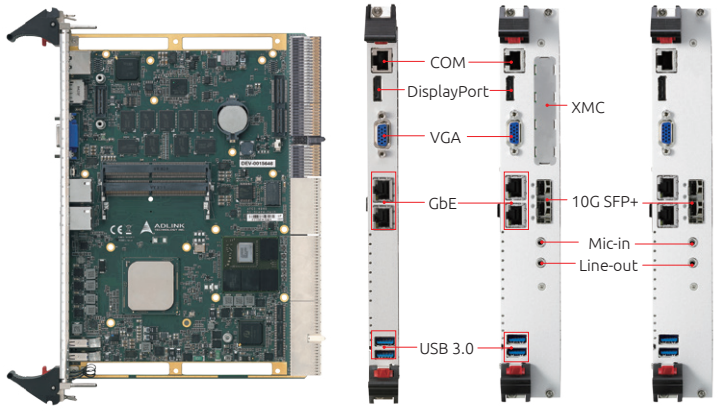
cPCI-6940

6U CompactPCI Intel® Xeon® Processor D-1500 Processor Blade with AMD Radeon™ E8860 GPU

Features

- 14nm multi-core Intel® Xeon® D-1500 family processor (formerly "Broadwell-DE")
- 16GB DDR4-2133 ECC soldered memory & up to 32GB DDR4-2133 ECC socket type memory, max. 48GB
- Integrated AMD Radeon™ E8860 GPU onboard supporting DirectX 11.1, Open GL 4.2, Open CL 1.2
- Dual 10G SFP+ ports on front panel (8HP versions)
- PCIe x16 to J4 UHM connector for rear expansion
- Extended temperature with Xeon® server grade processor



cPCI-6940 cPCI-6940DX cPCI-6940DH

Specifications

Processor & System

CPU

uFC-BGA 16-core Intel® Xeon® D-1577 SoC, 1.3GHz/ 2.1GHz, 24MB LLC, 45W TDP

uFC-BGA 12-core Intel® Xeon® D-1559 SoC, 1.5GHz/ 2.1GHz, 18MB LLC, 45W TDP, -40°C to 85°C

uFC-BGA 8-core Intel® Xeon® D-1548 SoC, 2.0GHz/ 2.6GHz, 12MB LLC, 45W TDP

uFC-BGA 8-core Intel® Xeon® D-1539 SoC, 1.6GHz/ 2.2GHz, 12MB LLC, 35W TDP, -40°C to 85°C

RAM

16GB DDR4-2133 ECC soldered memory & 2x SODIMM supporting up to 32GB of DDR4-2133 ECC socket type memory (up to 48GB total)

BIOS

AMI EFI BIOS, 64Mbit SPI flash memory

CompactPCI Bus

PCI 64bit/66MHz to J1, universal V(I/O)

Supports satellite and stand alone modes in Peripheral slots

Note: The cPCI-6940 J4 supports PCIe x16, which has a signal conflict with PICMG 2.5 backplanes. Do not insert the cPCI-6940 into a peripheral slot of backplanes supporting PICMG 2.5.

PICMG standards

PICMG® 2.0 CompactPCI® Rev. 3.0

PICMG® 2.1 Hot Swap Specification Rev.2.0

PICMG® 2.9 System Management Bus Rev. 1.0

PCIMG® 2.16 Packet Switching Backplane Rev.1.0

Connectivity

XMC

One PCIe x8 Gen2 XMC site BOM option (cPCI-6940DX only)

Optional 12V power support

Ethernet

Two 1/10G SFP+ ports on front panel (8HP version only)

One Intel® 82580 4-port GbE Controller providing 2 GbE to the front panel and 2 GbE to J3 for PICMG 2.16

Graphics

AMD Embedded Radeon™ E8860 GPU

1x VGA and 1x DisplayPort on front panel (DP up to 3840 x 2160, at 60Hz)

2x DVI-D and RGB to rear (RGB is switched from front)

USB

2x USB 3.0 on front panel

4x USB 2.0 and 2x USB 3.0 routed to rear USB 3.0 downgradeable to 2.0

PS/2

PS/2 keyboard/mouse port to rear

Serial Port

1x RS-232/422/485 on front panel

1x RS-232 + 1x TX/RX to J3 and 1x TX/RX to J5

Audio

Mic-in, Line-out on front panel (8HP version only)

PCIe

1x PCIe x16 to J4,configurable to 1x PCIe x8 to J4 and PCIe x8 to XMC on layer 2

1x PCIe x4 to J5, configurable to 4x PCIe x1

Rear I/O Signals

6x USB 2.0, 2x COM, 2x SATA, PS/2 KB/MS to J3
2x GbE, 1x VGA switched from front to J3

PCIe x16 to J4 through UHM connector or 1x PCIe x8 to J4 and PCIe x8 to XMC on layer 2

2x DVI-D, 2x SATA,1x PCIe x4, 1x COM(TX/RX), GPIO, USB 3.0 signal to J5

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Specifications

Storage

Processor Blade

1x SATA 6Gb/s direct connector for 2.5” onboard drive or DB-CFast

1x SATA 6Gb/s direct connector for 2.5” onboard SATA drive on layer 2 daughter board (cPCI-6940DH only)

4x supports SATA 3Gb/s ports routed to J3/J5

RTM

Available interfaces dependent on RTM model selected

Operating System

OS

Windows® Server 2012 (Limited performance on VGA)

Windows® Server 2008 R2 (Limited performance on VGA)

Windows® 10 Enterprise x64

Windows® 7 (64-bit)

RHEL 7 and above

VxWorks 7

Ubuntu 12 (Please contact ADLINK for other OS support)

Miscellaneous

LEDs

8x indication LEDs for 80h POST on front panel

1x WDT (red) on front and rear

1x Power (green) on front and rear

1x HDD (yellow) on front and rear

1x Hot Swap (blue) on front and rear

Battery

Coin cell lithium battery onboard for RTC CMOS RAM

Watchdog Timer

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

Hardware Monitor

Monitors CPU temperature, system temperature, Vcore and DC voltage

TPM

Atmel AT97SC3204 through LPC interface

Mechanical & Environmental

Form Factor

6U 4/8HP CompactPCI

233.33mm x 160mm (LxW)

Default equipped with J1, J2, J3 HM connectors, J4, J5 with UHM connectors

Operating Temp.

0°C to 60°C (D-1577)

Extended Temperature

-20°C to 70°C by default (D-1559 & D-1539)
-40°C to 85°C (D-1539 by screening)

Storage Temp.

-50°C to 100°C

Relative Humidity

95% non-condensing

Shock

40G peak-to-peak, 11ms duration, non-operating

Vibration

3.5Grms random vibration, 5-500Hz, each axis, operating

Power Consumption

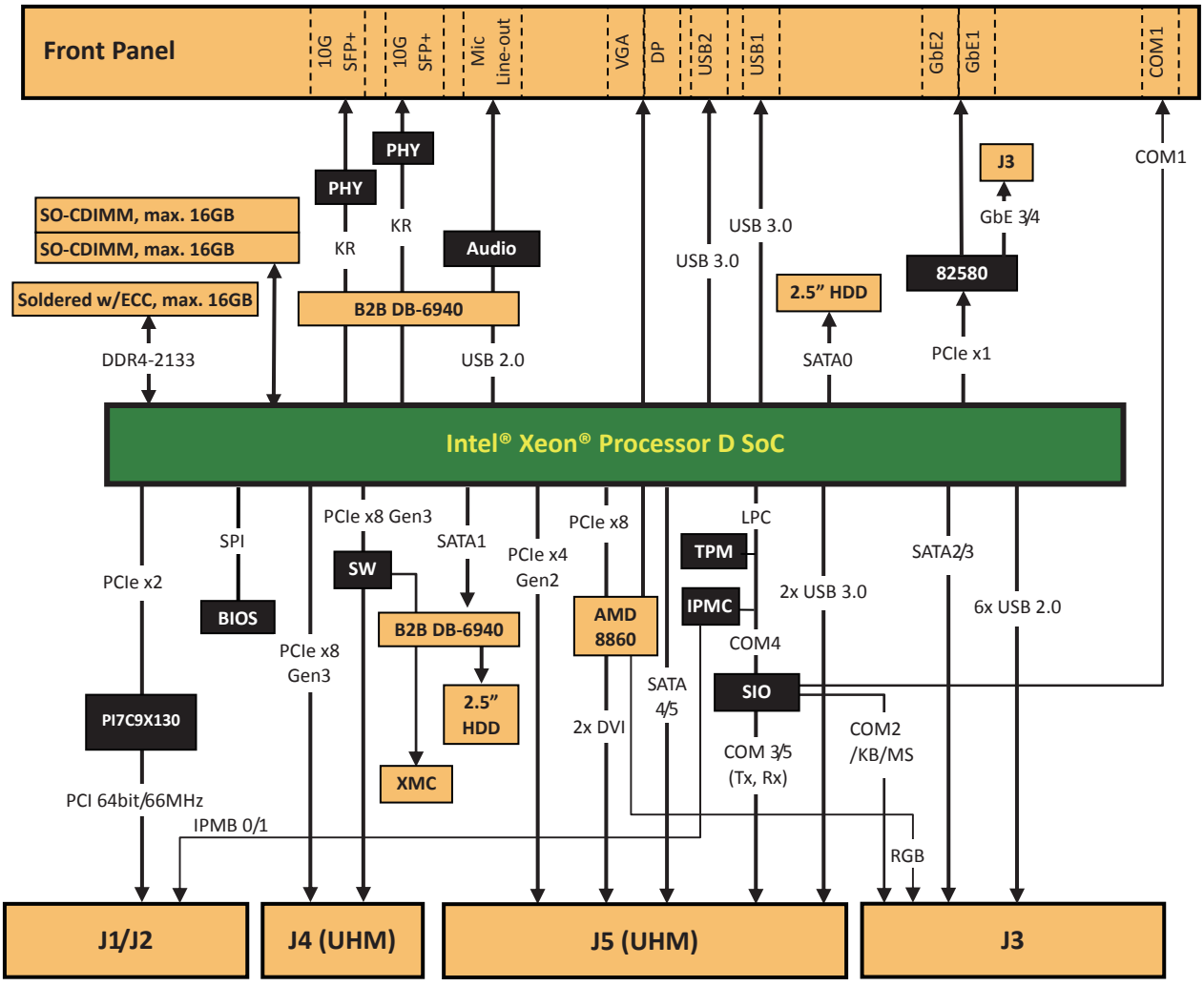
Intel® Xeon® Processor D-1577, 45W with BIOS EIST Enabled / CTDP Normal, 16GB DDR4-2133, Win 7: 5.24A@3.3V, 12.7A@5V, total 80.80W

Safety & EMI

Certifications

CE/FCC

cPCI-6940 Block Diagram



I/O Table

		GbE	10G SFP+	USB 2.0	USB 3.0	COM	DVI	VGA	XMC	SATA	CFast	CF	Mic-in	Line-out	PS/2 KB/MS	SD	SAS
Processor Blades																	
cPCI-6940 (4HP)	Faceplate	2			2	1	1	1									
	Onboard									1(1)	1(1)						
cPCI-6940DX (8HP)	Faceplate	2	2		2	1	1	1					1	1			
	Onboard								1	1(1)	1(1)						
cPCI-6940DH (8HP)	Faceplate	2	2		2	1	1	1					1	1			
	Onboard									2(1)	1(1)						
Rear Transmission Modules																	
cPCI-R6002	Faceplate	2		2		1	1 (VGA signal only)										
	Onboard									2 (7-pin)							
cPCI-R6002D	Faceplate	2		4		1	1 (VGA signal only)								1		
	Onboard									3 (2x 7-pin+1x 2.5" space)(3)							
cPCI-R6100	Faceplate	4		4		1 (RJ-45)		1 (VGA only)							1		
	Onboard									2 (7-pin)		1(2)				1	
cPCI-R6110	Faceplate	2		4				1 (VGA only)							1		
	Onboard									3 (2x 7-pin+1x 2.5" space)(3)							
cPCI-R6120	Faceplate	2		4				1 (VGA only)							1		
	Onboard									2 (2.5" SATA drive onboard)							
cPCI-RMPS2	Faceplate	2 (M12)		3 (M12)		2	DVI-I, DVI-D										
	Onboard			1		1				2							

(1) Removable adapter design. SATA adapter by default, can be replaced with CF, CFast or SAS adapter.
(2) Converted from USB.
(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) Space is reserved onboard for one 2.5" SATA drive.
(5) Supported by PCIe x4 from cPCI-6940 to MXM module on the RTM

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Ordering Information

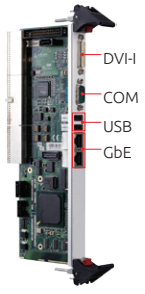
Processor Blades

- **cPCI-6940/D1559/M16-0**
  4HP 6U CompactPCI blade with Intel® Xeon® D-1559 processor 1.5GHz, AMD E8860 GPU and 16GB DDR4-2133 ECC soldered memory with DP, VGA, 2x GbE, COM, 2x USB 3.0, onboard SATA slot
- **cPCI-6940/D1548/M16-0**
  4HP 6U CompactPCI blade with Intel® Xeon® D-1548 processor 2.0GHz, AMD E8860 GPU and 16GB DDR4-2133 ECC soldered memory with DP, VGA, 2x GbE, COM, 2x USB 3.0, onboard SATA slot
- **cPCI-6940/D1539/M16-0**
  4HP 6U CompactPCI blade with Intel® Xeon® D-1539 processor 1.6GHz, AMD E8860 GPU and 16GB DDR4-2133 ECC soldered memory with DP, VGA, 2x GbE, COM, 2x USB 3.0, onboard SATA slot, -40°C to 85°C (by screening)
- **cPCI-6940DH/D1577/M16-0**
  8HP 6U CompactPCI blade with Intel® Xeon® D-1577 processor 1.3GHz, AMD E8860 GPU and 16GB DDR4-2133 ECC soldered memory with DP, VGA,2x GbE, COM, 2x USB 3.0, 10G SFP+ x2, audio, 2x 2.5" SATA space
- **cPCI-6940DH/D1559/M16-0**
  8HP 6U CompactPCI blade with Intel® Xeon® D-1559 processor 1.3GHz, AMD E8860 GPU and 16GB DDR4-2133 ECC soldered memory with DP, VGA,2x GbE, COM, 2x USB 3.0, 10G SFP+ x2, audio, 2x 2.5" SATA space
- **cPCI-6940DX/D1577/M16-0**
  8HP 6U CompactPCI blade with Intel® Xeon® D-1577 processor 1.3GHz, AMD E8860 GPU and 16GB DDR4-2133 ECC soldered memory with DP, VGA,2x GbE, COM, 2x USB 3.0, 10G SFP+ x2, audio, XMC slot
- **cPCI-6940DX/D1559/M16-0**
  8HP 6U CompactPCI blade with Intel® Xeon® D-1559 processor 1.5GHz, AMD E8860 GPU and 16GB DDR4-2133 ECC soldered memory with DP, VGA,2x GbE, COM, 2x USB 3.0, 2x 10G SFP+, audio, XMC slot

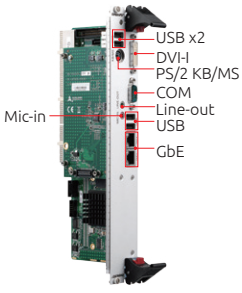
Rear Transition Modules

- **cPCI-R6002**
  4HP Rear I/O module with 2x GbE, 2x COM, 3x USB, 2x SATA, DVI-I
- **cPCI-R6002D**
  8HP Rear I/O module with 2x GbE, 2x COM, 5x USB, 2x SATA, VGA, PS/2 KB/MS (without audio output with cPCI-6940)
- **cPCI-R6100**
  4HP Rear I/O module with 4x GbE, 4x COM, 2x SATA, DVI, VGA, PS/2, CF, SD socket
- **cPCI-R6110**
  4HP Rear I/O module with 2x GbE, 4x USB, 3x SATA, VGA, PS/2 KB/MS, CF, SD
- **cPCI-R6120**
  8HP Rear I/O module with 2x GbE, 4x USB, 2x SATA, VGA, PS/2 KB/MS, CF, SD w/space for dual SATA drives
- **cPCI-RMPSA**
  6U 8HP RTM with 2x M12 GbE, 3x M12 USB 2.0, DVI-I, DVI-D, 2x COM, 2x USB 3.0

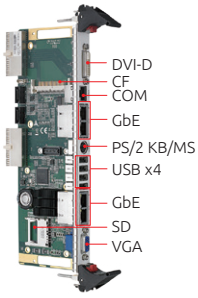
Contact us for different CPU, memory combinations.
See 6U RTM selection guide for more options.



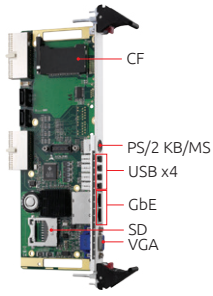
cPCI-R6002



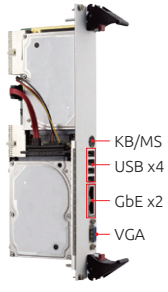
cPCI-R6002D



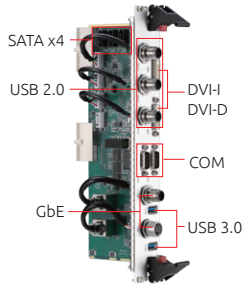
cPCI-R6100



cPCI-R6110



cPCI-R6120



cPCI-RMPSA

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