



User Manual

SOM-DB5830 A1

**Development Board for COM
Express Type 6 Pin-Out Modules**

ADVANTECH

Enabling an Intelligent Planet

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Product Warranty (2 years)

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This warranty does not apply to any products which have been repaired or altered by persons other than repair personnel authorized by Advantech, or which have been subject to misuse, abuse, accident or improper installation. Advantech assumes no liability under the terms of this warranty as a consequence of such events.

Because of Advantech's high quality-control standards and rigorous testing, most of our customers never need to use our repair service. If an Advantech product is defective, it will be repaired or replaced at no charge during the warranty period. For out-of-warranty repairs, you will be billed according to the cost of replacement materials, service time and freight. Please consult your dealer for more details.

If you think you have a defective product, follow these steps:

1. Collect all the information about the problem encountered. (For example, CPU speed, Advantech products used, other hardware and software used, etc.) Note anything abnormal and list any onscreen messages you get when the problem occurs.
2. Call your dealer and describe the problem. Please have your manual, product, and any helpful information readily available.
3. If your product is diagnosed as defective, obtain an RMA (return merchandise authorization) number from your dealer. This allows us to process your return more quickly.
4. Carefully pack the defective product, a fully-completed Repair and Replacement Order Card and a photocopy proof of purchase date (such as your sales receipt) in a shippable container. A product returned without proof of the purchase date is not eligible for warranty service.
5. Write the RMA number visibly on the outside of the package and ship it prepaid to your dealer.

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Declaration of Conformity

CE

This product has passed the CE test for environmental specifications. Test conditions for passing included the equipment being operated within an industrial enclosure. In order to protect the product from being damaged by ESD (Electrostatic Discharge) and EMI leakage, we strongly recommend the use of CE-compliant industrial enclosure products.

FCC Class B

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

Reorient or relocate the receiving antenna.

Increase the separation between the equipment and receiver.

Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

Consult the dealer or an experienced radio/TV technician for help.

Technical Support and Assistance

1. Visit the Advantech website at <http://support.advantech.com> where you can find the latest information about the product.
2. Contact your distributor, sales representative, or Advantech's customer service center for technical support if you need additional assistance. Please have the following information ready before you call:
 - Product name and serial number
 - Description of your peripheral attachments
 - Description of your software (operating system, version, application software, etc.)
 - A complete description of the problem
 - The exact wording of any error messages

Warnings, Cautions and Notes

Warning! Warnings indicate conditions, which if not observed, can cause personal injury!



Caution! Cautions are included to help you avoid damaging hardware or losing data. e.g.



There is a danger of a new battery exploding if it is incorrectly installed. Do not attempt to recharge, force open, or heat the battery. Replace the battery only with the same or equivalent type recommended by the manufacturer. Discard used batteries according to the manufacturer's instructions.

Note! Notes provide optional additional information.



Document Feedback

To assist us in making improvements to this manual, we welcome comments and constructive criticism. Please send all such, in writing, to:
support@advantech.com

Selection Guide w/ P/N

Part No.	Description
SOM-DB5830-00A1	COM Express R3.0 Development Board for Type 6 Pin-Out

Packing List

Part No.	Description	Quantity
SOM-EA10	PCIe x4 - to- 4 PCIe x1 Riser Card	1
1700008941	Serial ATA Cable 7P/7P 32cm	2
1701100300	Flat COM Port Cable	2
1960077251T000	I/O Bracket for SOM-DB5830	1
1910001675	POST M2.5*4L 2.5*5L 2.5 2.1 5 5 Cu Ni	5
1920001128	NUT M D=5 5 2.1 3 Cu Ni	5

Pin Description

Advantech provides useful checklists for schematic design and layout routing. The schematic checklist will specify details about each pin's electrical properties and how to connect for different user scenarios. The layout checklist will specify the layout constraints and recommendations for trace length, impedance, and other necessary information during the design process.

Please contact your nearest Advantech branch office for design documents and further advanced support.

Safety Instructions

1. Read these safety instructions carefully.
2. Keep this User Manual for later reference.
3. Disconnect this equipment from any AC outlet before cleaning. Use a damp cloth. Do not use liquid or spray detergents for cleaning.
4. For plug-in equipment, the power outlet socket must be located near the equipment and must be easily accessible.
5. Keep this equipment away from humidity.
6. Put this equipment on a reliable surface during installation. Dropping it or letting it fall may cause damage.
7. The openings on the enclosure are for air convection. Protect the equipment from overheating. **DO NOT COVER THE OPENINGS.**
8. Make sure the voltage of the power source is correct before connecting the equipment to the power outlet.
9. Position the power cord so that people cannot step on it. Do not place anything over the power cord.
10. All cautions and warnings on the equipment should be noted.
11. If the equipment is not used for a long time, disconnect it from the power source to avoid damage by transient overvoltage.
12. Never pour any liquid into an opening. This may cause fire or electrical shock.
13. Never open the equipment. For safety reasons, the equipment should be opened only by qualified service personnel.
14. If one of the following situations arises, please have the equipment checked by service personnel:
 - The power cord or plug is damaged.
 - Liquid has penetrated into the equipment.
 - The equipment has been exposed to moisture.
 - The equipment does not work well, or you cannot get it to work according to the user's manual.
 - The equipment has been dropped and damaged.
 - The equipment has obvious signs of breakage.
15. **DO NOT LEAVE THIS EQUIPMENT IN AN ENVIRONMENT WHERE THE STORAGE TEMPERATURE MAY GO BELOW -20° C (-4° F) OR ABOVE 60° C (140° F). THIS COULD DAMAGE THE EQUIPMENT. THE EQUIPMENT SHOULD BE KEPT IN A CONTROLLED ENVIRONMENT.**
16. **CAUTION: DANGER OF EXPLOSION IF BATTERY IS INCORRECTLY REPLACED. REPLACE ONLY WITH THE SAME OR EQUIVALENT TYPE RECOMMENDED BY THE MANUFACTURER, DISCARD USED BATTERIES ACCORDING TO THE MANUFACTURER'S INSTRUCTIONS.**

The sound pressure level at the operator's position according to IEC 704-1:1982 is no more than 70 dB (A).

DISCLAIMER: This set of instructions is given according to IEC 704-1. Advantech disclaims all responsibility for the accuracy of any statements contained herein.

Safety Precaution - Static Electricity

Follow these simple precautions to protect yourself from harm and the products from damage.

- To avoid electrical shock, always disconnect the power from your PC chassis before you work on it. Don't touch any components on the CPU card or other cards while the PC is on.
- Disconnect power before making any configuration changes. The sudden rush of power as you connect a jumper or install a card may damage sensitive electronic components.

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Chapter 1

General Information

This chapter gives background information of the SOM-DB5830 Type 6 compatible carrier board

Sections include:

- Introduction
- Functional Block Diagram
- Product Specification

1.1 Introduction

SOM-DB5830 is a new carrier board which complies with the PICMG COM.0 R 3.0 Type 6 Pin-out. Compared with COM.0 R 2.1, the differences in the main features are shown below (details can refer to PICMG COM.0 R 3.0 specification):

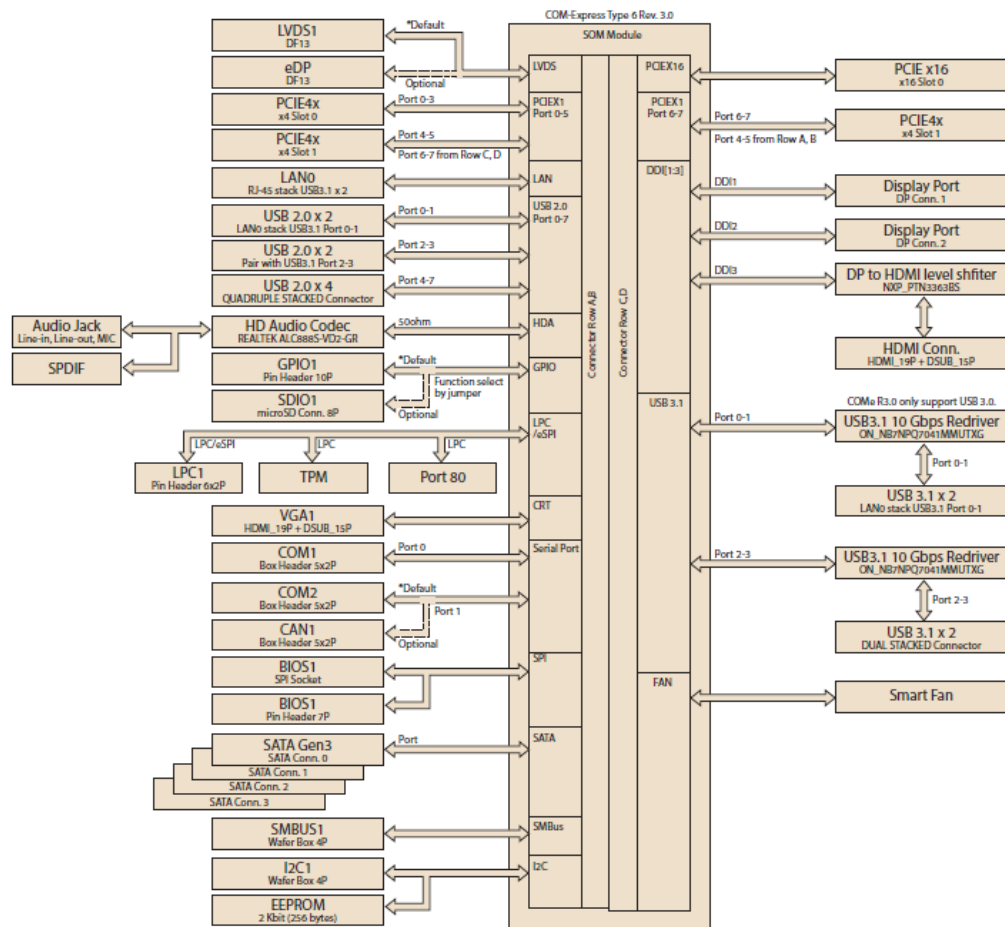
- Removed Express Card support
- Removed AC'97
- Added Rapid Shutdown support
- Left pin header of eSPI interface multiplexed over LPC

USB3.1 Gen2 will be a common feature of following generation platforms. SOM-DB5830 has been designed with a new USB driver for USB3.1 Gen2 - 10Gbit/s transfer rate which is better than COM Express specification.

Customers can emulate required functions on SOM-DB5830 as a reference design board. Customers can integrate the SOM-DB5830 directly into their product as the application boards.

Acronyms	
Term	Define
ACPI	Advanced Configuration Power Interface - standard to implement power saving modes in PC-AT systems
BIOS	Basic Input Output System - firmware in PC-AT system that is used to initialize system components before handing control over to the operating system
CAN	Controller-area network (CAN or CAN-bus) is a vehicle bus standard designed to allow microcontrollers to communicate with each other within a vehicle without a host computer
DDI	Digital Display Interface - containing DisplayPort, HDMI/DVI, and SDVO
EAPI	<p>Embedded Application Programmable Interface Software interface for COM Express© specific industrial function</p> <ul style="list-style-type: none"> ■ System Information ■ Watchdog Timer ■ I2C Bus ■ Flat Panel Brightness Control ■ User Storage Area ■ GPIO
GbE	Gigabit Ethernet
GPIO	General Purpose Input Output
HDA	Intel High Definition Audio (HD Audio) refers to the specification released by Intel in 2004 for delivering high definition audio that is capable of playing back more channels at higher quality than AC'97
I2C	Inter Integrated Circuit - 2 wire (clock and data) signaling scheme allowing communication between integrated circuit, primarily used to read and load register values
ME	Management Engine
PC-AT	"Personal Computer - Advanced Technology" - an IBM trademark term used to refer to Intel based personal computer in 1990s
PEG	PCI Express Graphics
RTC	Real Time Clock - battery backed circuit in PC-AT systems that keeps system time and date as well as certain system setup parameters
SPD	Serial Presence Detect - refers to serial EEPROM on DRAMs that has DRAM Module configuration information
TPM	Trusted Platform Module, chip to enhance the security features of a computer system
UEFI	Unified Extensible Firmware Interface
WDT	Watch Dog Timer

1.2 Block Diagram



Chapter 2

Mechanical Information

This chapter gives mechanical information on the SOM-DB5830 Type 6 compatible Carrier Board

Sections include:

- Board Information
- Mechanical Drawing
- Assembly Drawing

2.1 Board Information

The figures below indicate the main chips on COM Express Carrier Board.

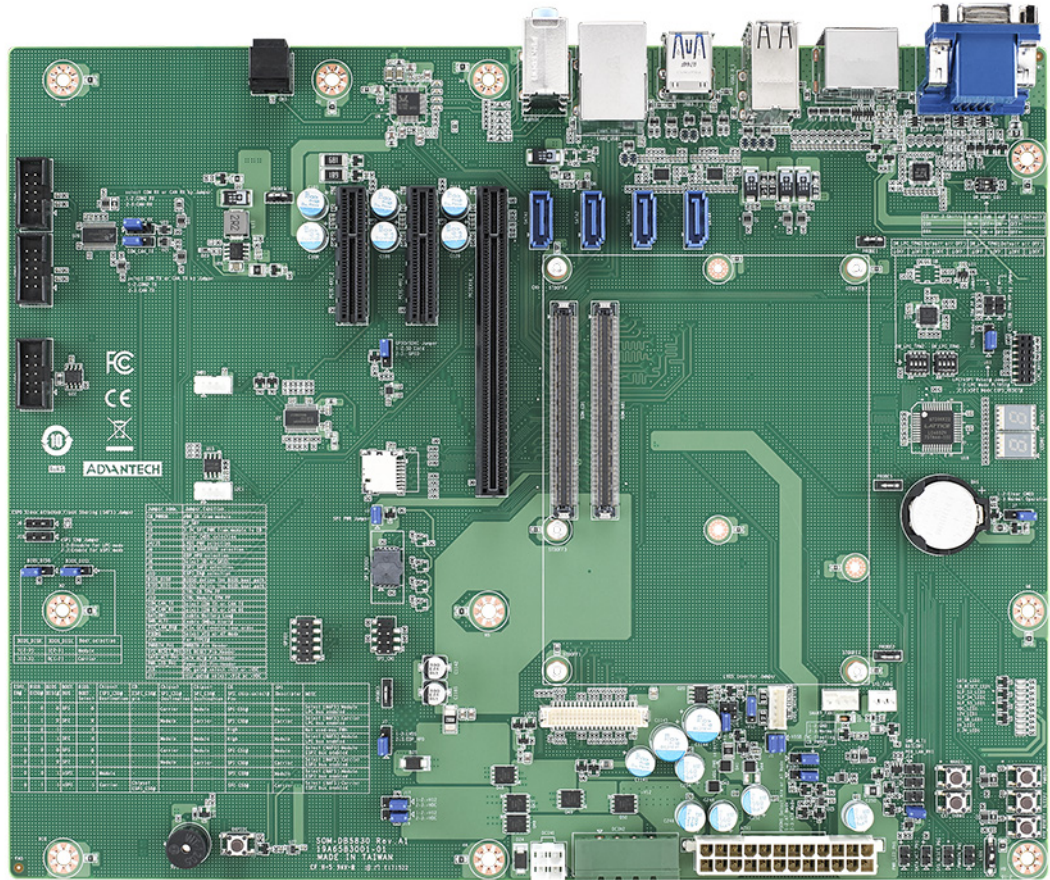


Figure 2.1 Board Chips ID - Front

2.2 Mechanical Drawing

For more detail about 2D/3D models, please find on Advantech COM support service website: <http://com.advantech.com>

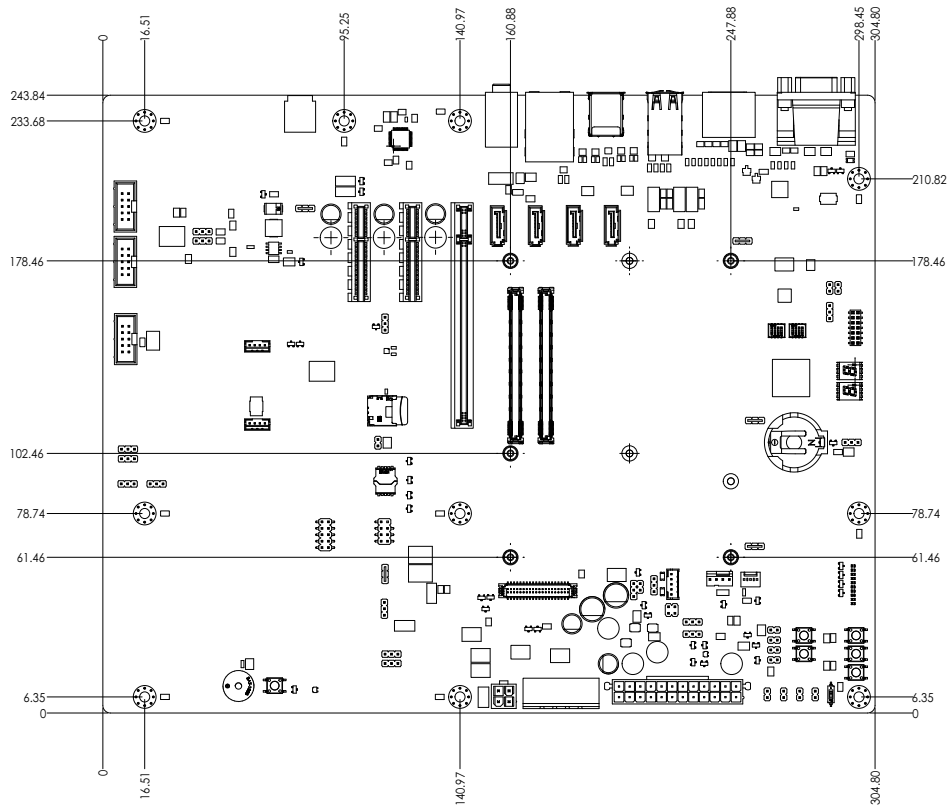


Figure 2.2 SOM-DB5830 Board Mechanical Drawing - Front

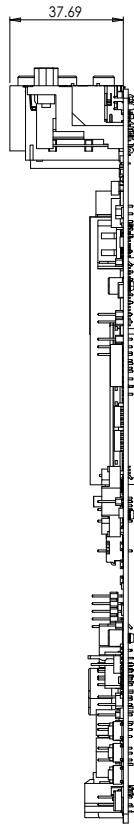


Figure 2.3 SOM-DB5830 Board Mechanical Drawing - Side

2.3 Assembly Drawing

These figures demonstrate the assembly order from the thermal module, COM Express Basic module to carrier board.

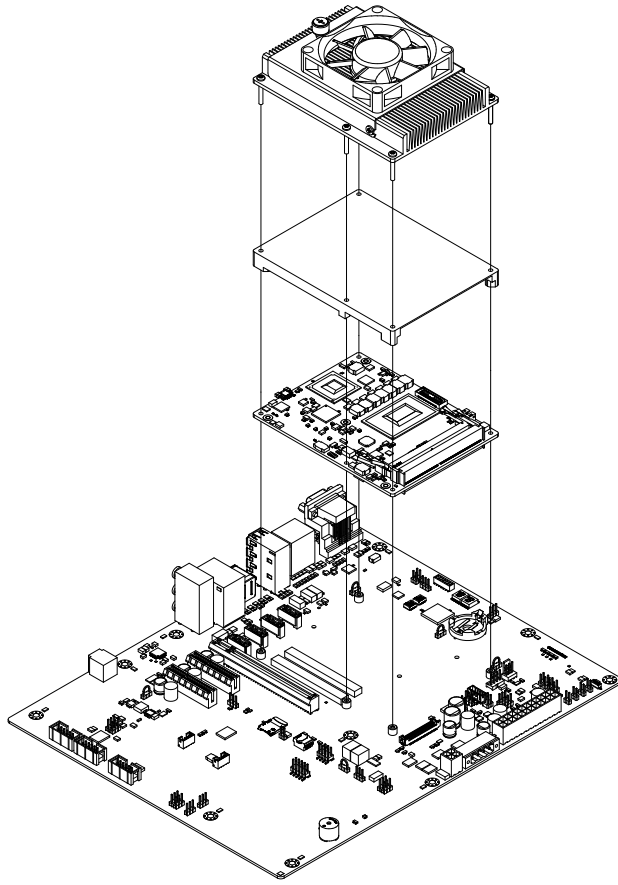


Figure 2.4 Assembly Drawing - COM Express to SOM-DB5830

Chapter 3

Connectors and Jumper Settings

This chapter provides info on connectors and jumper settings on the SOM-DB5830 Type 6 compatible Carrier Board

3.1 SOM-DB5830 A1 Connectors and Jumper Setting

3.1.1 Connector Location

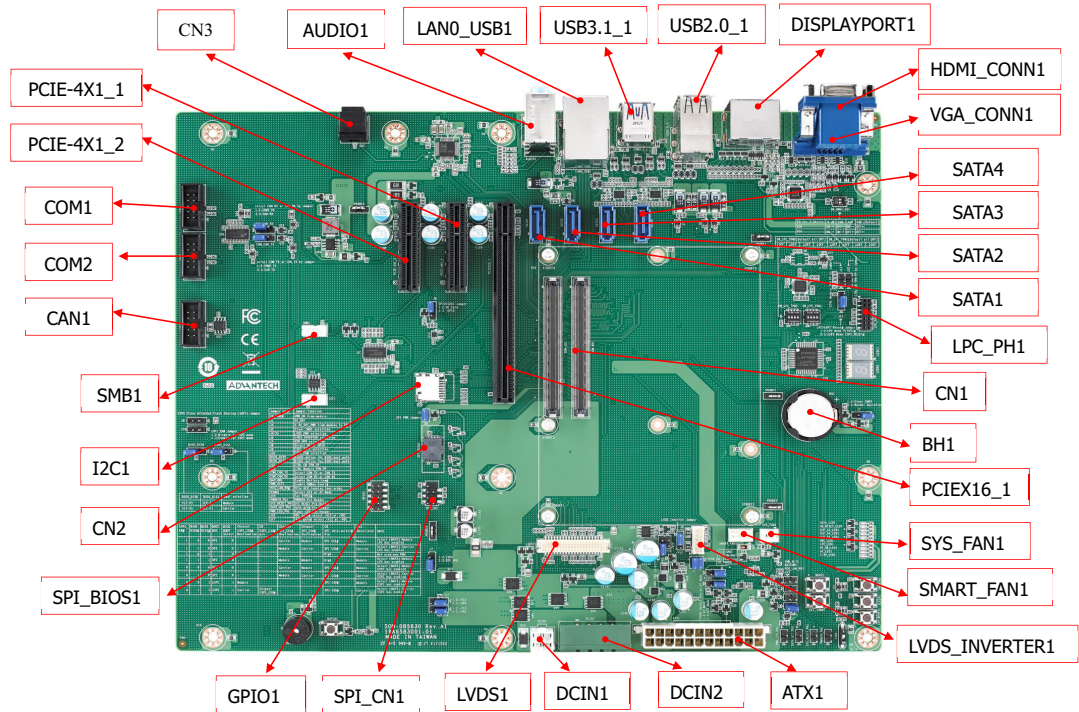
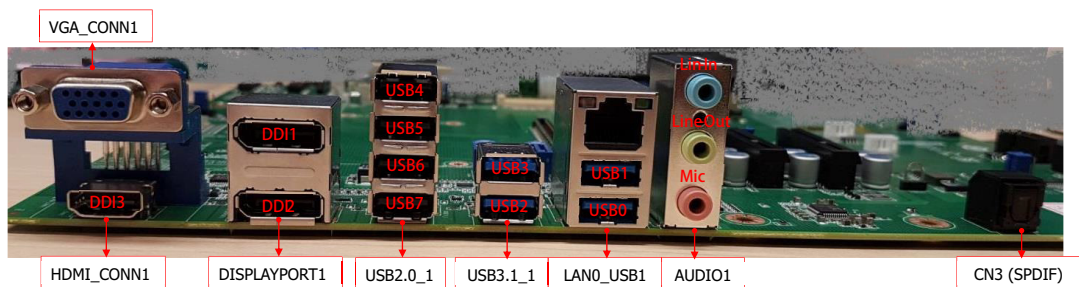
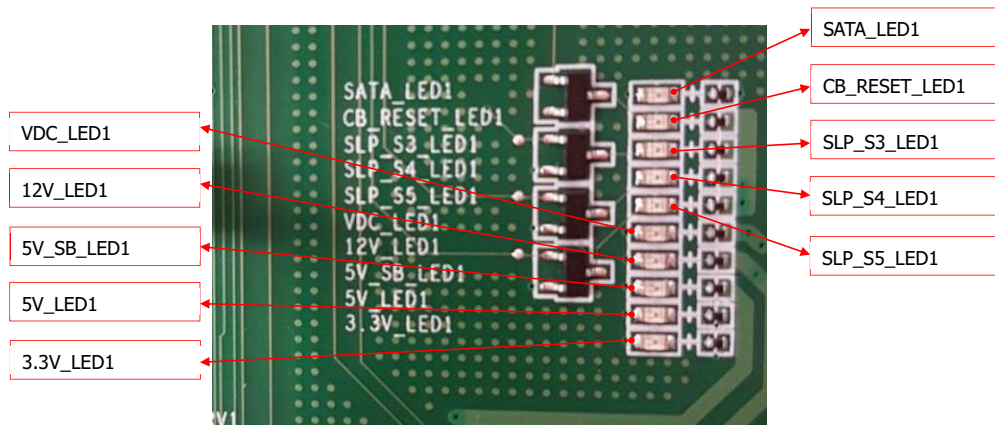


Figure 3.1 Connector Location

3.1.2 IO Connector Location



3.1.3 LED Location



3.1.4 Jumper and Switch Location

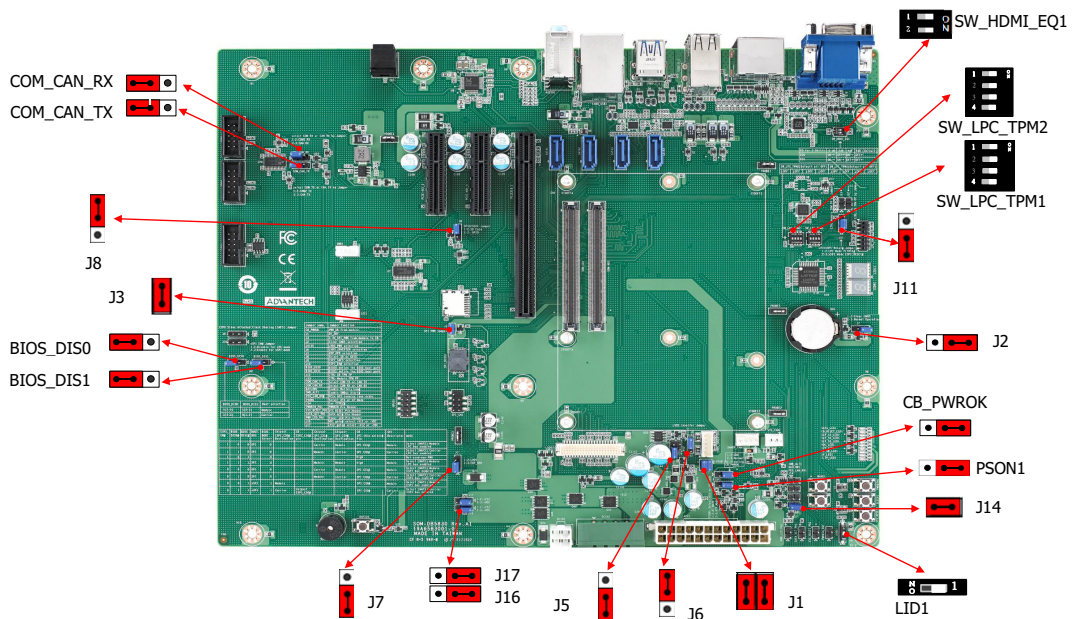


Figure 3.2 SOM-DB5830 A1 Default Jumper Setting

3.1.5 Connector List

Table 3.1: Connector List			
Label	Function	Label	Function
ATX1	ATX Connector	BH1	RTC Battery Connector
CN1	COM Express Connector	SMART_FAN1	Smart Fan Connector
COM1	COM Port1 Connector (Tx, Rx)	SMB1	SMBus Wafer Box
COM2	COM Port2 Connector (Tx, Rx)	SYS_FAN1	System Fan Connector
DCIN1	Wide Range DC Input Connector1	SPI_CN1	SPI BIOS PIN HEADER
GPIO1	GPIO Pin Header	CAN1	CAN Bus Connector
I2C1	I2C Wafer Box	SPI_BIOS1	SPI BIOS Socket
LAN0_USB1	LAN, USB3.1/2.0 Port0 and Port1 Connector	DCIN2	Wide Range DC Input Connector2
LPC_PH1	Low Pin Count Pin Header	PCIE-4X1_1	PCIe x4 Slot1
PCIE_X16_1	PCIe x16 Slot	SATA1	SATA Port0 Connector
PCIE-4X1_2	PCIe x4 Slot2	SATA2	SATA Port1 Connector
LVDS_INVERTER1	LVDS INVERTER Connector	SATA3	SATA Port2 Connector
CN3	S/PDIF Connector	SATA4	SATA Port3 Connector
DISPLAYPORT1	Display Port1&2 Connector	HDMI_CONN1	HDMI Connector
USB2.0_1	USB2.0 Port4~7 Connector	VGA_CONN1	CRT Connector
USB3.1_1	USB3.1 Port2~3 Connector	AUDIO1	AUDIO Jack
CN2	Micro SD Card Connector	LVDS1	LVDS Connector

3.1.6 Jumper, Switch and Button List

Table 3.2: Jumper, Switch and Button List

Label	Function	Label	Function
J16, J17	SOM-DB5830 Voltage Input (VIN) Selection	SW_LPC_TPM1	TPM Enable/Disable Switch
J1	COMe Module +V5SB Supply	SW_LPC_TPM2	TPM Enable/Disable Switch
PERSON1	ATX / AT Mode Selection	CB_PWROK	PWROK Signal Pull Down or Floating Selection
J3	Carrier Board SPI power supply	PWRBTN1	Power Button
J2	Normal Operation / Clear COMS Selection	SYS_RESET1	Reset Button
J9	eSPI_SAFS Selection	SLEEP1	Sleep Button
J10	eSPI_EN# Selection	EXT_THRM1	External Thermal Trip Button
J11	LPC / eSPI Reset# Jumper Selection	WAKE1	Wake Button
J12	CTRL CB TPM PP Selection	LID1	LID Button
J13	CTRL Module TPM PP Selection	RAPID1	Rapid Shutdown Button
J14	COMe R3.0 support Type SEL	SW_HDMI_EQ1	HDMI level shifter EQ SEL
J4, J5	LVDS_PWR Selection		
J6	LVDS_INVERTER Selection		
J8	GPIO / SDIO SEL		
J7	EDP / LVDS HPD Selection		
BIOS_DIS0	BIOS Disable0		
BIOS_DIS1	BIOS Disable1		
CB_PWROK	PWR_OK from module SEL		
COM_CAN_TX	COM TX / CAN TX SEL		
COM_CAN_RX	COM RX / CAN RX SEL		
BATLOW1	Enable Battery Low#		
SMB_ALT1	Enable SMBus Alert#		
PEG_LAN_RV1	PCIe GFX Reverse Lane Order		
PWRBTN_PH1	PWRBTN Pin Header		
SYS_RESET_PH1	SYS RESET Pin Header		
SATA_ACT_PH1	SATA ACT# Pin Header		
PWR_LED_PH1	Power LED Pin Header		

3.1.7 Switch Setting

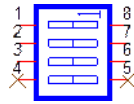


Table 3.3: SW_LPC_TPM1 & SW_LPC_TPM2: TPM Enable/Disable Switch

Dip Switch	1-8	2-7	3-6	4-5	Function
SW_LPC_TPM1 ~	ON	ON	ON	ON	TPM Enable
SW_LPC_TPM2	OFF	OFF	OFF	OFF	TPM Disable [Default]

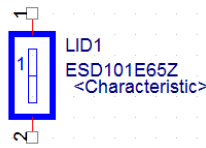


Table 3.4: LID1 LID Button Enable/Disable Switch

Dip Switch	1-2	Function
LID1	ON	LID# Enable
	OFF	LID# Disable [Default]

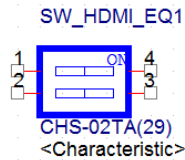


Table 3.5: SW_HDMI_EQ1 HDMI level shifter EQ SEL

Dip Switch	1-4	2-3	Function
SW_HDMI_EQ1	ON	ON	EQ set to 0dB
	OFF	ON	EQ set to 2dB
	ON	OFF	EQ set to 4dB
	OFF	OFF	EQ set to 6dB [Default]

3.1.8 Connector Pin Definition

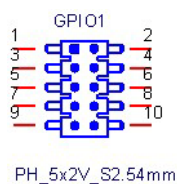


Table 3.6: GPIO1 GPIO Pin Header

Pin	Signal	Pin	Signal
1	GPI0	2	GPO0
3	GPI1	4	GPO1
5	GPI2	6	GPO2
7	GPO1	8	GPO3
9	GPI3	10	GND

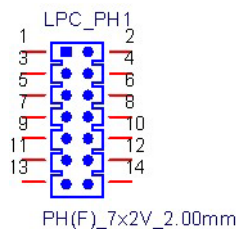


Table 3.7: LPC_PH1 Low Pin Count Pin Header

Pin	Signal	Pin	Signal
1	CLK33M_PH	2	LPC_PH_AD1
3	ESPI_LPC_RST#	4	LPC_PH_AD0
5	LPC_PH_FRAME#	6	+V3.3
7	LPC_PH_AD3	8	GND
9	LPC_PH_AD2	10	Pull-up via 10K ohm to +V3.3
11	SERIRQ_PH	12	ESPI_LPC_RST#
13	+V5_DUAL	14	+V5

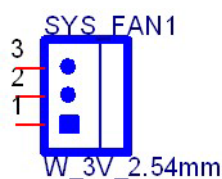


Table 3.8: SYS_FAN1 System Fan Connector

Pin	Signal
1	GND
2	+V12
3	SYS_FAN_SENSE

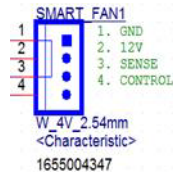


Table 3.9: SMART_FAN1 Smart Fan Connector

Pin	Signal
1	GND
2	+V_FAN
3	FANTACH_R1
4	FANPWM_R

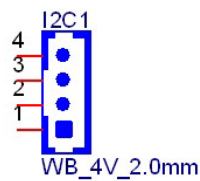


Table 3.10: I²C1 I²C Wafer Box

Pin	Signal
1	GND
2	I2C_DAT
3	I2C_CLK
4	+V3.3_DUAL

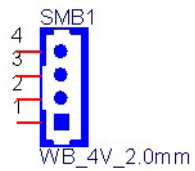


Table 3.11: SMB1 SMBus Wafer Box

Pin	Signal
1	GND
2	SMB_DAT
3	SMB_CLK
4	+V3.3_DUAL

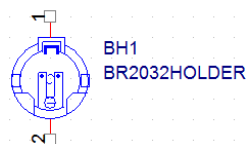


Table 3.12: BH1 RTC Battery Connector

Pin	Signal
1	3SMB_CLK
2	4+V3.3_DUAL

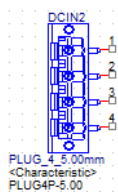


Table 3.13: DCIN2 Wide Range DC Input Connector2

Pin	Signal
1	GND
2	+VDC
3	+VDC
4	GND

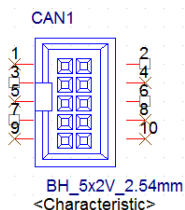


Table 3.14: CAN1 CAN Bus Connector

Pin	Signal	Pin	Signal
1	NC	2	CAN1_D-
3	GND	4	NC
5	NC	6	GND
7	CAN1_D+	8	NC
9	NC	10	NC

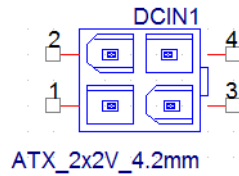


Table 3.15: DCIN1 Wide Range DC Input Connector1

Pin	Signal	Pin	Signal
1	GND	3	+VDC
2	GND	4	+VDC

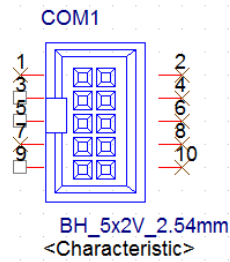


Table 3.16: COM1 COM Port1 Connector

Pin	Signal	Pin	Signal
1	NC	2	NC
3	COM1_RX	4	NC
5	COM1_TX	6	NC
7	NC	8	NC
9	GND	10	NC

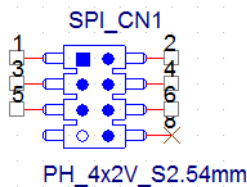


Table 3.17: SPI_CN1 SPI BIOS Pin Header

Pin	Signal	Pin	Signal
1	+V3.3M_SPI_J	2	GND
3	Q_SPI_PH_CS#	4	Q_SPI_PH_CLK
5	Q_SPI_PH_MISO	6	Q_SPI_PH_MOSI
X		8	NC

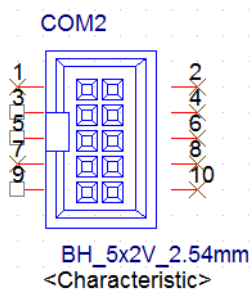


Table 3.18: COM2 COM Port2 Connector

Pin	Signal	Pin	Signal
1	NC	2	NC
3	COM2_RX	4	NC
5	COM2_TX	6	NC
7	NC	8	NC
9	GND	10	NC

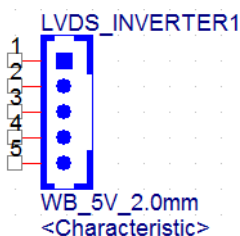


Table 3.19: LVDS_INVERTER1 LVDS INVERTER Connector

Pin	Signal
1	+V12_Z_LVDS
2	GND
3	LVDS_BKLT_Z_EN#
4	LVDS_Z_VBR
5	+V5_LVDS

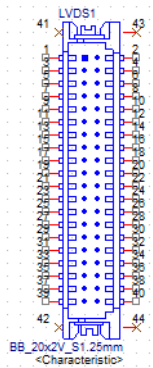


Table 3.20: LVDS1 LVDS Connector

Pin	Signal	Pin	Signal
1	+VLVDS_PANEL_PWR	2	+VLVDS_PANEL_PWR
3	GND	4	GND
5	+VLVDS_PANEL_PWR	6	+VLVDS_PANEL_PWR
7	LVDS0_Z_D0-	8	LVDS1_Z_D0-
9	LVDS0_Z_D0+	10	LVDS1_Z_D0+
11	GND	12	GND
13	LVDS0_Z_D1-	14	LVDS1_Z_D1-
15	LVDS0_Z_D1+	16	LVDS1_Z_D1+
17	GND	18	GND
19	LVDS0_Z_D2-	20	LVDS1_Z_D2-
21	LVDS0_Z_D2+	22	LVDS1_Z_D2+
23	GND	24	GND
25	LVDS0_Z_CLK-	26	LVDS1_Z_CLK-
27	LVDS0_Z_CLK+	28	LVDS1_Z_CLK+
29	GND	30	GND
31	LVDS_Z_DDC_CLK_eDP_AUX+	32	LVDS_Z_DDC_DAT_eDP_AUX-
33	GND	34	EDP_HDP_A
35	LVDS0_Z_D3-	36	LVDS1_Z_D3-
37	LVDS0_Z_D3+	38	LVDS1_Z_D3+
39	Pull-low via 4.7Kohm to GND	40	LVDS1_CTRL

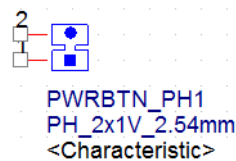
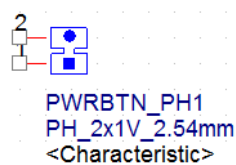
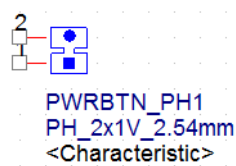


Table 3.21: PWRBTN_PH1 PWRBTN Pin Header

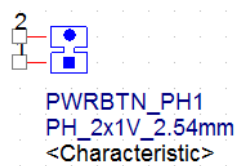
Pin	Signal
1	GND
2	PWRBTN#


Table 3.22: SYS_RESET_PH1 SYS RESET Pin Header

Pin	Signal
1	GND
2	PM_EXTRST#


Table 3.23: SATA_ACT_PH1 SATA ACT# Pin Header

Pin	Signal
1	SATA_ACT#
2	Pull-up via 330 ohm to +V3.3


Table 3.24: PWR_LED_PH1 Power LED Pin Header

Pin	Signal
1	GND
2	Pull-up via 330 ohm to +V5

3.1.9 Jumper Setting

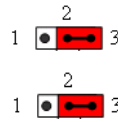


Table 3.25: BIOS_DISABLE0/BIOS_DISABLE1 BIOS Disable0, BIOS Disable1

BIOS_DISABLE1# (BIOS_DISABLE1)	BIOS_DISABLE0# (BIOS_DISABLE0)	Chipset SPI CS1# Destination	Chipset SPI CS0# Destination	Carrier SPI_CS#	SPI Descriptor	BIOS Entry
2-3 (1)	2-3 (1)	Module	Module	High	Module	SPI0/SPI1 [Default]
1-2 (0)	2-3 (1)	Module	Carrier	SPI0	Carrier	SPI0/SPI1
1-2 (0)	1-2 (0)	Carrier	Module	SPI1	Module	SPI0/SPI1



Table 3.26: J16, J17 SOM-DB5830 Voltage Input (VIN) Selection

Pin	Function
J16 1-2 J17 1-2	Supply ATX (+V12) to VIN [Default]
J16 2-3 J17 2-3	Supply DCIN (+VDC) to VIN

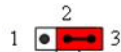


Table 3.27: PSON1 ATX / AT Mode Selection

Pin	Function
1-2	AT Mode
2-3	ATX Mode [Default]



Table 3.28: J1 COMe Module +V5SB Supply

Pin	Function
1-X 3-X	Not supply +V5SB to COMe Module
1-2 3-4	Supply +V5SB to COMe Module [Default]

**Table 3.29: J3 Carrier Board SPI power supply**

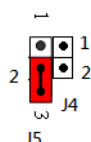
Pin	Function
1-2	Carrier Board SPI Power Supply [Default]
1-X	Carrier Board SPI No Power

**Table 3.30: J13 COMe Module TPM Disable**

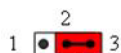
Pin	Function
1-X	COMe Module TPM Enable [Default]
1-2	COMe Module TPM Disable

**Table 3.31: J12 Carrier Board TPM Disable**

Pin	Function
1-X	Carrier Board TPM Enable [Default]
1-2	Carrier Board TPM Disable

**Table 3.32: J4, J5 LVDS_PWR selection**

Pin	Function
J5 2-3	LVDS_PWR is +V3.3 [Default]
J5 1-2	LVDS_PWR is +V5
J4 2 - J5 2	LVDS_PWR is +V12

**Table 3.33: J2 Normal Operation / Clear COMS Selection**

Pin	Function
1-2	Clear CMOS
2-3	Normal Operation [Default]

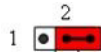


Table 3.34: CB_PWROK Power ok signal Pull Down\Floating Selection

Pin	Function
1-2	POWROK Signal Pull Down
2-3	POWROK Signal Connect to Module [Default]
2-X	POWROK Signal Floating



Table 3.35: J7 EDP / LVDS HPD selection

Pin	Function
1-2	LVDS HPD [Default]
2-3	EDP HPD

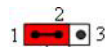


Table 3.36: COM_CAN_TX COM TX / CAN TX SEL

Pin	Function
1-2	COM Port TX [Default]
2-3	CAN BUS TX

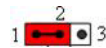


Table 3.37: COM_CAN_RX COM RX / CAN RX SEL

Pin	Function
1-2	COM Port RX [Default]
2-3	CAN BUS RX



Table 3.38: J6 LVDS_INVERTER selection

Pin	Function
1-2	INVERTER is +V5 [Default]
2-3	INVERTER is +V12



Table 3.39: J8 GPIO_SDIO_SEL

Pin	Function
1-2	SD Card
2-3	GPIO [Default]



Table 3.40: J11 ESPI Reset SEL

Pin	Function
1-2	PLRST# [Default]
2-3	ESPI RESET#



Table 3.41: J10 ESPI EN & Disable SEL

Pin	Function
1-2	ESPI Disable
2-3	ESPI EN
1-X	LPC [Default]

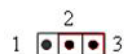


Table 3.42: J9 ESPI_SAFS Selection

Pin	Function
1-2	ESPI_SAFS Mode
2-3	ESPI_SAFS Disable



Table 3.43: PEG_LAN_RV1 PCIe GFX reverse lane order

Pin	Function
1-2	PCIe GFX Lane Reverse
1-X	Normal [Default]



Table 3.44: SMB_ALT1 SMB_ALT#

Pin	Function
1-2	SMBus Alert
1-X	Normal [Default]



Table 3.45: J14 COMe R3.0 support Type SEL

Pin	Function
1-2	Support Type Enable [Default]
1-X	Support Type Disable



Table 3.46: BATLOW1 BATLOW#

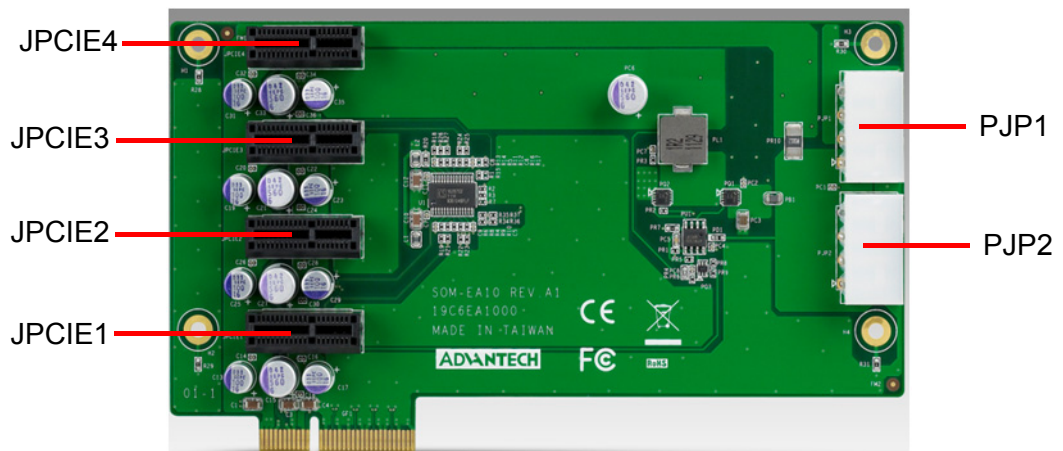
Pin	Function
1-2	Battery Low
1-X	Normal [Default]

Chapter 4

SOM-EA10

4.1 SOM-EA10

4.1.1 Connector Location

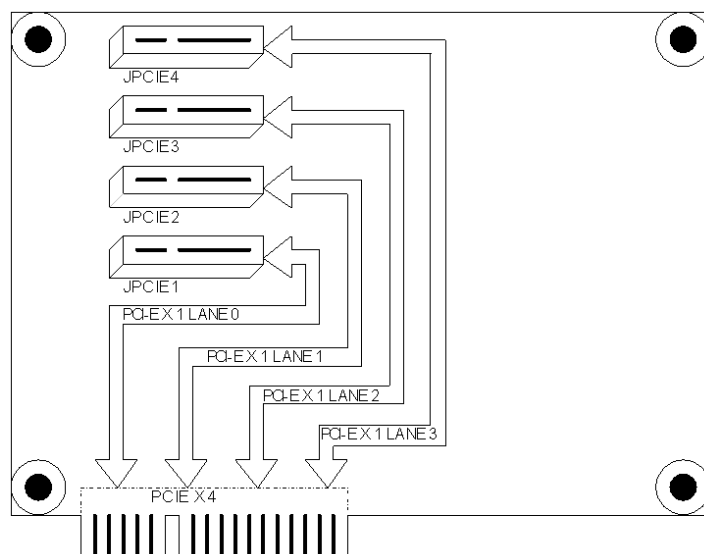


4.1.2 Connector List

Table 4.1: Connector List

Label	Function
JPCIE1	PCIe x1 Port 1 Connector
JPCIE2	PCIe x1 Port 2 Connector
JPCIE3	PCIe x1 Port 3 Connector
JPCIE4	PCIe x1 Port 4 Connector
PJP1	4P Power Connector
PJP2	4P Power Connector

4.1.3 SOM-EA10 Block Diagram



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