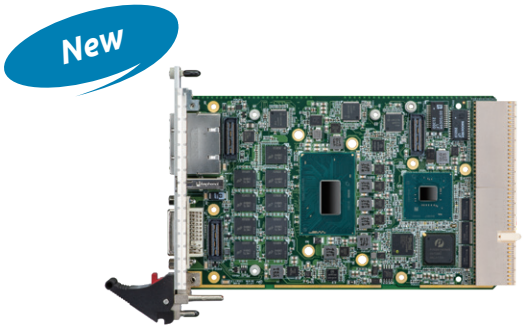
ADLINK
LEADING EDGE COMPUTING

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

cPCI-3520 Series

Datasheet



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

CompactPCI®

EXTENDED TEMPERATURE

Features

- 14nm multi-core 9th Gen Intel® processor (formerly Coffee Lake Refresh)
- Dual channel DDR4-2666 soldered SDRAM with ECC, up to 32GB
- Up to three independent displays
- Supports Satellite mode operation as a standalone blade in peripheral slots
- TPM 2.0 Support

Specifications

Processor & System	CPU	Intel® Xeon® E-2276ME 6C/12T, 45W/35W, ECC Intel® Xeon® E-2276ML 6C/12T, 25W, ECC 9th Gen Intel® Core™ i7-9850HL 6C/12T, 25W 9th Gen Intel® Core™ i7-9850HE 6C/12T, 45W/35W 8th Gen Intel® Core™ i5-8400H 4C/8T, 45W/35W 9th Gen Intel® Core™ i3-9100HL 4C/8T, 25W, ECC
	Chipset	Intel® CM246 Chipset
	Memory	Dual channel DDR4-2666 SDRAM soldered, 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 2.9 System Management (R1.0)

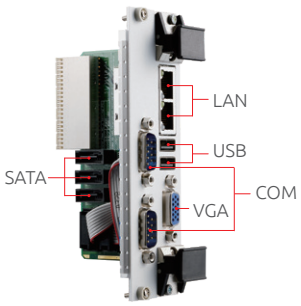
Specifications

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® I210IT 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
Storage	Blade	One SATA direct connector for 2.5” onboard HDD (8HP 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	Microsoft Windows 10, 32/64-bit Linux 6.4 Wind River VxWorks 7.0 (support by request) (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 (support on ECC version)
	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) 2 (2.0)	1 (DB9)	1 (DVI-I)	1			1 (Line-in) 1 (Line-out)	
	Onboard						1 (SATA) 1 (CFast)	optional[2]		
cPCI-3520G (8HP)	Faceplate	2 (RJ-45)	1 (3.0) 1 (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)					
	Onboard						1 (SATA) 1 (CFast)	optional[2]		
cPCI-3520M (8HP)	Faceplate	2 (RJ-45)	1 (3.0) 2 (2.0)[3]	2 (DB9)[3]	1 (DVI-I) 2 (DVI-D)[3]	1[3]			1 (Line-in)[3] 1 (Line-out)[3]	
	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
(3) Available with SCSI 100-pin high density IO cable



cPCI-R3P00(T)

Ordering Information

Processor Blades	
cPCI-3520/2276ML/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-3520/9850HL/M16/S32	1-slot (4HP) 3U CompactPCI blade with Intel® Core™ i7-9850HL processor, 16GB DDR4-2666 soldered memory, DVI, 2x GbE, 1x USB 3.0 and onboard 32GB SSD
cPCI-3520D/9850HL/M16	2-slot (8HP) 3U CompactPCI blade with Intel® Core™ i7-9850HL processor, 16GB DDR4-2666 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/9850HL/M16	2-slot (8HP) 3U CompactPCI blade with Intel® Core™ i7-9850HL processor, 16GB DDR4-2666 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/9850HL/M16 (available by request)	2-slot (8HP) 3U CompactPCI blade with Intel® Core™ i7-9850HL processor, 16GB DDR4-2666 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/9850HL/M16	2-slot (8HP) 3U CompactPCI blade with Intel® Core™ i7-9850HL processor, 16GB DDR4-2666 soldered memory, DVI, 4x GbE, 1x USB 3.0, 2x USB 2.0, CFast socket and SATA space
cPCI-3520M/9850HL/M16 (available by request)	2-slot (8HP) 3U CompactPCI blade with Intel® Core™ i7-9850HL processor, 16GB DDR4-2666 soldered memory, 3x DVI, 2x GbE, 1x USB 3.0, 2x USB 2.0, 2x COM, PS/2 KB/MS, Line-in, Line-out, CFast socket and SATA connector
cPCI-3520S/9850HL/M16	2-slot (8HP) 3U CompactPCI blade with Intel® Core™ i7-9850HL processor, 16GB DDR4-2666 soldered memory, DVI, 2x GbE, 1x USB 3.0, CFast socket and PMC/XMC connector
cPCI-3520P/9850HL/M16 (available by request)	3-slot (12HP) 3U CompactPCI blade with Intel® Core™ i7-9850HL processor, 16GB DDR4-2666 soldered memory, DVI, 2x GbE, 1x USB 3.0, COM, 2x USB 2.0, PS/2 KB/MS, Line-in, Line-out, CFast socket, SATA connector and PMC/XMC connector
Contact us for different CPU, memory, SSD/HDD, CFast and mSATA combinations.	
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 2x DVI-D female, 2x DB9 male, 2x USB female, 2x PS/2 female, 2x audio jack, 150 mm cable
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

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