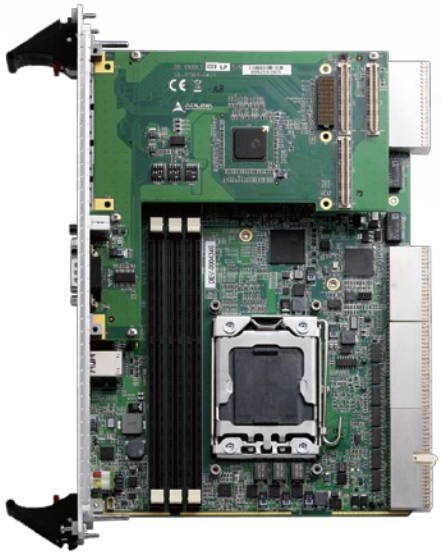
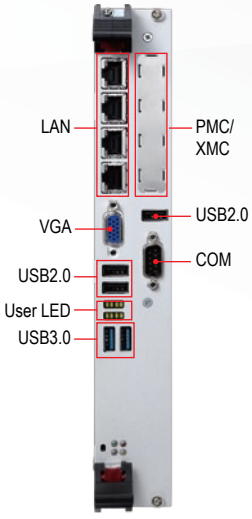
cPCI-6930 Series

6U CompactPCI Eight-Core 32nm Intel® Xeon® Processor Blade





Features

- Up to Eight-Core Intel® Xeon processor 1.8GHz and 20MB LLC
- Up to 48GB DDR3 ECC/REG memory by RDIMMs
- Two USB 3.0, four GbE ports on front panel
- Optional SAS 6 Gb/s port for 2.5” drive onboard
- Onboard SATA SSD and optional CF, CFast socket

CompactPCI®

Specifications

Processor & System

CPU	LGA1356 Eight-Core Intel® Xeon® E5-2448L Processor 1.8GHz , 20MB LLC, TDP 70W
	LGA1356 Six-Core Intel® Xeon® E5-2428L Processor 1.8GHz , 15MB LLC, TDP 60W
	LGA1356 Intel® Quad-Core Xeon® E5-2418L Processor 2.0GHz , 10MB LLC, TDP 50W
	Passive heatsink
Chipset	Intel® C600 PCH
Memory	Three channel DDR3-1600 ECC register SDRAM with three RDIMM slots, up to 48GB capacity (dependent on availability of memory modules)
BIOS	AMI® EFI BIOS, 64Mbit SPI flash memory
CompactPCI Bus	PCI 64-bit, 66MHz, 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)
PIGMIG Standards	PICMG 2.0 CompactPCI R3.0
	PICMG 2.1 Hot Swap R2.0
	PICMG 2.9 System Management R1.0
	PICMG 2.16 Packet Switch Backplane R1.0

Connectivity

PMC/XMC	One PCI 32/64-bit, 33/66/133MHz PMC site or PCI-Express x8 XMC site
Ethernet	One Intel® 82580 Gigabit Ethernet controller for four 10/100/1000BASE-T ports
	Two Intel® 82574L Gigabit Ethernet controllers for two 10/100/1000BASE-T ports to J3 for PICMG 2.16
	Two additional 10/100/1000BASE-T ports from Intel® 82576EB on RTM (cPCI-R6100 or cPCI-R6110)
Graphics	SMI SM750 2D graphics chip
	16MB embedded 32-bit DDR memory at 166MHz
	Two analog RGB signals to front and rear for VGA interfaces with dual display support
	Up to 1920x1440 resolution
	Additional discrete ATI E4690 GPU supporting two DVI-I ports on RTM cPCI-R6700
USB	Two USB 3.0 and three USB 2.0 ports on front panel
	Six USB 2.0 ports routed to rear
PS/2	PS/2 Keyboard Mouse port to rear
Serial Port	Up to three 16C550 compatible serial ports
	One DB-9 RS-232 port on front panel
	Two serial ports routed to rear
Audio	High Definition Audio signals routed to rear

Storage

SBC	4GB SATA NAND flash onboard
	One SATA 6 Gb/s direct connector for 2.5” onboard drive (removable)
	Optional CF or CFast socket (shares space with SATA direct connector)
	Optional SAS direct connector for 2.5” onboard drive (shares space with SATA direct connector; not available concurrently with COM, USB, PMC/XMC site on layer 2)
RTM*	Up to three SATA ports
	CF (x1) and SD (x1) sockets
	Eight SAS ports supporting hardware RAID via two mini-SAS x4 connectors (LSISAS1068E)
	*Available interfaces dependent on RTM model selected

Operating System

OS	Microsoft Windows 7 32/64-bit
	Microsoft Windows Server 2008 64-bit
	Red Hat Enterprise Linux 6.1
	Fedora 15
	Wind River VxWorks 6.9
	(Please contact ADLINK for other OS support)

Miscellaneous

LED	Power, WDT, Hard Disk, Hotswap and Port 80 User LEDs
Battery	Coin cell lithium battery onboard for RTC CMOS RAM
TPM	Infineon SLB 9635 TT1.2 (optional, support upon reques)
Watchdog Timer	System Reset and NMI, with Programmable Interval, 1-65535 seconds or minutes
Hardware Monitor	Monitors CPU temperature, system temperature, Vcore and DC voltages

Mechanical & Environmental

Form Factor	6U 8HP (dual slot) CompactPCI
	233.33mm x 160mm (LxW)
Operating Temperature	0° to 55°C with forced air flow
Storage Temperature	-40°C to 85°C
RH Humidity	95% non-condensing
Shock	15G peak-to-peak, 11ms duration, non-operating
Vibration	2 Grms random vibration, 5-500Hz, each axis, operating
Power Consumption	8-C Xeon E5-2448L processor, 12GB DDR3-1600 under Windows 7 with 100% CPU usage
	19.6A@5V, 4.6A@3.3V, total 113.2W when Turbo boost and HT enabled; 16.7A@5V, 4.4A@3.3V, total 98W when Turbo boost and HT disabled
Weight	Net weight 1087.6g with heatsink
EMI/EMC	EN 55022 Class A, EN 55024, EN 61000-3-2, EN 61000-3-3

I/O Table

		GbE	USB 2.0	USB 3.0	COM	DVI	VGA	PMC/ XMC	SATA	CFast	CF	Mic-in	Line-out	PS/2 KB/MS	SD	SAS
SBC																
cPCI-6930D	**Faceplate**	4	3	2	1		1	1								
	Onboard								1(1)	1(1)	1(1)					1(1)
RTM																
cPCI-R6100	**Faceplate**	4	4		1 (RJ-45)		1							1		
	Onboard								2 (7-pin)		1				1	
cPCI-R6200	**Faceplate**	2	5		1 (DB-9)		1					1	1	1		4 (SFF-8088)
	Onboard		1 (5-pin)		1(5) (10-pin)				3(3)		1 (optional) (3)					4 (SFF-8087)
cPCI-R6700D	**Faceplate**	2	3		1 (DB-9)	2 DVI-I								1		
	Onboard		2		1(2) (10-pin)				3(5) (7-pin)			1 (10-pin)				
cPCI-R6501D	**Faceplate**	2	1		1 (DB-9)	2 (DVI-I+DVI-D)										
	Onboard		1 (10-pin)		1(2) (10-pin)				3(5) (7-pin)			1 (10-pin)		1 (10-pin)		

(1) Removable adapter design. SATA adapter by default, can be replaced with CF, CFast or SAS adapter.
(2) Tx, Rx signals only.
(3) Two 7-pin signal connectors onboard for external HDDs and one direct connector for onboard 2.5" SATA drive. SATA direct connector can be replaced by CompactFlash adapter (DB-6920CF) for CF slot.
(4) Converted from USB.
(5) Space is reserved onboard for one 2.5" SATA drive.

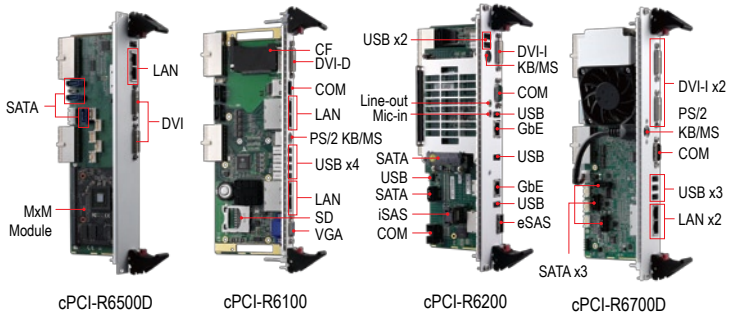
Ordering Information

Model Number	Description/Configuration
Processor Blades	
cPCI-6930D/2448/M12G	8HP cPCI-6930 with Intel® Xeon® E5-2448L processor and 3x 4GB DDR3-1333 RDIMM with GbE x4, USB2.0 x3, USB3.0 x2, VGA, COM, SATA, PMC/XMC
cPCI-6930D/2428/M8G	8HP cPCI-6930 with Intel® Xeon® E5-2428L processor and 2x 4GB DDR3-1333 RDIMM with GbE x4, USB2.0 x3, USB3.0 x2, VGA, COM, SATA, PMC/XMC
cPCI-6930D/2418/M6G	8HP cPCI-6930 with Intel® Xeon® E5-2418L processor and 3x 2GB DDR3-1333 RDIMM with GbE x4, USB2.0 x3, USB3.0 x2, VGA, COM, SATA, PMC/XMC
Rear Transition Modules	
cPCI-R6100	4HP Rear I/O module with GbE x4, COM, USB x4, SATA x2, VGA, PS/2, CF, SD socket
cPCI-R6110	4HP Rear I/O module with GbE x2, COM, USB x4, SATA x3, VGA, PS/2, CF, SD socket
cPCI-R6200	8HP Rear I/O module with GbE x2, USB x6, VGA, SATA x3, Mic-in, Line-out, PS/2 KB/MS, SAS x8
cPCI-R6700D	8HP Rear I/O module with discrete GPU ATI/AMD E4690, DVI-I x2, GbE x2, USB x3, COM x2, PS/2, SATA x3, audio header
cPCI-R6500D	2-slot 8HP cPCI-R6500D with AMD Radeon E6760 MXM module, 2x GbE, 1x DVI-I, 1xDVI-D, 1x USB, 3x SATA and 10-pin KB/MS, audio, 2x COM headers

Accessories

DB-SAS	SAS adapter board
DB-CFast	CFast socket adapter board with screws

Contact your ADLINK representative for different CPU, memory and storage combinations.
See 6U RTM selection guide for more options



cPCI-R6500D cPCI-R6100 cPCI-R6200 cPCI-R6700D