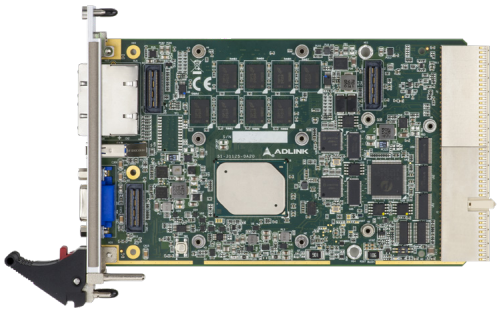
ADLINK
LEADING EDGE COMPUTING

3U CompactPCI Quad-Core Intel Atom® Processor X Series Blade

Datasheet

cPCI-3640 Series





cPCI-3640 cPCI-3640D cPCI-3640T cPCI-3640TR

CompactPCI® EXTENDED TEMPERATURE EN50155

Features

- Low power quad-core Intel Atom® x6413E Processor (formerly Elkhart Lake)
- Up to 32GB DDR4-2400-3200MT/s ECC soldered memory
- Optional onboard SSD support
- Flexibility in IO selection
- Extended temperature -40 to 85 degree C supported

Specifications

Processor & System	CPU	Quad-core, quad thread Intel Atom® x6413E SoC processor, 1.5GHz, bust frequency 3.0GHz, TDP 9W
	Memory	Dual channel DDR4-2400-3200MT/s with IBECC (In-band ECC), up to 32GB
	BIOS	AMI EFI BIOS, dual 16M bytes SPI flash memory CompactPCI Bus PCI 32-bit, 33/66MHz, 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

Distribuída no Brasil pela LRI | vendas@lri.com.br | 51 2129-3000

Specifications

Connectivity	Ethernet	Two 2.5G BASE-T Gigabit Ethernet ports on faceplate by Intel® I225/226 controllers, switchable to J2
		Two additional GbE in M12 circular connectors on layer 2 daughter board by Intel® I210IT (cPCI-3640T, cPCI-3640TR)
	Graphics	Integrated in Intel® processor One VGA on faceplate switchable to rear transition module by BIOS option
	Serial Port	Optional serial port on selected dual-slot SKUs (cPCI-3640D, cPCI-3640T, cPCI-3640TR) Two serial ports routed to rear transition module
	PS/2	Optional PS/2 keyboard mouse on cPCI-3640D
	USB	One USB 3.0 on front panel 1st layer One USB 2.0 routed to rear transition module Two additional USB 2.0 on cPCI-3640D
	Audio	Optional Mic-in, Line-out on cPCI-3640D
Storage	Blade	One onboard SSD in 4HP version. Offering SSD/CFAST/mSATA on daughter board by option One Serial ATA direct connector for 2.5" onboard HDD on selected 8HP SKUs (shared with SATA to RTM)
	RTM	Two SATA 3Gb/s port routed to RTM (shared with cPCI-3640 layer 2 SATA port)
Operating System	OS	Windows 10 64-bit Yocto 2.0 Wind River VxWorks 7.0 (by request) QNX 7.0 (by request) (Please contact ADLINK for other OS support)
Miscellaneous	LED	Power, WDT, Storage Drive, Thermal, General Purpose LEDs are reserved to rear by BOM option (contact ADLINK for assistance)
	Battery	Coin cell lithium battery onboard for RTC backup power (optional Gold Capacitor)
	Watchdog Timer	System Reset and NMI, with programmable interval, 1-65535 seconds or minutes
		Controlled by SEMA
	Hardware Monitor	Monitors CPU temperature, system temperature, Vcore and DC voltage by SEMA
	Security	Trusted Platform Module TPM 2.0 (by customer request)
Mechanical & Environmental	Form Factor	3U 4HP/8HP CompactPCI 100mm x 160mm (L x W)
	Operating Temperature	EN50155:2017 Standard: -40°C to 70°C (fanless) Extreme: -40°C to +85°C (screened, with forced air flow)
	Storage Temperature	40°C to 85°C
	Relative Humidity	95% non-condensing
	Shock	EN50155:2017/IEC61373 Edition 2.0:2010, Category 1 class B Body mounted
	Vibration	EN50155:2017/IEC61373 Edition 2.0:2010, Category 1 class B Body mounted
	Altitude	4000m, MIL-STD-810G w/Change 1, Method 500.6, Procedure II
	Power Consumption	23.75W by cPCI-3640/E3950/M8G 15.50W by cPCI-3640/E3940/M8G
	Weight	cPCI-3630TR: Net weight 480g with heatsink
Safety & EMI	Certification	CE/FCC EMC Directive 2014/30/EU (EN55032 / EN55024) EMC Directive 2014/30/EU (EN50121-3-2)

Distribuída no Brasil pela LRI | vendas@lri.com.br | 51 2129-3000

I/O Table

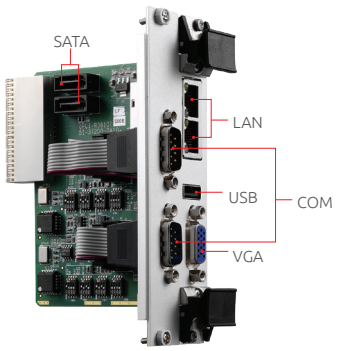
		GbE	Display	USB	COM	PS/2 KB/MS	Storage[2]	SSD	Audio	XMC
SBC										
cPCI-3640 (4HP)	Faceplate	2 (RJ-45)	1 VGA[3]	1 (3.0)						
	Onboard							1		
cPCI-3640D (8HP)	Faceplate	2 (RJ-45)	1 VGA[3]	1 (3.0) 2 (2.0)	1 (DB9)	1			1 (Line-in) 1 (Line-out)	
cPCI-3640T (8HP)	Onboard						1 (SATA)	Optional [4]		
	Faceplate	2 (RJ-45)[1] 2 (M12)	1 VGA[3]	1 (3.0)	1 (DB9)					
	Onboard						1 (SATA)	Optional [4]		
cPCI-3640TR (8HP)	Faceplate	4 (RJ-45)	1 VGA[3]	1 (3.0)	1 (DB9)					
	Onboard						1 (SATA)	Optional [4]		
RTM										
cPCI-R3610(T)	Faceplate	2 (RJ-45)	1 VGA[3]	1 (2.0)	2 (DB9)					
	Onboard						1 (SATA)[2]			

(1) Two RJ-45 connectors from Intel® I225/I226 GbE controllers and two M12 circular connectors from Intel® I210 GbE controllers
(2) One SATA port is shared between front SATA on 2nd layer of daughter board and SATA port routed to rear transition module.
(3) Switchable to front or rear by BIOS selection
(4) Available by soldering SSD with DB-3SSD adapter board, or replacing the daughter board with CFast or mSATA options.

Ordering Information

CPU Board	
cPCI-3640/6413E/M32G/S40	1-slot (4HP) 3U CompactPCI blade with Intel Atom® x6413E processor, 32GB DDR4-2400 IBECC soldered memory, supporting VGA, USB 3.0, 2x GbE and onboard 40GB SSD
cPCI-3640D/6413E/M32G	2-slot (8HP) 3U CompactPCI blade with Intel Atom® x6413E processor, 32GB DDR4-2400 IBECC soldered memory, supports VGA, USB 3.0, 2x GbE, COM (RS-232/422/485), 2x USB 2.0, PS/2 keyboard mouse, line-in, line-out, and 2.5" SATA slot
cPCI-3640T/6413E/M32G/S40	2-slot (8HP) 3U CompactPCI blade with Intel Atom® x6413E processor, 32GB DDR4-2400 IBECC soldered memory, supporting, VGA, USB 3.0, 2x GbE in RJ-45 and 2x GbE in circular connectors, COM (RS-232/422/485), and onboard 40GB SSD
cPCI-3640TR/6413E/M32G (available by request)	2-slot (8HP) 3U CompactPCI blade with Intel Atom® x6413E processor, 32GB DDR4-2400 IBECC soldered memory, supports VGA, USB 3.0, 4x GbE in RJ-45 connectors, COM (RS-232/422/485), and 2.5" SATA slot
Rear Transition Module	
cPCI-R3610	8HP Rear I/O module with 2x GbE, 1x USB 2.0, VGA, 2x COM, 1x SATA 3Gb/s, 50mm depth
cPCI-R3610T	8HP Rear I/O module with 2x GbE, 1x USB 2.0, VGA, 2x COM, 1x SATA 3Gb/s, 80mm depth

Contact us for different CPU, memory and storage combinations.



cPCI-R3610T

All products and company names listed are trademarks or trade names of their respective companies. ©2022 ADLINK Technology, Inc. All Rights Reserved. All pricing and specifications are subject to change without further notice.

Distribuída no Brasil pela LRI | vendas@lri.com.br | 51 2129-3000