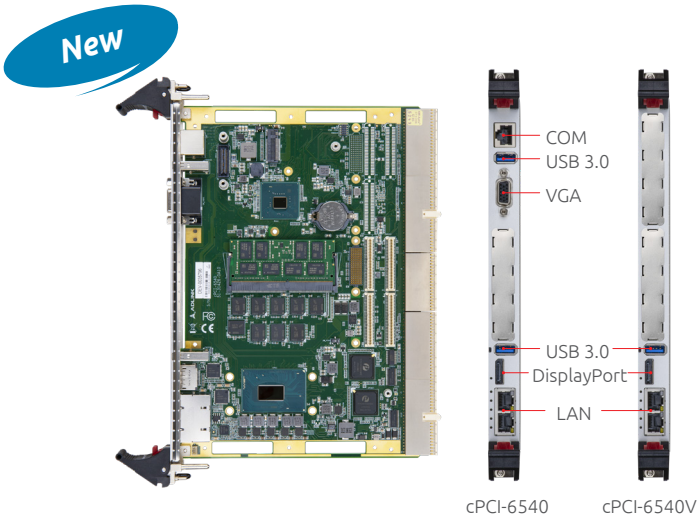
ADLINK
LEADING EDGE COMPUTING

6U CompactPCI 9th Gen Intel® Xeon®/Core™ Processor Blade with two PMC/XMC sites

cPCI-6540 Series

Datasheet



CompactPCI®

EXTENDED TEMPERATURE

Features

- 14nm multi-core 9th Gen Intel® processor (formerly Coffee Lake Refresh)
- Dual channel DDR4 ECC memory, soldered and SO-DIMM, up to 64GB
- Versatile storage: SSD, M.2 2242 NVMe
- Dual PMC/XMC sites
- Remote management and TPM support

Specifications

Processor & System	CPU	Intel® Xeon® E-2276ME processor, 6C/12T, 45/35W by cTDP (12MB cache, up to 4.5GHz) Intel® Core™ i7-9850HE processor, 6C/12T, 45/35W by cTDP (9MB cache, up to 4.4GHz) Intel® Core™ i7-9850HL processor, 6C/12T, 25W (9MB cache, up to 4.1GHz) Intel® Core™ i3-9100HL processor, 4C/4T, 25W (6MB cache, up to 2.9GHz) Intel® Celeron® G4930E processor, 4C/4T, 35W (2MB cache, 2.4GHz)
	Chipset	Mobile Intel® CM246 Chipset
	Memory	Dual channel DDR4-2666 SDRAM, up to 64GB One channel in SO-DIMM socket up to 32GB; one channel soldered onboard up to 32GB (dependent on availability of memory devices and modules) ECC supported by Intel® Xeon® E-2276ME, Intel® Core™ i3-9100HL and Intel® Celeron® G4930E
	BIOS	AMI® UEFI BIOS, SPI Flash memory Support dual BIOS (the system should boot even when one of the dual BIOS is failed) Reserve the option to boot without battery Secure Boot capabilities
	CompactPCI Bus	1x PCIe x4 Pericom PI7C9X130 PCIe to PCI bridge PCI 64-bit, 66MHz to J1, J2, universal V(I/O) Support host/Satellite mode
	Standard	PICMG 2.0 CompactPCI R3.0 PICMG 2.1 Hot Swap R2.0 PICMG 2.9 System Management (IPMI Rev. 1.5) PICMG 2.16 Packet Switch Backplane R1.0

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Specifications

Connectivity	PMC/XMC	Up to Two PMC/XMC sites PMC1 or XMC1: 64b/33,66,133M or PCIe x8 Gen2 (space shared with I/Os & onboard drive) PMC2 or XMC2: 64b/33,66,133M or PCIe x8 Gen2 with rear I/O
	Ethernet	Front: 4HP: two GbE ports in front panel by 2x Gigabit Ethernet controller I210IT, A port support NCSI Active LED: Yellow(Blinking); Speed LED: Green(100M)/Orange (1G) Rear: Additional 2x GbE ports by 2x Gigabit Ethernet controller I210IT to J3 for PICMG 2.16 Two additional 10/100/1000BASE-T ports from Intel® Ethernet controller on RTM (cPCI-R6100 series)
	Graphics	Integrated in Intel® processor with up to DX 11.2 and OGL4.3 One dual mode DP port on front panel, supporting DVI, HDMI, VGA by passive cables. One VGA port One analog VGA (converted from DP) port routed to rear J3. One TMDS port to rear J5 All graphics interfaces are independent channels Supports three independent displays Additional graphics MXM with AMD GPU or NVIDIA supporting two DVI ports on RTM (cPCI-R6500 series)
	USB	4HP: two USB 3.1 gen2 type A ports on front panel Up to six USB 2.0 to rear J3; one USB 3.0 to rear J5
	PS/2	PS/2 keyboard/mouse port to rear J3
	Serial Port	One serial port supporting RS-232/422/485 on front panel (BIOS) One RS-232 to rear J3; additional TX/RX to rear J3
	Audio	High Definition Audio signals routed to rear J3
Storage	SBC	On-board SATAIII 2.5" SATA drive space by DB-LSATA 1x PCIe x 4 M.2 2242 NVMe J3x 2 SATAIII J5x 1 SATAIII
	RTM	Up to three SATA ports CF (x1) and SD (x1) sockets when mating with cPCI-R6100 series *Available interfaces dependent on RTM model selected
Operating System	OS	Windows 10 IOT Enterprise RS5 (64-bit); Windows Server 2016 for cPCI-6540 with Xeon E3 only Ubuntu, SuSe, Redhat Enterprise; Wind River Linux (Yocto) to the new blade, WRLv10_19 LTS (basically the latest) Wind River VxWorks 7.0 upon request (Please contact ADLINK for other OS support)
Miscellaneous	LED	Power, WDT, Hard Disk, Hot Swap and Port 80 user LED
	Battery	Coin cell lithium battery onboard for RTC CMOS RAM
	TPM	Version 2.0 Atmel AT97SC3204 (optional support upon request)
	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

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Mechanical & Environmental	Form Factor	6U 4HP (single slot) CompactPCI 233.33mm x 160mm (LxW) Equipped with J1, J2, J3, J4, J5 connectors
	Operating Temperature	-20°C to +70°C extended temperature -40°C to +85°C extreme extended temperature
	Storage Temperature	-50°C to +100°C
	RH Humidity	95% non-condensing
	Shock	20G half-sine shock duration: 11 m
	Vibration	2 Grms random vibration, 5-500Hz, each axis, operating
	Power Consumption	3.18A @3.3V, 6.6A @5V, 0.01A @12V, total43.614W (measured on i7-9850HL 25W SKU)
	Weight	500.2g (cPCI-6530 with heatsink assembled)
Safety & EMI	Certification	EMC: EN 55032/35 EMI: CISPR 32, FCC Part 15B Class A EMS: IEC 61000-4-11 IEC 61000-4-2 ESD: Contact: 4 kV; Air: 8 kV IEC 61000-4-3 RS: 80 MHz to 1 GHz: 10 V/m IEC 61000-4-4 EFT: Power: 2 kV; Signal: 1 kV IEC 61000-4-5 Surge: Power: 2 kV; Signal: 1 kV IEC 61000-4-6 CS: 1 V IEC 61000-4-8 PFMF

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I/O Table

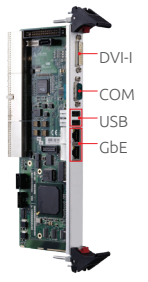
		GbE	USB 2.0	USB 3.0	COM	Display	VGA	PMC/ XMC	SATA	CF	M.2	Mic-in	Line-out	PS/2 KB/MS	SD
cPCI-6540	Faceplate	2		2	1	1 DP	1								
	Onboard							1	1		1				
cPCI-6540V	Faceplate	2		1		1 DP	1								
	Onboard							2			1				
cPCI-R6002	Faceplate	2	2		1	1 (VGA signal only)									
	Onboard								2 (7-pin)						
cPCI-R6002D	Faceplate	2	4		1	1 (VGA signal only)						1	1	1	
	Onboard								3 (2x 7-pin+1x 2.5" sapce)(1)						
cPCI-R6100	Faceplate	4	4		1 (RJ-45)	DVI-D	1							1	
	Onboard								2 (7-pin)	1					1
cPCI-R6110	Faceplate	2	4				1							1	
	Onboard								3(1)	1					
cPCI-R6120	Faceplate	2	4				1 (VGA only)								
	Onboard								2 (2.5" SATA drive onboard)						
cPCI-R65N0	Faceplate	2	2		1	2 (DVI-I, DVI-D)								1	
	Onboard				1 (Tx/Rx, 10-pin header)				3 (7-pin)			1 (10-pin)	1 (10-pin)		
cPCI-R6500	Faceplate	2	1			DVI-I DVI-D									
	Onboard								3(7-pin)						

(1) 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 with CompactFlash adapter (DB-6920CF)

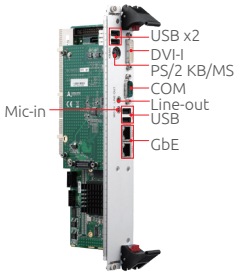
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Ordering Information

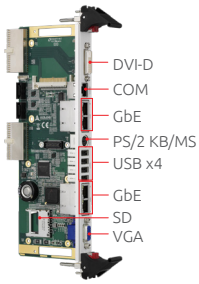
Processor Blades	
cPCI-6540/E-2276ML/M32-32	4HP cPCI-6540 with Intel® Xeon™ E-2276ME and 32GB DDR4-2666 ECC soldered memory and 32GB SODIMM with 2x GbE, 2x USB 3.0, 1x RJ-45 COM and single PMC/XMC site
cPCI-6540/E-2276ML/M32-0	4HP cPCI-6540 with Intel® Xeon™ E-2276ME and 32GB DDR4-2666 ECC soldered memory with 2x GbE, 2x USB 3.0, 1x RJ-45 COM and single PMC/XMC site
cPCI-6540/9850HL/M32-32	4HP cPCI-6540 with Intel® Core™ i7-9850HL and 32GB DDR4-2666 soldered memory and 32GB SODIMM with 2x GbE, 2x USB 3.0, 1x RJ-45 COM and single PMC/XMC site
cPCI-6540/9100HL/M16-0	4HP cPCI-6540 with Intel® Core™ i3-9100HL and 16GB DDR4-2666 ECC soldered memory with 2x GbE, 2x USB 3.0, 1x RJ-45 COM and single PMC/XMC site
	Contact us for different CPU, memory options.
Rear Transition Modules	
cPCI-R6002	4HP Rear I/O module with GbE x2, COM x2, USB x3, SATA x2, DVI-I
cPCI-R6002D	8HP Rear I/O module with 2x GbE, 2x COM, 5x USB, 2x SATA, VGA, PS/2 KB/MS
cPCI-R6100	4HP Rear I/O module with GbE x4, COM, USB x4, SATA x2, DVI, VGA, PS/2, CF, SD socket
cPCI-R6110	4HP Rear I/O module with GbE x2, COM, USB x4, SATA x3, DVI, VGA, PS/2, CF, SD socket
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-R6500/RTX3000	6U 8HP Rear I/O module with NVIDIA RTX3000 MXM 3.0 graphics module Type A with DVI-I x1, DVI-D x1, GbE x2, USB x2, COM x1, PS/2 x1, SATA x3
cPCI-R6500/A8860	4HP Rear I/O module with AMD E8860MF MXM 3.0 graphics module with DVI-I x1, DVI-D x1, GbE x2, USB x1
	See 6U RTM selection guide for more options.



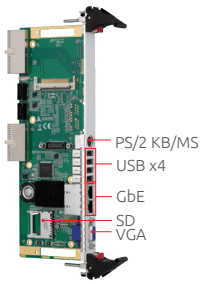
cPCI-R6002



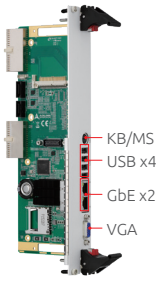
cPCI-R6002D



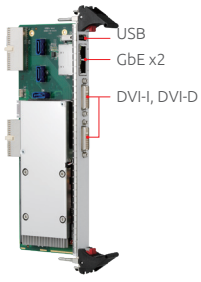
cPCI-R6100



cPCI-R6110



cPCI-R6120



cPCI-R6500

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