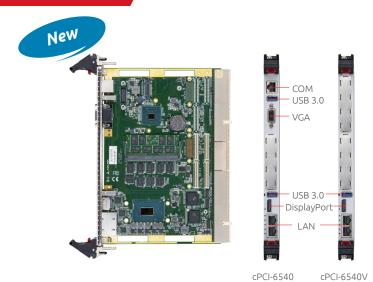


6U CompactPCI 9th Gen Intel $^{®}$  Xeon $^{®}$ /Core $^{™}$  Processor Blade with two PMC/XMC sites

## Datasheet

# cPCI-6540 Series







#### **Features**

- 14nm multi-core 9th Gen Intel® processor (formerly Coffee Lake Refresh)
- Dual channel DDR4 ECC memory, soldered and SO-CDIMM, 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-2276ML 6C/12T, 25W (12M Cache, 2.00 GHz) 9th Gen Intel® Core™ i7-9850HL 6C/12T, 25W TDP (9M Cache, up to 4.10 GHz) 9th Gen Intel® Core™ i7-9850HE 6C/12T, 45W/35W TDP (9M Cache, up to 4.40 GHz) 9th Gen Intel® Core™ i3-9100HL 4C/4T, 25W TDP (6M Cache, up to 2.90 GHz)						
	Chipset	Intel® C240 Series Chipsets						
	Memory	Dual channel DDR4-2666 SDRAM with ECC, up to 64GB* One channel in SO-CDIMM socket up to 32GB; one channel soldered onboard up to 32GB (dependent on availability of memory devices and modules)						
	BIOS	AMI <sup>®</sup> UEFI BIOS, SPI Flash memory Support dual BIOS (the system should boot even when one of the dual BIOS is faile 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						

## **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 or 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 PCle 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							

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	2.73A @ 3.3V, 11.65A @ 5V, total 67.26W
	Weight	500.2g (cPCI-6530 with heatsink assembled)
Safety & EMI	Certification	EMC: EN 55032/35 EMI: CISPR 32, FCC Part 15B Class A

### I/O Table

		GbE	USB 2.0	USB 3.0	СОМ	Display	VGA	PMC/ XMC	SATA	CF	M.2	Mic-in	Line- out	PS/2 KB/MS	SD
cPCI-6540	Faceplate Onboard	2		2	1	1 DP	1	1	1		1				
cPCI-6540V	Faceplate Onboard	2		1		1 DP	1	2			1				
cPCI-R6002	Faceplate	2	2		1	1 (VGA si	gnal	2			I				
	Onboard								2 (7-pin)						
cPCI-R6002D	Faceplate	2	4		1	1 (VGA si	gnal					1	1	1	
	Onboard								3 (2x 7-pin+1x 2.5" sapce) <sup>(1)</sup>						
cPCI-P6100	Faceplate	4	4		1 (RJ-45)	DVI-D	1							1	
	Onboard								2 (7-pin)	1					1
cPCI-R6110	Faceplate Onboard	2	4				1		3(1)	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)						

<sup>(1)</sup> 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)