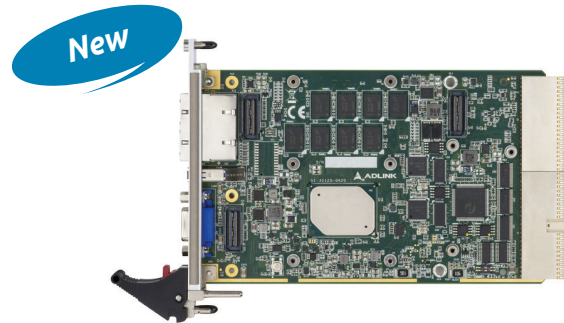


# cPCI-3630 Series

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

### Features

- Low power quad-core Intel Atom® x7-E3950 Processor (formerly Apollo Lake I)
- Up to 8GB DDR3L-1600 ECC soldered memory
- Optional onboard 32GB SSD support
- Smart Embedded Management Agent (SEMA) for system health monitoring
- Optional additional GbE ports with MIL-STD M12 connectors
- EN 50155 compliant for railway applications



**CompactPCI®**



cPCI-3630 cPCI-3630D cPCI-3630G cPCI-3630M cPCI-3630N cPCI-3630S cPCI-3630T cPCI-3630TR

### Specifications

#### • Processor & System

##### CPU

Quad-core Intel Atom® x7-E3950 SoC processor, 1.6GHz, TDP 12W  
 Dual-core Intel Atom® x5-E3930 SoC processor, 1.3GHz, TDP 6.5W

##### Memory

Dual channel DDR3L-1600 ECC soldered, up to 8GB

##### 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

#### • Connectivity

##### XMC

PCIe x1 XMC site on 2nd or 3rd layer daughter board

##### Ethernet

Two 10/100/1000BASE-T Gigabit Ethernet Ports on faceplate by Intel® I210 controllers, switchable to J2  
 Two additional GbE in M12 MIL-STD connectors on layer 2 daughter board by Intel® 82574L (cPCI-3630T, cPCI-3630TR)

##### Graphics

Integrated in Intel® processor  
 One VGA on faceplate switchable to rear transition module by BIOS option  
 Additional two DisplayPort support up to 4096x2160p by using cPCI-3630G

##### Serial Port

Optional serial port on selected dual-slot SKUs (cPCI-3630D, cPCI-3630G, cPCI-3630T, cPCI-3630TR)  
 Two serial ports routed to rear transition module

##### PS/2

Optional PS/2 keyboard mouse on cPCI-3630D, cPCI-3630G

##### 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-3630D, cPCI-3630M

##### Audio

Optional Mic-in, Line-out on cPCI-3630D



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## Specifications

### • Storage

#### Blade

One onboard 32GB SSD in 4HP version. Offering 32GB SSD/CFAST/mSATA on daughter board by option for 8HP version

One Serial ATA direct connector for 2.5" onboard HDD on selected SKUs (shared with SATA to RTM)

#### RTM

Two SATA 3Gb/s port routed to RTM (shared with cPCI-3630 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

### • Mechanical & Environmental

#### Form Factor

3U 4HP/8HP CompactPCI

100mm x 160mm (L x W)

#### Operating Temperature

EN50155 Tx

Standard: -40°C to 70°C (fanless)

Extreme: -40°C to +85°C (screened, with forced air flow)

#### Storage Temperature

EN50155 Tx

-50°C to +100°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-3630/E3950/M8G

15.50W by cPCI-3630/E3930/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)

## I/O Table

		GbE	Display	USB	COM	PS/2 KB/MS	Storage <sup>(2)</sup>	SSD	Audio	XMC
<b>SBC</b>										
cPCI-3630 (4HP)	Faceplate	2 (RJ-45)	1 VGA <sup>(3)</sup>	1 (3.0)						
	Onboard							1		
cPCI-3630D (8HP)	Faceplate	2 (RJ-45)	1 VGA <sup>(3)</sup>	1 (3.0) 2 (2.0)	1 (DB9)	1			1 (Line-in) 1 (Line-out)	
	Onboard						1 (SATA)	Optional <sup>(4)</sup>		
cPCI-3630G (8HP)	Faceplate	2 (RJ-45)	1 VGA <sup>(3)</sup> + 2 DP	1 (3.0) 1 (2.0)	1 (DB9)	1				
	Onboard						1 (SATA)	Optional <sup>(4)</sup>		
cPCI-3630M (8HP)	Faceplate	2 (RJ-45)	1 VGA <sup>(3)</sup> + 2 DP	1 (3.0) 2 (2.0)	2 (DB9)	1				
	Onboard						1 (SATA)	Optional <sup>(4)</sup>	1 (Line-in) 1 (Line-out)	
cPCI-3630N (4HP)	Faceplate									
	Onboard						1 (SATA)	Optional <sup>(4)</sup>		
cPCI-3630S (8HP)	Faceplate	2 (RJ-45)	1 VGA <sup>(3)</sup>	1 (3.0)						
	Onboard							Optional <sup>(4)</sup>		1
cPCI-3630T (8HP)	Faceplate	2 (RJ-45) <sup>(1)</sup> 2 (M12)	1 VGA <sup>(3)</sup>	1 (3.0)	1 (DB9)					
	Onboard						1 (SATA)	Optional <sup>(4)</sup>		
cPCI-3630TR (8HP)	Faceplate	4 (RJ-45)	1 VGA <sup>(3)</sup>	1 (3.0)	1 (DB9)					
	Onboard						1 (SATA)	Optional <sup>(4)</sup>		
<b>RTM</b>										
cPCI-R3610(T)	Faceplate	2 (RJ-45)	1 VGA <sup>(3)</sup>	1 (2.0)	2 (DB9)					
	Onboard						1 (SATA) <sup>(5)</sup>			

(1) Two RJ-45 connectors from Intel® I210 GbE controllers and two M12 MIL-STD connectors from Intel® 82574L GbE controllers

(2) SATA port is shared with rear transition module SATA port

(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.

(5) Share SATA with cPCI-3630 main board SATA

## Ordering Information

### CPU Board

- **cPCI-3630/E3950/M4G/S32**  
1-slot (4HP) 3U CompactPCI blade with Intel Atom® x7-E3950 processor, 4GB DDR3L-1600 soldered memory, supports VGA, USB 3.0, 2x GbE and onboard 32GB SSD
- **cPCI-3630D/E3950/M4G**  
2-slot (8HP) 3U CompactPCI blade with Intel Atom® x7-E3950 processor, 4GB DDR3L-1600 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 SATA connector
- **cPCI-3630G/E3950/M4G**  
2-slot (8HP) 3U CompactPCI blade with Intel Atom® x7-E3950 processor, 4GB DDR3L-1600 soldered memory, supports VGA, USB 3.0, 2x GbE, 2x DP, COM in RJ-45, PS/2 KB/MS, USB 2.0
- **cPCI-3630M/E3950/M4G**  
2-slot (8HP) 3U CompactPCI blade with Intel Atom® x7-E3950 processor, 4GB DDR3L-1600 soldered memory, supports VGA, USB 3.0, 2x GbE, one 100-pin connector with signal of 2x DP, 2x COM, PS/2 KB/MS, audio, 2x USB 2.0 and mating testing cable
- **cPCI-3630N/E3950/M4G/S32**  
1-slot (4HP) 3U CompactPCI blade with Intel Atom® x7-E3950 processor, 4GB DDR3L-1600 soldered memory, no I/O only LEDs (Power, HDD, WDT, GP, GbE LEDs), and onboard 32GB SSD
- **cPCI-3630S/E3950/M4G**  
2-slot (8HP) 3U CompactPCI blade with Intel Atom® x7-E3950 processor, 4GB DDR3L-1600 soldered memory, supports VGA, USB 3.0, 2x GbE, XMC site on Layer-2
- **cPCI-3630T/E3950/M4G**  
2-slot (8HP) 3U CompactPCI blade with Intel Atom® x7-E3950 processor, 4GB DDR3L-1600 soldered memory, supports, VGA, USB 3.0, 2x GbE in RJ-45 and 2x GbE in MIL-STD M12 connectors, COM (RS-232/422/485), and SATA connector
- **cPCI-3630TR/E3950/M4G**  
**(available by request)**  
2-slot (8HP) 3U CompactPCI blade with Intel Atom® x7-E3950 processor, 4GB DDR3L-1600 soldered memory, supports VGA, USB 3.0, 4x GbE in RJ-45 connectors, COM (RS-232/422/485), and SATA connector

### 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.

