 Mb flash memory
Features	Intel® PXE pre-boot on Ethernet Serial Console

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## I/O Interfaces

Display	Intel® 855GME Integrated Graphics with 32 MB UMA
Ethernet	Intel® 82546GB Dual-Port Gigabit Ethernet Controller Intel® 82541PI Single-Port Gigabit Ethernet Controller
IDE	ATA-100, dual-channel, built-in optional 2.5" HDD
SCSI	Optional PMC-8631 SCSI card via PMC2 J24 rear I/O to cPCI-R6840 RTM
Serial ATA	Supports two SATA ports on rear board
USB	USB 2.0, two ports on front panel, two ports on RTM
Front Panel I/Os	COM1 (RJ45 type), Gigabit Ethernet, two USB 2.0 VGA (optional), and PS/2 Combo (optional)
Backplane I/Os (rear I/O)	Display: DVI, CRT, and internal LVDS interface Dual Gigabit Ethernet Ports, two USB 2.0, COM2 (RJ-45 type) Two Internal SATA Ports 40/44-pin ATA connector, one CF Socket Optional ultra-320 SCSI interface

## Mechanical and Environmental

Form Factor	6U CompactPCI®
Dimensions	233.33 mm x 160 mm (L x W), one slot (4HP) wide
Operating Temp.	0°C to 55°C (CPU type dependent; external air-flow required)
Storage Temp.	-20°C to 80°C
Shock	15 G peak-to-peak, 11 ms duration, non-operation
Vibration	Non-operation: 1.88 Grms, 5-500 Hz, each axis Operation: 0.5 Grms, 5-500 Hz, each axis
Measured Power Consumption	8.8 A at +5 V, 4.0 A at +3.3 V, 0.2 A at +12 V (1.6 GHz CPU, 512 MB DDR- 333, HDD, USB, K/B, Mouse attached)
Compliance	CE, FCC Class A

## Other Features

Watchdog Timer	Two stage, SMI/SCI before RESET
LED	Four LEDs on the front panel including storage access LED (RED), Power LED (GREEN), Hot-Swap status (Blue), and Watchdog timer LED (Yellow)
PIM	Support PIM by cPCI-R6841 RTM
Operating System Compatibility	Microsoft® Windows® 2000/XP, Windows® Server® 2003, Windows® XP Embedded, VxWorks® 5.51 (Other OS support, please contact ADLINK for availability)

## Peripheral Connectivity

I/O	cPCI-6840		cPCI-6840V		CPCI	cPCI-R6840		cPCI-R6841	
	Face-plate	On-Board	Face-plate	On-Board	J3/J5	On-Board	Face-plate	On-Board	Face-plate
Serial Port (COM1)	RJ-45	--	RJ-45	--	--	--	--	--	--
Serial Port (COM2)	--	--	--	--	J3	--	RJ-45	--	RJ-45
USB (port 0, port 1)	Y	--	Y	--	--	--	--	--	--
USB (port 2, port 3)	--	--	--	--	J5	--	Y	--	Y
Gigabit Ethernet Port 1	--	2.16	--	2.16	J3	--	RJ-45	--	RJ-45
Gigabit Ethernet Port 2	--	2.16	--	2.16	J3	--	RJ-45	--	RJ-45
Gigabit Ethernet Port 3	RJ-45	--	RJ-45	--	--	--	--	--	--
Primary IDE	--	44-pin	--	44-pin	--	--	--	--	--
Secondary IDE	--	--	--	--	J5	40-pin 44-pin, CF	--	40-pin 44-pin, CF	--
General Purpose LED	Y	--	Y	--	--	--	--	--	--
Reset button	Y	--	Y	--	--	--	--	--	--
PMC1 (lower)	--	Y	--	--	--	--	--	--	--
PMC2 (upper)	--	Y	--	Y	J5	--	--	PIM	--
SCSI via PMC2 J24	--	--	Y	--	J5	SCSI	SCSI	--	--
SATA	--	--	--	--	J5	Y	--	Y	--
PS/2 Keyboard / Mouse	--	--	Y	--	J3	--	--	--	Y
VGA	--	--	DB-15	--	J3	--	DB-15	--	DB-15
DVI	--	--	--	--	J3	--	DVI	--	--
LVDS	--	--	--	--	J3	Y	--	Y	--
2.5" HDD	--	Mountable on PMC2	--	Mountable on PMC2	--	--	--	Mountable	--

1  
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2  
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3  
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Platforms

4  
3U cPCI  
SBC

5  
3U cPCI  
Platforms

6  
SBC & IMB

7  
Industrial  
Chassis

8  
Computer  
On Modules

9  
Network  
Security  
Appliances

10  
Panel PC

11  
IPC  
Accessories