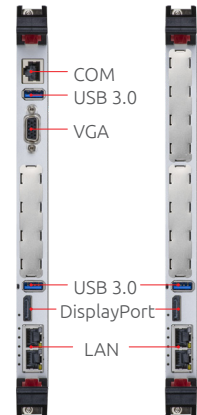
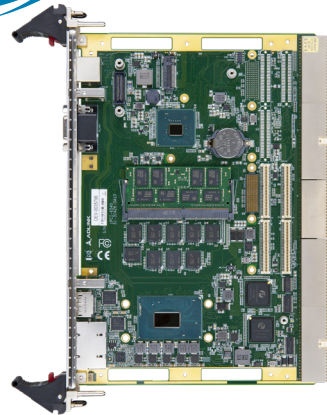


6U CompactPCI 9th Gen Intel® Xeon®/Core™ Processor Blade
with two PMC/XMC sites

Datasheet

cPCI-6540 Series

New



cPCI-6540

cPCI-6540V

CompactPCI®

**EXTENDED
TEMPERATURE**

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® 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 | |

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 |
| 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 |

| | | |
|----------------------------|-----------------------|--|
| 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 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 |
|--------------|---------------|--|

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)