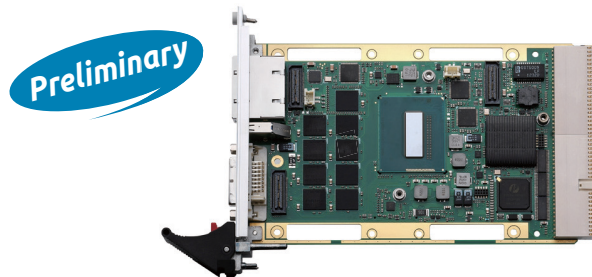# cPCI-3520 Series

3U CompactPCI 9th Gen Intel® Xeon®/Core™ i7/Celeron® Processor Blade

Features

Preliminary

- 14nm multi-core 9th Gen Intel® processor, (formerly Coffee Lake Refresh)
- Max. 32GB DDR4-2666 by 2x SODIMM
- Up to three independent displays
- System/Peripheral slot operation
- TPM 2.0 Support

CompactPCI®

EXTENDED TEMPERATURE

cPCI-3520   cPCI-3520D   cPCI-3520G   cPCI-3520L   cPCI-3520M   cPCI-3520T

Specifications

- ### Processor & System

  CPU
  Intel® Xeon® E-2276ML 6C/12T, 25W
  9th Gen Intel® Core™ i7-9850HL 6C/12T, 25W
  9th Gen Intel® Core™ i7-9850HE 6C/12T, 45W/35W

  Chipset
  Intel® CM246 Chipset

  Memory
  DDR4-2666 dual bank SODIMM memory, up to 32GB
  Supports ECC memory (dependent on processor)

  BIOS
  AMI UEFI BIOS, dual 128Mb SPI flash memory

  BMC
  Supports ADLINK SEMA 4.0

  CompactPCI Bus
  PCI 32-bit, 33/66 MHz, 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)

  PICMG Standards
  PICMG 2.0 CompactPCI R3.0
  PICMG 2.1 Hot Swap R2.0
  PICMG 2.9 System Management (R1.0)

- ### Connectivity

  PMC/XMC
  Optional PCI 64-bit/66MHz PMC site or PCIe x1 XMC site

  Ethernet
  One Intel® I219LM controller for one Gigabit Ethernet front panel port with
  Three Intel® I210IT controllers for one Gigabit Ethernet front panel port and two rear ports
  Additional two Intel® I210L controllers for two Gigabit
  Ethernet front panel ports on riser card (cPCI-3520L/cPCI-3520T)

  Graphics
  Integrated in Intel® processor, 3D engine
  One DVI-I (digital+analog) port on front panel, analog switchable to rear, supports up to QXGA 2048x1536 pixels@75Hz, 32-bits
  Two DisplayPorts on riser card, support up to 2560×1440 pixels @ 60Hz, DVI, VGA and HDMI interfaces are available by adapter cables (cPCI-3520G only)
  Three independent displays with different /contents

  USB
  Single USB 3.0 port on front panel, and up to three USB ports on front panel on selected SKUs
  Three USB ports to rear, two on RTM panel

  Audio
  Line-in and Line-out ports on front panel (cPCI-3520D only)

  PS/2
  Keyboard/Mouse on cPCI-3520D and cPCI-3520G

  Serial Port
  Up to four serial ports
  One RS-232/422/485 selectable port on front panel (cPCI-3520D/cPCI-3520L/cPCI-3520T)
  One RS-232/422/485 10-pin header on riser card (cPCI-3520G only)
  Two serial ports on rear panel: one with Tx/Rx signal only, one converted from USB signal

Specifications

● Storage

Blade
One SATA direct connector for 2.5" onboard HDD (8HP & 12HP version only)

CFast socket or mSATA socket
Optional onboard 32GB SSD (by replacing CFast adapter board)

RTM
Three 7-pin SATA signal connectors
Supports SATA RAID 0/1/5/10

● Operating System

OS
Microsoft Windows 10, 32/64-bit
Linux 6.4
Wind River VxWorks
QNX Software Development Platform (SDP 7.0)
(Please contact ADLINK for other OS support)

● Miscellaneous

LEDs
Power, WDT, Storage Drive, Overheat, General Purpose

Battery
Coin cell lithium battery onboard for RTC
CMOS RAM for BIOS configuration

Watchdog Timer
System Reset and NMI, with Programmable Interval, 1-65535 sec or 1-65535 minutes

Hardware Monitor
Monitors CPU temperature, system temperature and DC voltages by IPMI

TPM
Support TPM 2.0 (optional support upon request)

● Mechanical & Environmental

Form Factor
3U 4HP/8HP/12HP CompactPCI blade
100mm x 160mm (L x W)

Operating Temperature
-20°C to +70°C
-40°C to +85°C
Storage Temperature: -50°C to +100°C

Relative Humidity
95% non-condensing

Shock
20G peak-to-peak, 11ms duration, operating

Vibration
2Grms random vibration, 5 to 500Hz in 3 axes, operating

Weight
Net weight 713.55g (cPCI-3520D with heatsink)
Net weight 718.20g (cPCI-3520G with heatsink)

● Safety & EMI

Certifications
CE/FCC

I/O Table

		GbE	USB	COM	Display	PS/2 KB/MS	Storage	Onboard SSD	Audio	PMC/XMC
SBC										
cPCI-3520 (4HP)	Faceplate	2 (RJ-45)	1 (3.0)		1 (DVI-I)					
	Onboard						1 (CFast)	optional(2)		
cPCI-3520D (8HP)	Faceplate	2 (RJ-45)	1 (3.0) 1 (2.0)	1 (DB9)	1 (DVI-I)	1				
	Onboard						1 (SATA) 1 (CFast)	optional(2)	1 (Line-in) 1 (Line-out)	
cPCI-3520G (8HP)	Faceplate	2 (RJ-45)	1 (3.0) 2 (2.0)	1 (RJ-45)	1 (DVI-I) 2 (DP)	1				
	Onboard			1 (10-pin)			1 (SATA) 1 (CFast)	optional(2)		
cPCI-3520L (8HP)	Faceplate	4 (RJ-45)	1 (3.0) 1 (2.0)	1(DB9)	1 (DVI-I) 2 (DP)	1				
	Onboard			1 (10-pin)			1 (SATA) 1 (CFast)	optional(2)		
cPCI-3520L (8HP)	Faceplate	4 (RJ-45)	1 (3.0) 1 (2.0)	1(DB9)	1 (DVI-I)					
	Onboard						1 (SATA) 1 (CFast)	optional(2)		
cPCI-3520M (8HP)	Faceplate	2 (RJ-45)	1 (3.0) 2 (2.0)	2 (DB9)	1 (DVI-I) 2 (DVI-D)	1			1 (Line-in) 1 (Line-out)	
	Onboard						1 (SATA) 1 (CFast)	optional(2)		
cPCI-3520P (12HP)	Faceplate	2 (RJ-45)	1 (3.0) 2 (2.0)	1 (DB9)	1 (DVI-I)	1			1 (Line-in) 1 (Line-out)	
	Onboard						1 (SATA) 1 (CFast)	optional(2)		1
cPCI-3520S (8HP)	Faceplate	2 (RJ-45)	1 (3.0)		1 (DVI-I)					
	Onboard						1 (CFast)			1
cPCI-3520T (8HP)	Faceplate	2 (RJ-45) 2 (M12)	1 (3.0)	1 (DB9)	1 (DVI-I)					
	Onboard						1 (SATA) 1 (CFast)	optional(2)		
RTM										
cPCI-R3P00(T)	Faceplate	2 (RJ-45)	2 (2.0)	2 (DB9)	1 (VGA)(1)					
	Onboard						3 (SATA)			

(1) Switched from front port
(2) Available by replacing CFast or mSATA board with onboard SSD adapter board

cPCI-3520 Series

Ordering Information

- **cPCI-3520/2776/M16/S128**
  1-slot (4HP) 3U CompactPCI blade with Intel® Xeon® E-2276ML processor, 16GB DDR4-2666 ECC soldered memory, DVI, 2x GbE, 1x USB 3.0 and onboard 128GB SSD

- **cPCI-3520/9850H/M16/S32**
  1-slot (4HP) 3U CompactPCI blade with Intel® Core™ i7-9850HL processor, 16GB DDR4-2666 ECC soldered memory, DVI, 2x GbE, 1x USB 3.0 and onboard 32GB SSD

- **cPCI-3520D/9850H/M16**
  2-slot (8HP) 3U CompactPCI blade with Intel® Core™ i7-9850HL processor, 16GB DDR4-2666 ECC soldered memory, DVI, 2x GbE, 1x USB 3.0, COM, 2x USB 2.0, PS/2 KB/MS, Line-in, Line-out, CFast socket and SATA connector

- **cPCI-3520G/9850H/M16**
  2-slot (8HP) 3U CompactPCI blade with Intel® Core™ i7-9850HL processor, 16GB DDR4-2666 ECC soldered memory, DVI, 2x GbE, 1x USB 3.0, RJ-45 COM, 2x DisplayPort, PS/2 KB/MS, 1x USB 2.0, CFast socket and SATA connector

- **cPCI-3520T/9850H/M16 (available by request)**
  2-slot (8HP) 3U CompactPCI blade with Intel® Core™ i7-9850HL processor, 16GB DDR4-2666 ECC soldered memory, DVI, 2x GbE, 1x USB 3.0, 2x GbE in RJ-45 and 2x GbE in MIL-STD M12 connectors, COM (RS-232/422/485), CFast socket and SATA space

- **cPCI-3520L/9850H/M16**
  3-slot (12HP) 3U CompactPCI blade with Intel® Core™ i7-9850HL processor, 16GB DDR4-2666 ECC soldered memory, DVI, 4x GbE, 1x USB 3.0, 2x USB 2.0, CFast socket and SATA space

- **cPCI-3520M/9850H/M16 (available by request)**
  2-slot (8HP) 3U CompactPCI blade with Intel® Core™ i7-9850HL processor, 16GB DDR4-2666 ECC soldered memory, 3x DVI, 2x GbE, 1x USB 3.0, 2x USB 2.0, 2x COM, PS/2 KB/MS, Line-in, Lineout, CFast socket and SATA connector

- **cPCI-3520S/9850H/M16**
  2-slot (8HP) 3U CompactPCI blade with Intel® Core™ i7-9850HL processor, 16GB DDR4-2666 ECC soldered memory, DVI, 2x GbE, 1x USB 3.0, CFast socket and PMC/XMC connector

- **cPCI-3520P/9850H/M16 (available by request)**
  3-slot (12HP) 3U CompactPCI blade with Intel® Core™ i7-9850HL processor, 16GB DDR4-2666 ECC soldered memory, DVI, 2x GbE, 1x USB 3.0, COM, 2x USB 2.0, PS/2 KB/MS, Line-in, Lineout, CFast socket, SATA connector and PMC/XMC connector

Accessories

- **SATA drive installation kit**
  2.5" SATA drive installation package including bracket, screws

- **Y-cable for keyboard & mouse**
  Y-cable for keyboard & mouse and 200mm in cable length

- **DisplayPort to DVI cable**
  DisplayPort to DVI adapter cable with 150mm cable (one is included in cPCI-3520G package by default)

- **DisplayPort to VGA cable**
  DisplayPort to VGA adapter cable with 150mm cable

- **DisplayPort to HDMI cable**
  DisplayPort to HDMI adapter cable with 150mm cable

- **RJ-45 to DB9 cable (cPCI-3520G only)**
  RJ-45 to DB9 COM adapter and 200mm in cable length

- **SCSI 100p to IO cable**
  (cPCI-3520M only and available by request)
  SCSI 100-pin male to 2 x DVI-D female, 2 x DB9 male, 2 x USB female, 2 x PS/2 female, 2 x audio jack, 150 mm cable Contact us for different CPU, memory, SSD/HDD, CFast and mSATA combinations.

Rear Transition Module

- **cPCI-R3P00**
  8 HP Rear I/O module with 2x GbE, 2x COM, 2x USB 2.0, 3x SATA connectors, VGA, 50mm depth

- **cPCI-R3P00T**
  8 HP Rear I/O module with 2x GbE, 2x COM, 2x USB 2.0, 3x SATA connectors, VGA, 80mm depth

cPCI-R3P00(T)