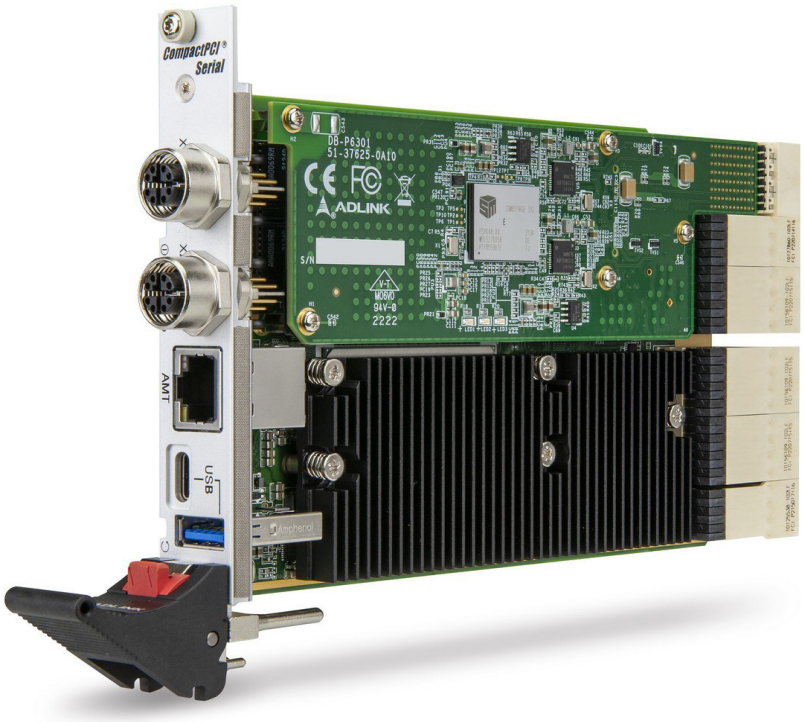
cPCI-A3535 Series

User's Manual

Performance 3U CompactPCI® Serial
11th Gen Intel® Core™ / Intel® Xeon® Processor Blade



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Revision Date:	August 14, 2026
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LEADING EDGE AI COMPUTING

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Revision History

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1.0	Initial release	2025-05-13
1.1	Getting started updated	2026-08-14

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Preface

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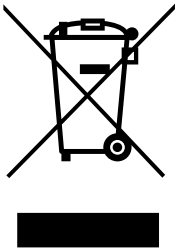
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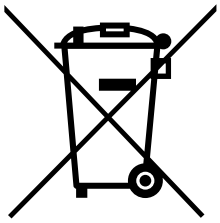
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Conventions

Take note of the following conventions used throughout this manual to make sure that users perform certain tasks and instructions properly.



NOTE: Additional information, aids, and tips that help users perform tasks.



CAUTION: Information to prevent ***minor*** physical injury, component damage, data loss, and/or program corruption when trying to complete a task.



WARNING: Information to prevent ***serious*** physical injury, component damage, data loss, and/or program corruption when trying to complete a specific task.

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1 Introduction

1.1 Overview

CompactPCI® Serial (PICMG CPCI-S.0) is a modular computer standard officially adopted by PICMG in 2011. The CompactPCI Serial standard defines a connector to support high-speed serial interfaces including PCI Express, SATA, USB and Ethernet. A CompactPCI Serial backplane has six high-speed connectors P1 to P6 on the system slot. On peripheral slots, only P1 is mandatory and P2 to P6 are optional. A CompactPCI Serial system can comprise a total of nine blades (one system blade and eight peripheral I/O blades) through an Ethernet full mesh or single star architec-ture. The CompactPCI® Serial standard provides more flexibility and higher speed and bandwidth in modular system solutions.

The ADLINK cPCI-A3535 is a 3U CompactPCI Serial processor blade featuring an 11th Gen Intel® processor, Intel® RM590E Chipset and supports 2 SO-DIMM DDR4-3200 ECC memory up to 64GB.

The cPCI-A3535 is available in both single-slot (4HP) form factor and dual-slot (8HP) form factor. The common interfaces for both form factors are 1x USB 3.0 Type A, 1x USB Type C and 1x 2.5G Ethernet port in RJ-45 on the front panel and PCIe, SATA, USB, and Ethernet connectivity to the rear. Daughter boards provide extra onboard SSD storage for both form factors. The 4HP version supports 2x 2.5 GbE and the 8HP version supports 2x 10 GbE, both via M12 connectors on the front panel,

Serial interfaces on the backplane connectors P1 to P5 include 2x PCI Express x8, 3x PCI Express x4, 2x USB 3.0, 8x USB 2.0, 5x SATA 6Gb/s 4x LANs. Additionally, the P6 connector supports 2x Ethernet ports for the 4HP version and 4x Ethernet ports for the 8HP version.

The cPCI-A3535 is a high-performance solution for transportation, factory automation, defense and other industrial applications that require superior data transfer capability and advanced computing power.

1.2 Features

- 3U CompactPCI Serial (PICMG CPCI-S.0) processor blade in 4/8 HP width form factor
- 11th Gen Intel® Core™ Processor
- Graphics engine integrated in processor supporting Intel® UHD Graphics
- Dual channel DDR4-3200 SO-DIMM memory with ECC, up to 64GB
- Backplane communication by PCI Express, USB 2.0/3.0, SATA, and Gigabit Ethernet
- Storage: onboard SATA SSD

1.3 Package Contents

cPCI-	XX	A3535	XXX	/11555MLE	/M32	/SXX
	(A)		(B)	(C)	(D)	(E)

(A) Operating Temperature Code

- Blank = 0˚C to 60˚C
- ET= -20˚C to 70˚C with air flow by screening

(B) Configuration Code

- Blank = Single slot width, 1x USB Type C, 2x M12 Ethernet, 1x RJ-45 Ethernet, 1x USB 3.0
- Other = ODM/OEM project code

(C) CPU Code

- 11555MLE = 6-core Intel® Xeon® 11555MLE processor
- 11555MRE = 6-core Intel® Xeon® 11555MRE processor

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(D)Memory Size Code

- M32 = 2x 16GB DDR4-3200 SO-DIMM
- M64 = 2x 32GB DDR4-3200 SO-DIMM

(E) Storage Configuration Code

- Blank = Without P6 daughter board storage
- S80 = Onboard soldered 80GB SSD with dual GbE ports to P6 on daughter board

1.4 Package Contents

The cPCI-A3535 is packaged with the following components. If any of the following items are missing or damaged, retain the ship-ping carton and packing material and contact the dealer for inspection. Please obtain authorization before returning any prod-uct to ADLINK. The packing contents of cPCI-A3535 non-standard configurations will vary depending on customer requests.

Processor Blade

- The cPCI-A3535 Processor Blade
  - CPU and memory specifications will differ depending on options selected
  - Thermal module is assembled on the board
  -



The contents of non-standard cPCI-A3535 configurations may vary depending on the customer's requirements.

Optional Accessories

- M12 cables
- USB Type C cable



This product must be protected from static discharge and physical shock. Never remove any of the components except at a static-free workstation. Use the anti-static bag shipped with the product when putting the board on a surface. Wear an anti-static wrist strap properly grounded on one of the system's ESD ground jacks when installing or servicing system components.

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2 Specifications

2.1 Product Specifications

CompactPCI S.0 Standards	• CompactPCI® Serial CPCI-S.0 R2.0
Mechanical	• Standard 3U cPCI-S.0 • Board size: 100mm x 160mm • Single slot (4HP, 20.32mm), dual slot (8HP, 40.64mm) • CompactPCI Serial P1 to P5 connectors; P6 connector on daughter board
Processor	4HP SKU • Intel® Xeon® W-11555MLE (6c, 12t), 1.9 GHz, 12MB cache, 25W. 8HP SKU • Intel® Xeon® W-11555MRE (6c, 12t), 2.6GHz(2.1GHz), 12MB cache, 45W (cTDP 35W)
Chipset	• Intel® RM590E Chipset
Memory	• Dual channel DDR4-3200 ECC SO-DIMM memory up to 64GB
BIOS	• Dual AMI UEFI BIOS, 256Mb SPI flash memory
Gigabit Ethernet	Front Panel I/O 4HP/8HP SKU: • 1x 2.5G Intel® I225-IT Ethernet Controller with IAMT (RJ45) 4HP SKU: • 2x 2.5G Intel® I225-IT Ethernet Controller (M12) 8HP SKU: • 2x 10G Intel® X710TM4/AT2 Ethernet Controller (M12) Rear I/O 4HP SKU: • 2x 2.5G Intel® I225-IT Ethernet Controller to P6 connector 8HP SKU: • 4x 1G Intel® I350AM4 Ethernet Controller to P6 connector
Graphics	• Integrated in Intel® processor • 1x USB-C DisplayPort output on faceplate with resolution up to 7680×4320 @60Hz
USB	Front Panel I/O • 1x USB 3.2 Gen1 Type-A Rear I/O 4HP SKU: • 2x USB 3.2 Gen1 to P1/P3 connector • 8x USB 2.0 to P1/P2/P3 connector
PCI Express	Rear I/O • 2x PCIe 3.0 x8 to P1/P2 connector • 3x PCIe 3.0 x4 to P4 connector • 2x PCIe 3.0 x1 to P4/P5 connector
TPM	• TPM 2.0 SLB 9670XQ2.0
Storage Interfaces	• 1x soldered 80GB 3D NAND flash on daughter board • 5x SATA ports with RAID 0/1/5/10 support to P3 connector (max. 6Gb/s limited by backplane)
Faceplate I/O	4HP SKU: • 1x USB 3.2 Gen1 • 1x Intel® I225-IT Ethernet Controller with iAMT (RJ45) • 2x Intel® I225-IT Ethernet Controller (M12) • 1x USB-C for DisplayPort 8HP SKU: • 1x USB 3.2 Gen1 • 1x Intel® I225-IT Ethernet Controller with iAMT (RJ45) • 2x Intel® X710TM4/AT2 Ethernet Controller (M12) • 1x USB-C for DisplayPort
OS Compatibility	• Microsoft Windows 10 64-bit • Linux Debian
Environmental*	• Operating Temperature: -40°C to 70°C (EN50155 OT4 Class, +85°C for 10 minutes, with air flow) • Storage Temperature: -40°C to 85°C • Operating Humidity: 10% to 95% relative humidity, non-condensing (EN60068-2-30, EN50155)

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	• Storage Humidity: 5% to 95% relative humidity, non-condensing • EN50155:2021 • RoHS2.0 & REACH compliant
EMI/EMC	• EN50155:2021, EN 50121-3-2 (radiated and conducted emission) • EN55024, EN50121-3-2 (immunity) • CE • UKCA • FCC Class A
Safety	• EN50155:2021 • EN45545-2:2013+A1:2015 (HL 1-3) EL9 for PCB (R24/R25)



*ADLINK-certified thermal design. The thermal performance is dependent on the chassis cooling design. Sufficient forced

air-flow is required. Temperature limits of optional mass storage devices may also affect the thermal specification.

Due to Intel PCH specification limitations, the maximum number of PCIe Root Ports (or devices) that can be enabled at the same time is 16. The PCIe from PCH, peripheral slot 3 of the backplane, is affected when CPU slot is named as slot 0, while the PCIe from CPU, peripheral slots 1 and 2 are not affected.

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2.2 Block Diagram

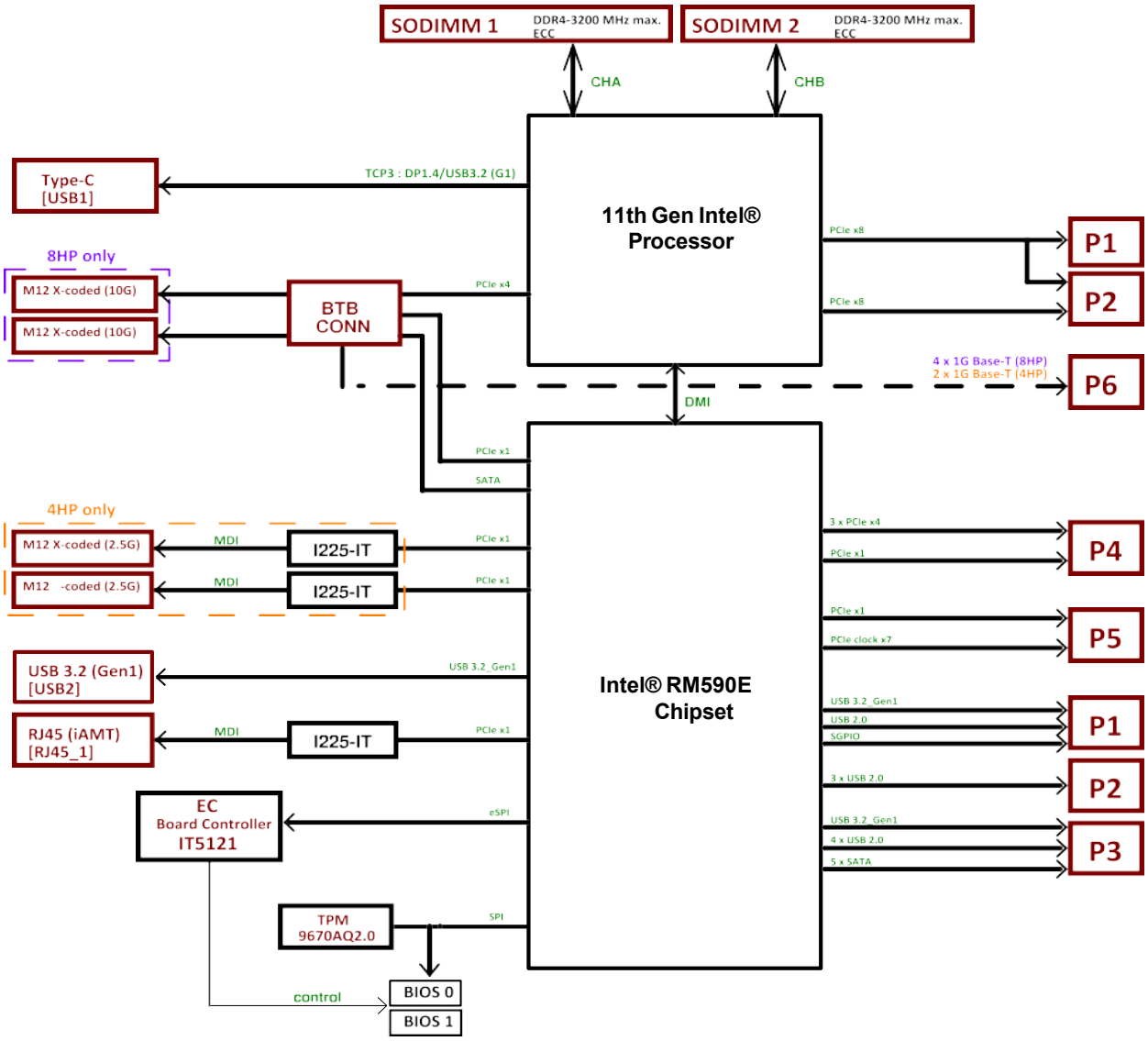


Figure 1: Functional block diagram

2.3 I/O Connectivity Table

Function	cPCI-A3535 (4HP/8HP)	
	Faceplate	Onboard
GbE	1 (RJ-45) 2 (M12)	—
USB	1 USB 3.2	—
Display	1 DP (USB-C)	—
Onboard NAND Flash	—	1

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2.4 Power Requirements

In order to guarantee a stable functionality of the system, it is rec-ommended to provide more power than the system requires. An industrial power supply unit should be able to provide at least twice as much power as the entire system requires of each voltage. An ATX power supply unit should be able to provide at least three times as much power as the entire system requires of each voltage.

2.4.1 Power Consumption

This section provides information on the power consumption of cPCI-A3535 Series when using Intel® Xeon® processors with 16GB DDR4 3200 W/T ECC SODIMM memory and onboard TLC SM619GXE 80GB. The cPCI-A3535 is powered by +12V only.

Intel® Xeon® W-11555MLE (4HP)		
OS/Mode	**Current @12V**	**Total Power**
	EIST Disabled / Enabled	
Windows 10 x64 Idle Mode[1]	1.6A / 1.56A	19.2W / 18.72W
Windows 10 x64 Typical Mode[2]	2.53A / 2.43A	30.36W / 29.16W
Windows 10 x64 Maximum Mode[3]	2.83A / 3.68A	33.96W / 44.16W
Intel® Xeon® W-11555MRE (8HP)		
OS/Mode	**Current @12V**	**Total Power**
	EIST Disabled / Enabled	
Windows 10 x64 Idle Mode[1]	1.66A / 1.68A	19.92W / 20.16W
Windows 10 x64 Typical Mode[2]	2.81A / 2.97A	33.72W / 35.64W
Windows 10 x64 Maximum Mode[3]	3.36A / 4.15A	40.32W / 49.8W

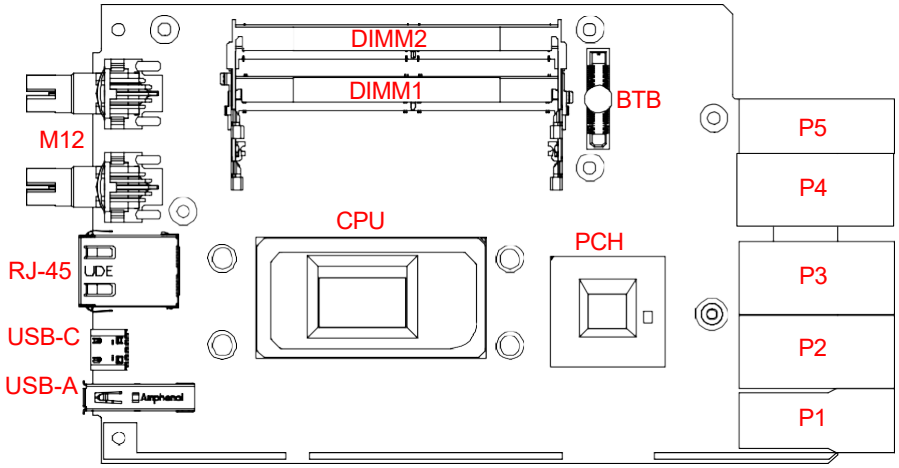
1. The system set to idle mode and stays idle for 10 minutes.
2. Run BurnInTest™ that includes CPU, memory, video and 2D/3D graphics. Set all test items to 100% loading and run for 10 minutes.
3. Run Intel® Thermal Analysis Tool that includes CPU, graphics and memory. Set all test items to 100% loading and run for 10 minutes.

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3 Board Interfaces

This chapter illustrates the board layout, connector pin assignments, and jumper settings to familiarize users with the cPCI-A3535 Series.

3.1 Board Layout

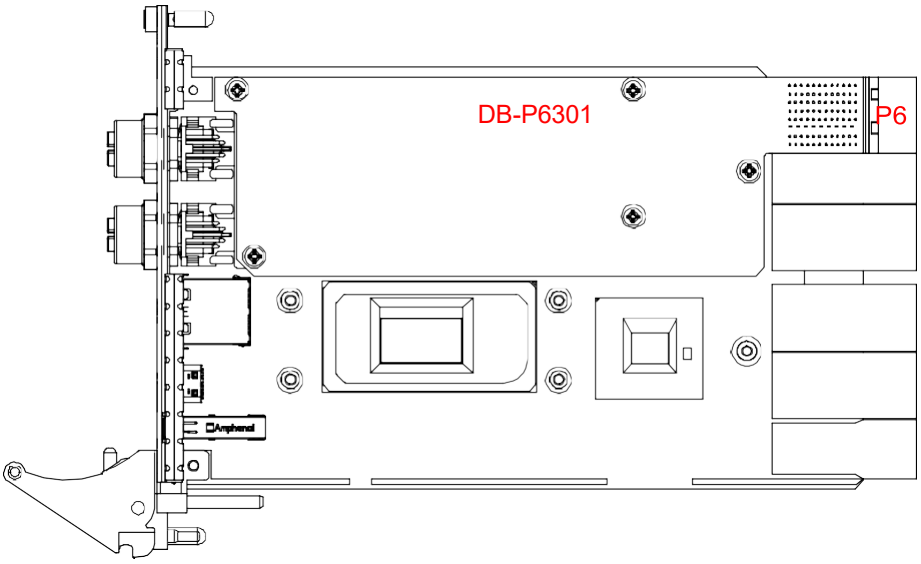


CPU	Intel® Xeon® Processor	**P1-P5**	CompactPCI Serial P1 to P5 connectors
PCH	Intel® RM590E Chipset	**BTB**	B2B connector for DB-P630x (CN5)
DIMM1/2	DDR4 SO-DIMM Sockets	**RJ45**	GbE connector for iAMT
USB-A	USB Type-A connector	**USB-C**	DisplayPort connector
M12	2.5GbE connectors (4HP) 10GbE connectors (8HP)		

Figure 2: Series board layout (component side)

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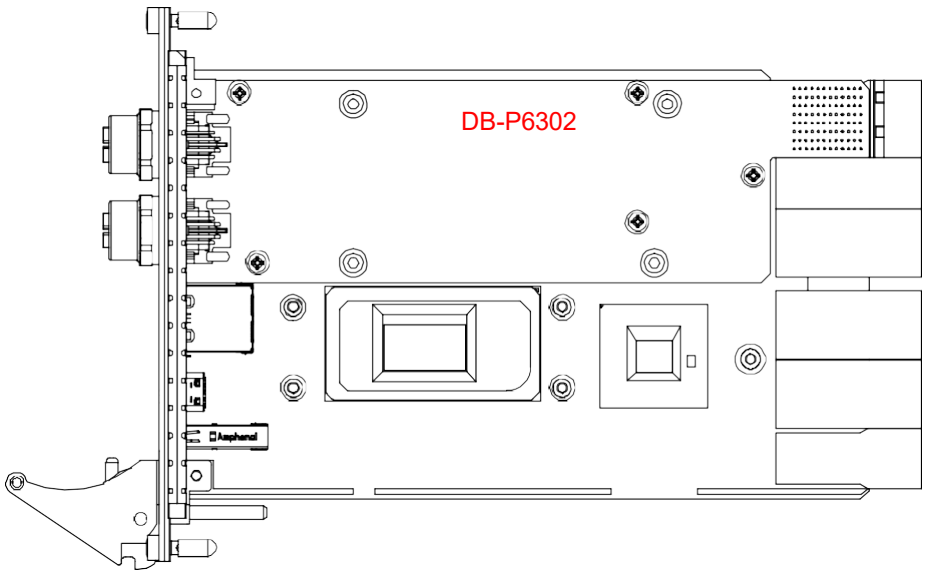
3.2 4HP Blade Assembly Layout



DB-P6301	Daughter board: - SM619GEE for storage - 2x I225IT for 2.5GbE	**P6**	CompactPCI Serial P6 connector

Figure 3: 4HP blade assembly layout

3.3 8HP Blade Assembly Layout



DB-P6302	Daughter board: - SM619GEE for storage - 2x X710 for 10GbE - 4x I350AM4 for 1GbE	**P6**	CompactPCI Serial P6 connector

Figure 4: 8HP blade assembly layout

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3.4 Faceplate

3.4.1 4HP

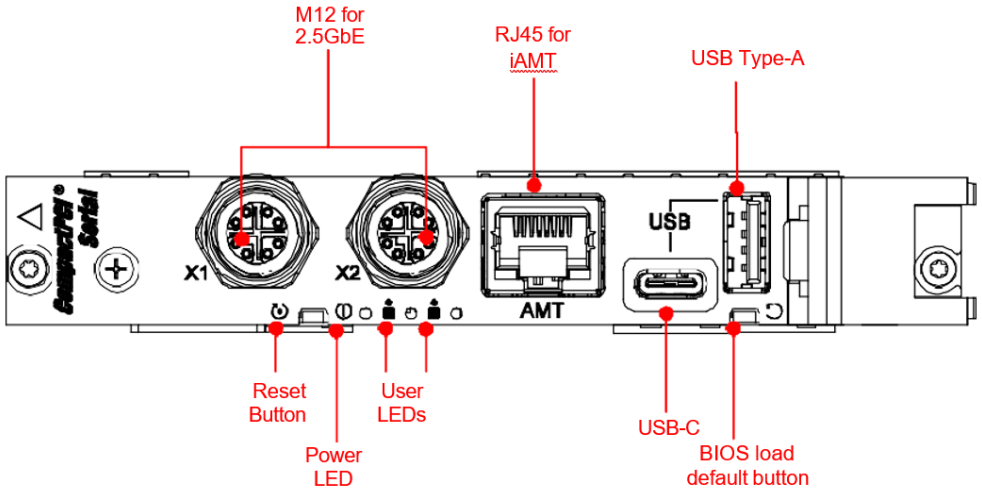


Figure 5: 4HP faceplate

3.4.2 8HP

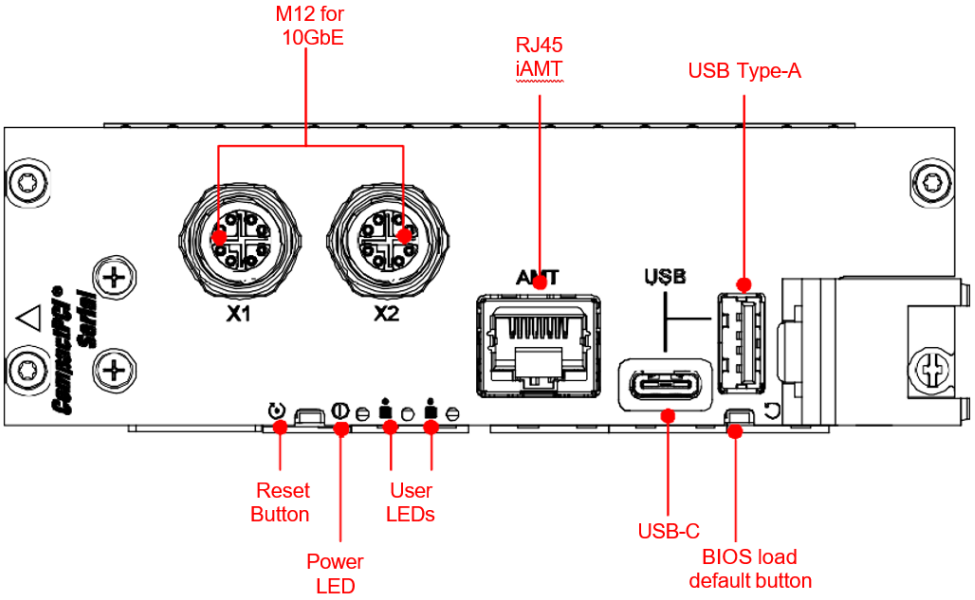


Figure 6: 8HP faceplate

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4 Connector Pinouts and Jumper Settings

4.1 Switches and Buttons

LED	Function
Reset (SW1)	Reboot system
BIOS Load Default (SW2)	Load default BIOS settings

4.2 System LEDs

LED	Color	Condition	Indication
Power LED5 	Green	Off	System off
		Green	POST OK
User LEDs (Left/Right) 	Amber	Off	No activity
		On/Blinking	Defined by user



The User LEDs can be programmed by the user. See “Control-ling User LEDs” on page 30 for detailed information.

4.3 Rear Signal Distribution

Table 1: Rear signal distribution

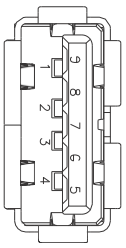
BP_SLOT	1(sys)	2	3	4	5	6	7	8	9
	SYS	peri_1	peri_2	peri_3	peri_4	peri_5	Peri_6	peri_7	Peri_8
PCIE	1234567	1(x8)	2(x8)	3(x4)	4(x4)	5(x4)	6(x1)	7(x1)	
USB2.0	12345678	1	2	3	4	5	6	7	8
USB3.2	12	1	2						
SATA	45678*				4	5	6	7	8
LAN	1234**	1	2	3	4				
I2C	1	1							

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4.4 Connector Pin Assignments

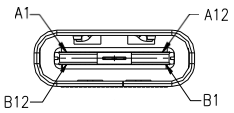
4.4.1 USB 3.2 Gen1 Connector

Pin #	Signal Name
1	P_+5V0_USB3_CN
2	PCH_USB2_CMC_N8
3	PCH_USB2_CMC_P8
4	GND
5	PCH_USB3_RX_C_CMC_N2
6	PCH_USB3_RX_C_CMC_P2
7	GND
8	PCH_USB3_TX_C_CMC_N2
9	PCH_USB3_TX_C_CMC_P2



4.4.2 USB-C DisplayPort Connectors

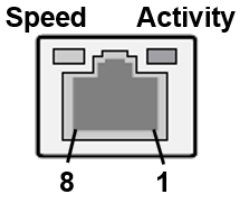
Pin #	Signal	Pin #	Signal
A1	GND	B1	GND
A2	G_TCP_TX_CMC_C_P0	B2	G_TCP_TX_CMC_C_P1
A3	G_TCP_TX_CMC_C_N0	B3	G_TCP_TX_CMC_C_N1
A4	TYPE_C_VBUS	B4	TYPE_C_VBUS
A5	TC_CC1_CN	B5	TC_CC2_CN
A6	PCH_USB2_CMC_P9	B6	PCH_USB2_CMC_P9
A7	PCH_USB2_CMC_N9	B7	PCH_USB2_CMC_N9
A8	TC_SBU1_CN	B8	TC_SBU2_CN
A9	TYPE_C_VBUS	B9	TYPE_C_VBUS
A10	G_TCP_TXRX_CMC_C_N1	B10	G_TCP_TXRX_CMC_C_N0
A11	G_TCP_TXRX_CMC_C_P1	B11	G_TCP_TXRX_CMC_C_P0
A12	GND	B12	GND



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4.5 RJ-45 Gigabit Ethernet Connectors

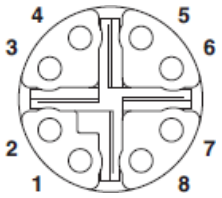
Pin #	Signal
1	LAN5_MDI_P0
2	LAN5_MDI_N0
3	LAN5_MDI_P1
4	LAN5_MDI_N1
5	LAN5_MDI_P2
6	LAN5_MDI_N2
7	LAN5_MDI_P3
8	LAN5_MDI_N3



Status		Speed LED (Green/Orange)	Activity LED (Yellow)
Network link is not established or system powered off		Off	Off
10/100 Mbps	Link	Off	On
	Active	Off	Blinking
1000 Mbps	Link	Green	On
	Active	Green	Blinking
2500 Mbps	Link	Orange	On
	Active	Orange	Blinking

4.6 GbE M12 X-Code Connectors

Pin #	Signal Name
1	MDI_T_P0
2	MDI_T_N0
3	MDI_T_P1
4	MDI_T_N1
5	MDI_T_P3
6	MDI_T_N3
7	MDI_T_N2
8	MDI_T_P2



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4.7 CompactPCI Serial Connectors

4.7.1 CompactPCI Serial Connector P1

	A	B	C	D	E	F	G	H	I	J	K	L
6	GND	CPU_PCIE_SLOT1_TX_C_P2	CPU_PCIE_SLOT1_TX_C_N2	GND	CPU_PCIE_SLOT1_RX_C_P2	CPU_PCIE_SLOT1_RX_C_N2	GND	CPU_PCIE_SLOT1_TX_C_P3	CPU_PCIE_SLOT1_TX_C_N3	GND	CPU_PCIE_SLOT1_RX_C_P3	CPU_PCIE_SLOT1_RX_C_N3
5	CPU_PCIE_SLOT1_TX_C_P0	CPU_PCIE_SLOT1_TX_C_N0	GND	CPU_PCIE_SLOT1_RX_C_P0	CPU_PCIE_SLOT1_RX_C_N0	GND	CPU_PCIE_SLOT1_TX_C_P1	CPU_PCIE_SLOT1_TX_C_N1	GND	CPU_PCIE_SLOT1_RX_C_P1	CPU_PCIE_SLOT1_RX_C_N1	GND
4	GND	PCH_USB2_P0	PCH_USB2_N0	GND	NC	NC	GND	NC	NC	GND	NC	NC
3	PCH_USB3_TX_C_P0	PCH_USB3_TX_C_N0	BP_PWRBTN-L	PCH_USB3_RX_C_P0	PCH_USB3_RX_C_N0	BP_PWR_FAIL	NC	SGPIO_SATA_DATAOUT0	NC	SGPIO_SATA_CLOCK	SGPIO_SATA_LOAD	NC
2	GND	CN_I2C_CLK	CN_I2C_DAT	GND	PS_ON#	RST_EXPORT#	GND	PRST_RST #	WAKE_IN-L	GND	NC	NC
1	P_+12V_CN	P_+5VSB_CN	GND	P_+12V_CN	P_+12V_CN	GND	P_+12V_CN	P_+12V_CN	GND	P_+12V_CN	P_+12V_CN	GND

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4.7.2 CompactPCI Serial Connector P2

	A	B	C	D	E	F	G	H	I	J	K	L
8	GND	NC	NC	GND	PCH_USB2_P1	PCH_USB2_N1	GND	PCH_USB2_P2	PCH_USB2_N2	NC	PCH_USB2_P3	PCH_USB2_N3
7	NC	NC	GND	NC	NC	GND	NC	NC	GND	NC	NC	GND
6	GND	CPU_PCIE_SLOT2_TX_C_P6	CPU_PCIE_SLOT2_TX_C_N6	GND	CPU_PCIE_SLOT2_RX_C_P6	CPU_PCIE_SLOT2_RX_C_N6	GND	CPU_PCIE_SLOT2_TX_C_P7	CPU_PCIE_SLOT2_TX_C_N7	GND	CPU_PCIE_SLOT2_RX_C_P7	CPU_PCIE_SLOT2_RX_C_N7
5	CPU_PCIE_SLOT2_TX_C_P4	CPU_PCIE_SLOT2_TX_C_N4	GND	CPU_PCIE_SLOT2_RX_C_P4	CPU_PCIE_SLOT2_RX_C_N4	GND	CPU_PCIE_SLOT2_TX_C_P5	CPU_PCIE_SLOT2_TX_C_N5	GND	CPU_PCIE_SLOT2_RX_C_P5	CPU_PCIE_SLOT2_RX_C_N5	GND
4	GND	CPU_PCIE_SLOT2_TX_C_P2	CPU_PCIE_SLOT2_TX_C_N2	GND	CPU_PCIE_SLOT2_RX_C_P2	CPU_PCIE_SLOT2_RX_C_N2	GND	CPU_PCIE_SLOT2_TX_C_P3	CPU_PCIE_SLOT2_TX_C_N3	GND	CPU_PCIE_SLOT2_RX_C_P3	CPU_PCIE_SLOT2_RX_C_N3
3	CPU_PCIE_SLOT2_TX_C_P0	CPU_PCIE_SLOT2_TX_C_N0	GND	CPU_PCIE_SLOT2_RX_C_P0	CPU_PCIE_SLOT2_RX_C_N0	GND	CPU_PCIE_SLOT2_TX_C_P1	CPU_PCIE_SLOT2_TX_C_N1	GND	CPU_PCIE_SLOT2_RX_C_P1	CPU_PCIE_SLOT2_RX_C_N1	GND
2	GND	CPU_PCIE_SLOT1_TX_C_P6	CPU_PCIE_SLOT1_TX_C_N6	GND	CPU_PCIE_SLOT1_RX_C_P6	CPU_PCIE_SLOT1_RX_C_N6	GND	CPU_PCIE_SLOT1_TX_C_P7	CPU_PCIE_SLOT1_TX_C_N7	GND	CPU_PCIE_SLOT1_RX_C_P7	CPU_PCIE_SLOT1_RX_C_N7
1	CPU_PCIE_SLOT1_TX_C_P4	CPU_PCIE_SLOT1_TX_C_N4	GND	CPU_PCIE_SLOT1_RX_C_P4	CPU_PCIE_SLOT1_RX_C_N4	GND	CPU_PCIE_SLOT1_TX_C_P5	CPU_PCIE_SLOT1_TX_C_N5	GND	CPU_PCIE_SLOT1_RX_C_P5	CPU_PCIE_SLOT1_RX_C_N5	GND

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4.7.3 CompactPCI Serial Connector P3

	A	B	C	D	E	F	G	H	I	J	K	L
8	GND	PCH_SATA_TX_C_P7	PCH_SATA_TX_C_N7	GND	CN_SATA_RX_P7	CN_SATA_RX_N7	GND	PCH_SATA_TX_C_P8	PCH_SATA_TX_C_N8	GND	CN_SATA_RX_P8	CN_SATA_RX_N8
7	PCH_SATA_TX_C_P5	PCH_SATA_TX_C_N5	GND	CN_SATA_RX_P5	CN_SATA_RX_N5	GND	PCH_SATA_TX_C_P6	PCH_SATA_TX_C_N6	GND	CN_SATA_RX_P6	CN_SATA_RX_N6	GND
6	GND	NC	NC	GND	NC	NC	GND	PCH_SATA_TX_C_P4	PCH_SATA_TX_C_N4	GND	CN_SATA_RX_P4	CN_SATA_RX_N4
5	NC	NC	GND	NC	NC	GND	NC	NC	GND	NC	NC	GND
4	GND	NC	NC	GND	NC	NC	GND	NC	NC	GND	NC	NC
3	NC	NC	GND	NC	NC	GND	NC	NC	GND	NC	NC	GND
2	GND	PCH_USB3_TX_C_P1	PCH_USB3_TX_C_N1	GND	PCH_USB3_RX_C_P1	PCH_USB3_RX_C_N1	GND	NC	NC	GND	NC	NC
1	PCH_USB2_P4	PCH_USB2_N4	GND	PCH_USB2_P5	PCH_USB2_N5	GND	PCH_USB2_P6	PCH_USB2_N6	GND	PCH_USB2_P7	PCH_USB2_N7	GND

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4.7.4 CompactPCI Serial Connector P4

	A	B	C	D	E	F	G	H	I	J	K	L
8	GND	NC	NC	GND	NC	NC	GND	NC	NC	GND	NC	NC
7	PCH_PCIE_SLOT6_TX_C_P	PCH_PCIE_SLOT6_TX_C_N	GND	PCH_PCIE_SLOT6_RX_C_P	PCH_PCIE_SLOT6_RX_C_N	GND	NC	NC	GND	NC	NC	GND
6	GND	PCH_PCIE_SLOT5_TX_C_P2	PCH_PCIE_SLOT5_TX_C_N2	GND	PCH_PCIE_SLOT5_RX_C_P2	PCH_PCIE_SLOT5_RX_C_N2	GND	PCH_PCIE_SLOT5_TX_C_P3	PCH_PCIE_SLOT5_TX_C_N3	GND	PCH_PCIE_SLOT5_RX_C_P3	PCH_PCIE_SLOT5_RX_C_N3
5	PCH_PCIE_SLOT5_TX_C_P0	PCH_PCIE_SLOT5_TX_C_N0	GND	PCH_PCIE_SLOT5_RX_C_P0	PCH_PCIE_SLOT5_RX_C_N0	GND	PCH_PCIE_SLOT5_TX_C_P1	PCH_PCIE_SLOT5_TX_C_N1	GND	PCH_PCIE_SLOT5_RX_C_P1	PCH_PCIE_SLOT5_RX_C_N1	GND
4	GND	PCH_PCIE_SLOT4_TX_C_P2	PCH_PCIE_SLOT4_TX_C_N2	GND	PCH_PCIE_SLOT4_RX_C_P2	PCH_PCIE_SLOT4_RX_C_N2	GND	PCH_PCIE_SLOT4_TX_C_P3	PCH_PCIE_SLOT4_TX_C_N3	GND	PCH_PCIE_SLOT4_RX_C_P3	PCH_PCIE_SLOT4_RX_C_N3
3	PCH_PCIE_SLOT4_TX_C_P0	PCH_PCIE_SLOT4_TX_C_N0	GND	PCH_PCIE_SLOT4_RX_C_P0	PCH_PCIE_SLOT4_RX_C_N0	GND	PCH_PCIE_SLOT4_TX_C_P1	PCH_PCIE_SLOT4_TX_C_N1	GND	PCH_PCIE_SLOT4_RX_C_P1	PCH_PCIE_SLOT4_RX_C_N1	GND
2	GND	PCH_PCIE_SLOT3_TX_C_P2	PCH_PCIE_SLOT3_TX_C_N2	GND	PCH_PCIE_SLOT3_RX_C_P2	PCH_PCIE_SLOT3_RX_C_N2	GND	PCH_PCIE_SLOT3_TX_C_P3	PCH_PCIE_SLOT3_TX_C_N3	GND	PCH_PCIE_SLOT3_RX_C_P3	PCH_PCIE_SLOT3_RX_C_N3
1	PCH_PCIE_SLOT3_TX_C_P0	PCH_PCIE_SLOT3_TX_C_N0	GND	PCH_PCIE_SLOT3_RX_C_P0	PCH_PCIE_SLOT3_RX_C_N0	GND	PCH_PCIE_SLOT3_TX_C_P1	PCH_PCIE_SLOT3_TX_C_N1	GND	PCH_PCIE_SLOT3_RX_C_P1	PCH_PCIE_SLOT3_RX_C_N1	GND

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4.7.5 CompactPCI Serial Connector P5

	A	B	C	D	E	F	G	H	I	J	K	L
6	C_SLOT5_CLK_REQ-L	C_SLOT5_100M_P	C_SLOT5_100M_N	C_SLOT6_CLK_REQ-L	C_SLOT6_100M_P	C_SLOT6_100M_N	C_SLOT7_CLK_REQ-L	C_SLOT7_100M_P	C_SLOT7_100M_N	NC	NC	NC
5	C_SLOT1_100M_P	C_SLOT1_100M_N	C_SLOT1_CLK_REQ-L	C_SLOT2_100M_P	C_SLOT2_100M_N	C_SLOT2_CLK_REQ-L	C_SLOT3_100M_P	C_SLOT3_100M_N	C_SLOT3_CLK_REQ-L	C_SLOT4_100M_P	C_SLOT4_100M_N	C_SLOT4_CLK_REQ-L
4	GND	NC	NC	GND	NC	NC	GND	NC	NC	GND	NC	NC
3	NC	NC	GND	NC	NC	GND	NC	NC	GND	NC	NC	GND
2	GND	NC	NC	GND	NC	NC	GND	NC	NC	GND	NC	NC
1	PCH_PCIE_SLOT7_TX_C_P	PCH_PCIE_SLOT7_TX_C_N	GND	PCH_PCIE_SLOT7_RX_C_P	PCH_PCIE_SLOT7_RX_C_N	GND	NC	NC	GND	NC	NC	GND

4.7.6 CompactPCI Serial Connector P6

DB-P6301 (4HP)

	A	B	C	D	E	F	G	H	I	J	K	L
8	GND	NC	NC	GND	NC	NC	GND	NC	NC	GND	NC	NC
7	NC	NC	GND	NC	NC	GND	NC	NC	GND	NC	NC	GND
6	GND	NC	NC	GND	NC	NC	GND	NC	NC	GND	NC	NC
5	NC	NC	GND	NC	NC	GND	NC	NC	GND	NC	NC	GND
4	GND	NC	NC	GND	NC	NC	GND	NC	NC	GND	NC	NC
3	NC	NC	GND	NC	NC	GND	NC	NC	GND	NC	NC	GND
2	GND	LAN2_MDI_T_P0	LAN2_MDI_T_N0	GND	LAN2_MDI_T_P1	LAN2_MDI_T_N1	GND	LAN2_MDI_T_P2	LAN2_MDI_T_N2	GND	LAN2_MDI_T_P3	LAN2_MDI_T_N3
1	LAN1_MDI_T_P0	LAN1_MDI_T_N0	GND	LAN1_MDI_T_P1	LAN1_MDI_T_N1	GND	LAN1_MDI_T_P2	LAN1_MDI_T_N2	GND	LAN1_MDI_T_P3	LAN1_MDI_T_N3	GND

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DB-P6302 (8HP)

	A	B	C	D	E	F	G	H	I	J	K	L
8	GND	NC	NC	GND	NC	NC	GND	NC	NC	GND	NC	NC
7	NC	NC	GND	NC	NC	GND	NC	NC	GND	NC	NC	GND
6	GND	NC	NC	GND	NC	NC	GND	NC	NC	GND	NC	NC
5	NC	NC	GND	NC	NC	GND	NC	NC	GND	NC	NC	GND
4	GND	LAN2_MDI3_T_P0	LAN2_MDI3_T_N 0	GND	LAN2_MDI3_T_P1	LAN2_MDI3_T_N 1	GND	LAN2_MDI3_T_P2	LAN2_MDI3_T_N 2	GND	LAN2_MDI3_T_P3	LAN2_MDI3_T_N 3
3	LAN2_MDI2_T_P0	LAN2_MDI2_T_N 0	GND	LAN2_MDI2_T_P1	LAN2_MDI2_T_N 1	GND	LAN2_MDI2_T_P2	LAN2_MDI2_T_N 2	GND	LAN2_MDI2_T_P3	LAN2_MDI2_T_N 3	GND
2	GND	LAN2_MDI1_T_P0	LAN2_MDI1_T_N 0	GND	LAN2_MDI1_T_P1	LAN2_MDI1_T_N 1	GND	LAN2_MDI1_T_P2	LAN2_MDI1_T_N 2	GND	LAN2_MDI1_T_P3	LAN2_MDI1_T_N 3
1	LAN2_MDI0_T_P0	LAN2_MDI0_T_N 0	GND	LAN2_MDI0_T_P1	LAN2_MDI0_T_N 1	GND	LAN2_MDI0_T_P2	LAN2_MDI0_T_N 2	GND	LAN2_MDI0_T_P3	LAN2_MDI0_T_N 3	GND

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5 Utilities

5.1 SEMA

Hardware monitoring and Watchdog Timer functionality are pro-vided by ADLINK's Smart Embedded Management Agent (SEMA), which operates via a Board Management Controller and communicates with the CPU through the SMBus. A graphical user interface program and command line interface are available to allow you to communicate with SEMA. Please refer to the SEMA user's manual, available the SEMA GitHub page: https://adlinktech.github.io/sema/index.html



NOTE:

SEMA features are dependent on hardware design. There may be additional costs for special service support.

5.2 Watchdog Timer

The cPCI-A3535's watchdog timer (WDT) is implemented by SEMA. For detailed information on how to program the WDT, refer to the SEMA user's manual WDT section on the SEMA GitHub page:

https://adlinktech.github.io/sema/WatchDog.html#sysfs-In

5.3 Controlling User LEDs

The User LEDs (uLED) on the cPCI-A3535 can be controlled using the GPIO pins of the Intel® RM590E Chipset: GPP_D18 (Left User LED), GPP_D19 (Right User LED). The following com-mands are sample code for Linux OS.

User LED	GPIO Pin	PINCTRL GPIO Number
Left	GPP_D18	gpio707
Right	GPP_D18	gpio708

5.3.1 Sample Code

```
# LED on: Pull high
# LED off: Pull low (default)

# uLED control by Chipset GPIO, add corresponding GPIO number to the system
    node
$ sudo sh -c "echo 707 > /sys/class/gpio/export"
$ sudo sh -c "echo 708 > /sys/class/gpio/export"

# uLED GPIO direction is output, set value "out" to the system node
$ sudo sh -c "echo out > /sys/class/gpio/gpio707/ direction"
$ sudo sh -c "echo out > /sys/class/gpio/gpio708/ direction"

# Set GPIO value "1" to turn uLED LED on
$ sudo sh -c "echo 1 > /sys/class/gpio/gpio707/value"
```


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```
$ sudo sh -c "echo 1 > /sys/class/gpio/gpio708/value"

# Set GPIO value "0" to turn uLED off
$ sudo sh -c "echo 0 > /sys/class/gpio/gpio707/value"
$ sudo sh -c "echo 0 > /sys/class/gpio/gpio708/value"

# Remove uLED GPIO used, unregister corresponding GPIO number from the
    system node
$ sudo sh -c "echo 707 > /sys/class/gpio/unexport"
$ sudo sh -c "echo 708 > /sys/class/gpio/unexport"
```


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6 BIOS Settings

The following chapter describes basic navigation for the AMI UEFI BIOS setup utility.

6.1 Starting the BIOS

To enter the setup screen, follow these steps:

1. Power on the motherboard
2. Press the < Delete > key on your keyboard when you see the following text prompt:

< Press DEL to run Setup >

3. After you press the < Delete > key, the main BIOS setup menu displays. You can access the other setup screens from the main BIOS setup menu.



In most cases, the < Delete > key is used to invoke the setup screen. There are several cases that use other keys, such as < F1 >, < F2 >, and so on.

6.1.1 Setup Menu

The main BIOS setup menu is the first screen that you can navi-gate. Each main BIOS setup menu option is described in this user's guide.

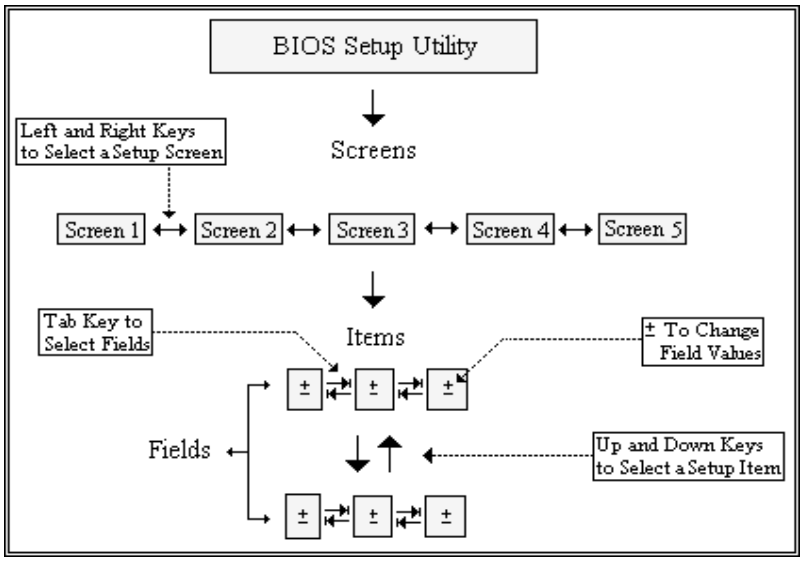
The Main BIOS setup menu screen has two main frames. The left frame displays all the options that can be configured. "Grayed" options cannot be configured, "Blue" options can be.

The right frame displays the key legend. Above the key legend is an area reserved for a text message. When an option is selected in the left frame, it is highlighted in white. Often a text message will accompany it.

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6.1.2 Navigation

The BIOS setup/utility uses a key-based navigation system called hot keys. Most of the BIOS setup utility hot keys can be used at any time during the setup navigation process.



NOTE: There is a hot key legend located in the right frame on most setup screens.

→← Left/Right. The Left and Right < Arrow > keys allow you to select a setup screen. For example: Main screen, Advanced screen, Chipset screen, and so on.

↑↓ Up/Down The Up and Down < Arrow > keys allow you to se-lect a setup item or sub-screen.

+- Plus/Minus The Plus and Minus < Arrow > keys allow you to change the field value of a particular setup item. For exam-ple: Date and Time.

Tab The < Tab > key allows you to select setup fields.

ESC The < Esc > key allows you to discard any changes you have made and exit the Setup. Press the < Esc > key to exit the setup without saving your changes. Press the < Enter > key to discard changes and exit. You can also use the < Arrow > key to select Cancel and then press the < Enter > key to abort this function and return to the previous screen.

6.2 Setup Menus

Refer to the document *cPCI-A3535 BIOS User's Manual* for detailed BIOS setup menu information, available for download from the ADLINK website at https://www.adlinktech.com/Products/CompactPCI/3UCompactPCISerialBlades/cPCI-A3535_Series.

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Safety Instructions

For user safety, please read and follow all instructions, WARNINGS, CAUTIONS, and NOTES marked in this manual and on the associated equipment before handling/operating the equipment.

- Read these safety instructions carefully.
- Keep this user’ s manual for future reference.
- Read the specifications section of this manual for detailed information on the operating environment of this equipment.
- When installing/mounting or uninstalling/removing equipment:
  - Turn off power and unplug any power cords/cables.
- To avoid electrical shock and/or damage to equipment:
  - Keep equipment away from water or liquid sources;
  - Keep equipment away from high heat or high humidity;
  - Keep equipment properly ventilated (do not block or cover ventilation openings);
  - Make sure to use recommended voltage and power source settings;
  - Always install and operate equipment near an easily accessible electrical socket-outlet;
  - Secure the power cord (do not place any object on/over the power cord);
  - Only install/attach and operate equipment on stable surfaces and/or recommended mountings; and,
  - If the equipment will not be used for long periods of time, turn off and unplug the equipment from its power source.
- Never attempt to fix the equipment. Equipment should only be serviced by qualified personnel.

A Lithium-type battery may be provided for uninterrupted, backup or emergency power.



WARNING:

Risk of explosion if battery is replaced with one of an incorrect type. Dispose of used batteries appropriately.

- Equipment must be serviced by authorized technicians when:
  - The power cord or plug is damaged;
  - Liquid has penetrated the equipment;
  - It has been exposed to high humidity/moisture;
  - It is not functioning or does not function according to the user’ s manual;
  - It has been dropped and/or damaged; and/or,
  - It has an obvious sign of breakage.

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