



User Manual

SOM-DB5720

**Development Board for COM
Express Type 1 & 2 Pin-out
Modules**

ADVANTECH

Enabling an Intelligent Planet

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Product Warranty (2 years)

Advantech warrants to you, the original purchaser, that each of its products will be free from defects in materials and workmanship for two years from the date of purchase.

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.

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

Packing List

Before setting up the system, check that the items listed below are included and in good condition. If any items are missing, please contact your dealer immediately.

SOM-DB5720-U0A1E:

- 1 SOM-DB5720 development board
- 1 SOM-EA20 HDMI/DisplayPort Riser Card
- 1 SOM-EA04 for COM-Mini Board
- 1 SOM-EA10 PCIe x4-to-4 PCIe x1 Riser Card
- 2 Serial ATA cable 7P/ 7P 30cm
- 1 D-SUB 9P cable 30cm
- 1 I/O Shield Bracket for SOM-DB5720
- 1 DDI card Bracket for SOM-EA20
- 5 Standoff (screw)
- 5 NUT (screw)
- 2 M3.5L screw
- 3 M2.5L screw

SOM-DB5720-00A1E:

- 1 SOM-DB5720 development board
- 1 SOM-EA20 HDMI/DisplayPort Riser Card
- 1 SOM-EA10 PCIe x4-to-4 PCIe x1 Riser Card
- 2 Serial ATA cable 7P/ 7P 30cm
- 1 D-SUB 9P cable 30cm

- 1 I/O Shield Bracket for SOM-DB5720
- 1 DDI card Bracket for SOM-EA20
- 5 Standoff (screw)
- 5 NUT (screw)
- 2 M3.5L screw
- 3 M2.5L screw

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, get 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 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

1.1 Introduction

SOM-DB5720 is a development board for COM-Express Type 1 & 2 pin-out module that fully complies with the PCI Industrial Computer Manufacturers PICMG COM Express standard. It is suitable for different form factor modules including COM-Basic, COM-Compact, and COM-Mini. All functions provided by COM-Express type 2 pin-outs are implemented on SOM-DB5720 with the most popular interfaces or connectors for ease of development and verification. Additional accessories help customers evaluate more applications, such as DDI cards that provide extended functions for HDMI/Displayport, PCIe riser card extend PCIe x4 to PCIe x1, and transition boards make SOM-DB5720 compatible with type 1 pin-out. This board provides a reliable testing platform and the flexibility for customer vertical market application pre-study.

1.2 SOM-DB5720 Connectors and Jumper Settings

1.2.1 SOM-DB5720 Connector Location

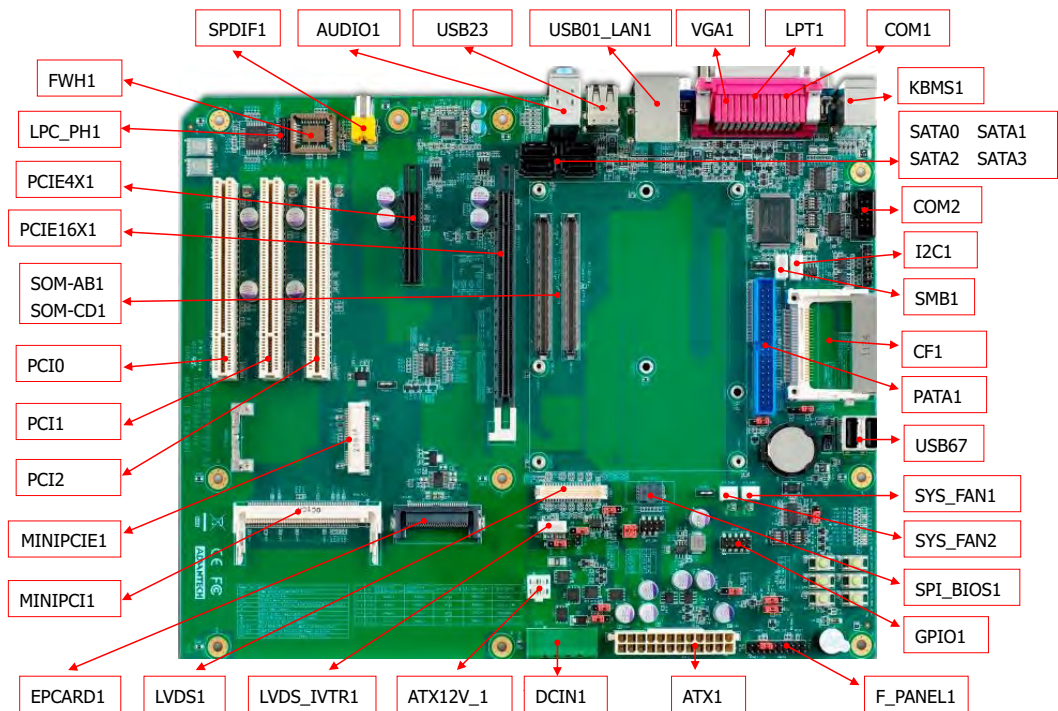
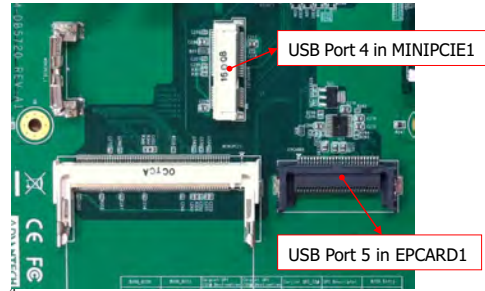
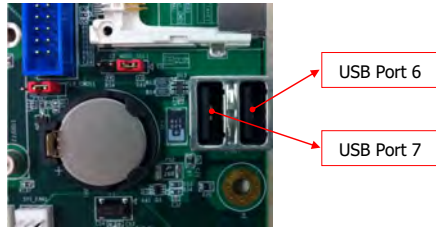
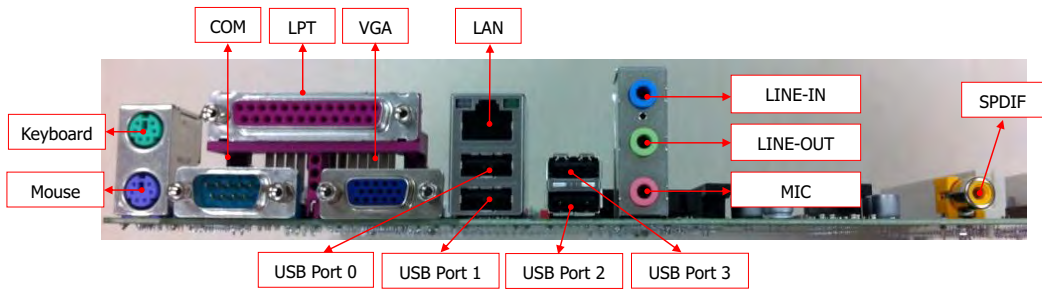
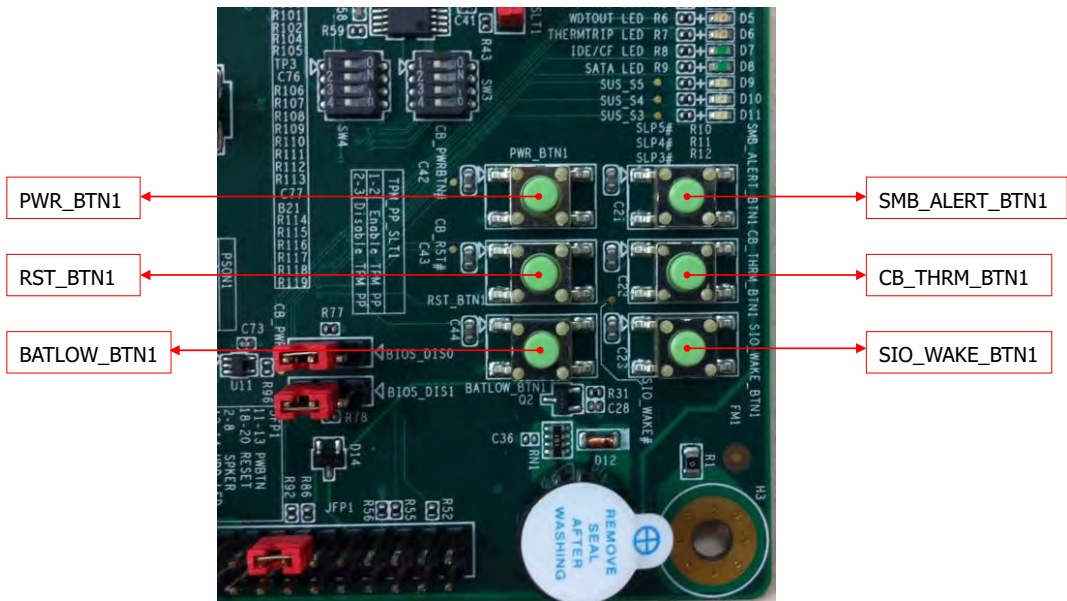


Figure 1.1 SOM-DB5720 Connector Location

1.2.2 I/O Connector Location



1.2.3 Button Location



1.2.4 Jumper and Switch Location

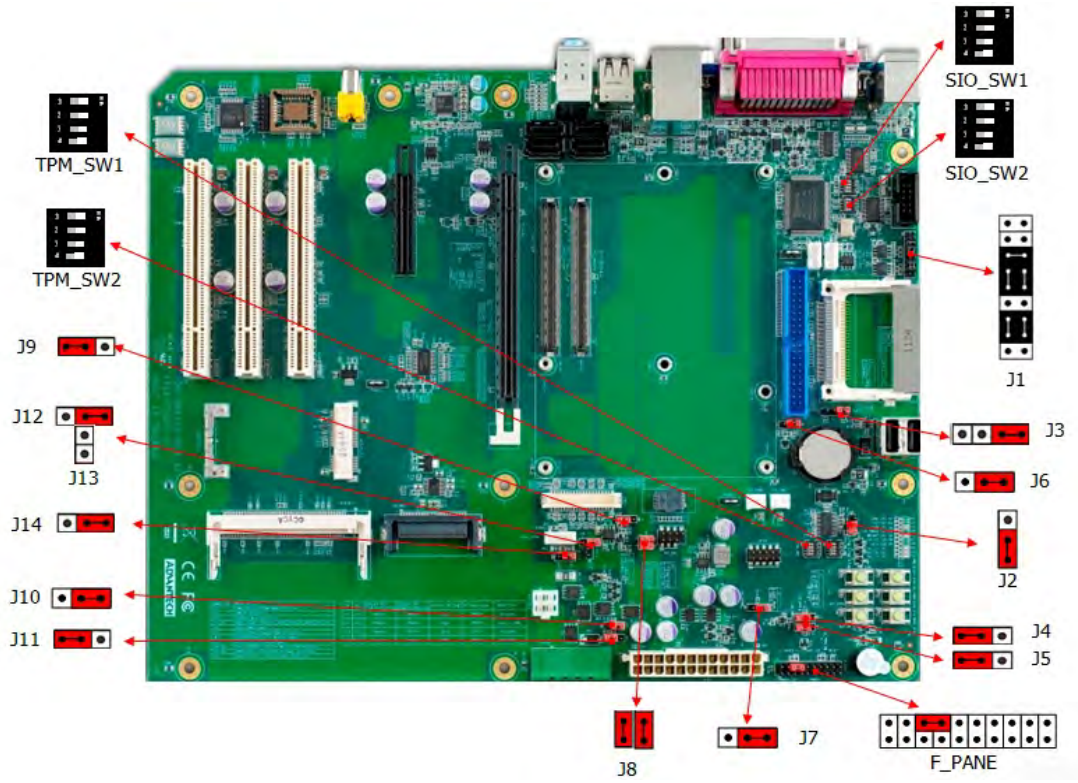


Figure 1.2 SOM-DB5720 Default Jumper Settings

1.2.5 Connector List

Table 1.1: Connector List			
Label	Function	Label	Function
ATX1	ATX Connector	PCI0	PCI Slots
ATX12V_1	ATX 4 Pin 12 V In Connector	PCI1	PCI Slots
AUDIO1	Line-in, Line-out and MIC Connector	PCI2	PCI Slots
CF1	CF Card Slot	PCIE16X1	PCIe x16 slot
COM1	COM Port Connector (RS-232)	PCIE4X1	PCIe x4 slot
COM2	COM Port Connector (RS-232/422/485)	SATA0	SATA Connectors
DCIN1	Wide Range DC Input Connector	SATA1	SATA Connectors
EPCARD1	Express Card Connector (Include USB2.0 Port 5)	SATA2	SATA Connectors
F_PANEL1	Front Panel Connector	SATA3	SATA Connectors
FWH1	Firmware Hub Socket	SMB1	SMBus Wafer Box
GPIO1	GPIO Pin Header	SOM-AB1	COM Express Connector Row A-B
I2C1	I ² C Wafer Box	SOM-CD1	COM Express Connector Row C-D
KBMS1	PS/2 Keyboard and Mouse Connector	SPDIF1	SPDIF Connector
LPC_PH1	Low Pin Count Pin Header	SPI_BIOS1	SPI BIOS Socket
LPT1	Printer Port Connector	SYS_FAN1	System Fan Connector1
LVDS_IVTR1	LVDS Inverter Power Wafer Box	SYS_FAN2	System Fan Connector2
LVDS1	LVDS Interface Connector	USB01_LAN1	USB2.0 Port 0 & 1 and LAN1 Connector
MINIPCI1	Mini-PCIe Connector (Include USB2.0 Port 4)	USB23	USB2.0 Port 2 & 3 Connector
PATA1	PATA Connector	USB67	USB2.0 Port 6 & 7 Connector
VGA1	CRT Connector		

1.2.6 Jumper, Switch and Button List

Table 1.2: Jumper, Switch and Button List

Label	Function	Label	Function
J1	COM2 RS-232 / RS-422 / RS-485 Selection	SIO_SW1	SIO LPC Bus On-Off Switch.
J2	Carrier Board TPM Enable/Disable Selection	SIO_SW2	SIO LPC Bus On-Off Switch.
J3	CF/PATA Mode Selection	TPM_SW1	TPM LPC Bus On-Off Switch.
J4	BIOS Disable0	TPM_SW2	TPM LPC Bus On-Off Switch.
J5	BIOS Disable1	-----	-----
J6	Clear COMS Jumper	BATLOW_BTN1	Battery Low Button
J7	ATX / AT Mode Selection	CB_THRM_BTN1	Carrier Board Thermal Trip Button
J8	COMe Module +V5SB supply	PWR_BTN1	Power Button
J9	PEG Function Enable/Disable Selection	RST_BTN1	Reset Button
J10, J11	SOM-DB5720 Voltage Input (VIN) Selection	SIO_WAKE_BTN1	Carrier Board SIO System Wake Up Button
J12, J13	LVDS Panel Voltage Selection	SMB_ALERT_BTN1	Carrier Board SM Bus Alert Button_
J14	LVDS Inverter Voltage Selection		

1.2.7 Connector Pin Definition

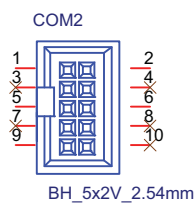


Table 1.3: COM2

Pin	Signal	Pin	Signal
1	NDCD#2_TXD485-	2	COM2_DSR#
3	NRXD2_TXD485+	4	COM2_RTS#
5	NTXD2_RXD485+	6	COM2_CTS#
7	NDTR#2_RXD485-	8	COM2_RI#
9	GND	10	NC

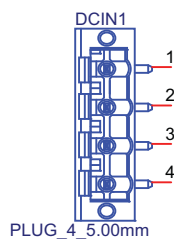


Table 1.4: DCIN1

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

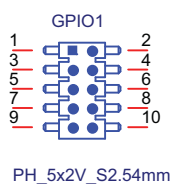


Table 1.5: GPIO1

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

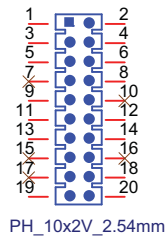


Table 1.6: F_PANEL1

Pin	Signal	Pin	Signal
1	PWR_LED	2	+V5
3	PWR_LED	4	GND
5	GND	6	SPKR
7	NC	8	BUZZER
9	GND	10	NC
11	GND	12	HDD_LED-
13	PWBTN	14	HDD_LED+
15	NC	16	NC
17	NC	18	RESET
19	GND	20	GND

F_PANEL1 Connector

3-5 POWER_LED

11-13 PWBTN

18-20 RESET

12-14 HDD_LED

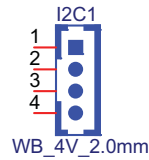


Table 1.7: I2C1

Pin	Signal
1	GND
2	I2C_DAT
3	I2C_CLK
4	I2C_CN_PWR

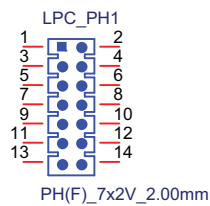


Table 1.8: LPC_PH1

Pin	Signal	Pin	Signal
1	LPCH_33M	2	LPC_AD1
3	LPCH_RST#	4	LPC_AD0
5	LPC_FRAME#	6	+V3.3
7	LPC_AD3	8	GND
9	LPC_AD2	10	+V3.3
11	LPC_SERIRQ	12	LPCH_RST#
13	+V5_DUAL	14	+V5

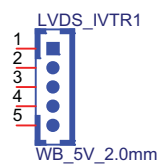


Table 1.9: LVDS_IVTR1

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

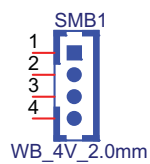


Table 1.10: SMB1

Pin	Signal
1	GND
2	SMB_DAT
3	SMB_CLK
4	SMB_CN_PWR

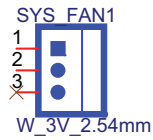


Table 1.11: SYS_FAN1

Pin	Signal
1	GND
2	+V12
3	NC

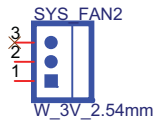


Table 1.12: SYS_FAN2

Pin	Signal
1	GND
2	+V12
3	NC

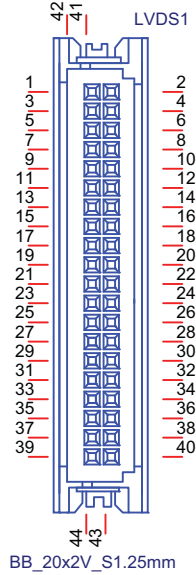


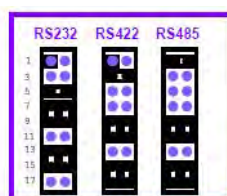
Table 1.13: LVDS1

Pin	Signal	Pin	Signal
1	+V_LVDS_PANEL	2	+V_LVDS_PANEL
3	GND	4	GND
5	+V_LVDS_PANEL	6	+V_LVDS_PANEL
7	LVDS_A0-_Z	8	LVDS_B0-_Z
9	LVDS_A0+_Z	10	LVDS_B0+_Z

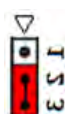
Table 1.13: LVDS1

11	GND	12	GND
13	LVDS_A1-_Z	14	LVDS_B1-_Z
15	LVDS_A1+_Z	16	LVDS_B1+_Z
17	GND	18	GND
19	LVDS_A2-_Z	20	LVDS_B2-_Z
21	LVDS_A2+_Z	22	LVDS_B2+_Z
23	GND	24	GND
25	LVDS_A_CK-_Z	26	LVDS_B_CK-_Z
27	LVDS_A_CK+_Z	28	LVDS_B_CK+_Z
29	GND	30	GND
31	LVDS_DDC_CLK	32	LVDS_DDC_DAT
33	GND	34	GND
35	LVDS_A3-_Z	36	LVDS_B3-_Z
37	LVDS_A3+_Z	38	LVDS_B3+_Z
39	GND	40	LVDS1_CTRL

1.2.8 Jumper Settings Table

**Table 1.14: J1: COM2 RS-232/422/485 Mode Selection**

Pin	Function
5-6, 7-9, 8-10, 13-15, 14-16	RS-232 [Default]
3-4, 9-11, 10-12, 15-17, 16-18	RS-422
1-2, 9-11, 10-12, 15-17, 16-18	RS-485

**Table 1.15: J2: Carrier Board TPM Enable/Disable Selection**

Pin	Function
1-2	Enable TPM
2-3	Disable TPM [Default]

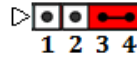


Table 1.16: J3: CF/PATA Mode Selection

Pin	Function
1-2	MASTER
2-3	SLAVE (for on board flash)
3-4	SLAVE (for CF) [Default]



Table 1.17: J4, J5: BIOS Disable Function

J4	J5	Chipset SPI CS1# Destination	Chipset SPI CS0# Destination	Carrier SPI_CS#	SPI Descriptor	Bios Entry
2-3	2-3	Carrier	Carrier	Carrier	Carrier	Carrier [Default]
1-2	1-2	SPI0/SPI1	SPI0/SPI1	SPI0/SPI1	SPI0/SPI1	SPI0/SPI1
2-3	2-3	Carrier FWH	Carrier FWH	Carrier FWH	Carrier FWH	Carrier FWH
1-2	1-2	SPI0/SPI1	SPI0/SPI1	SPI0/SPI1	SPI0/SPI1	SPI0/SPI1



Table 1.18: J6: Clear CMOS Jumper

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

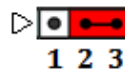


Table 1.19: J7: ATX/AT Mode Selection

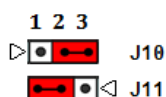
Pin	Function
1-2	AT Mode
2-3	ATX Mode [Default]


Table 1.20: J8: COMe Module +V5SB Supply

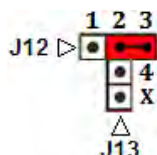
Pin	Function
1-2	Enable ATX 5 VSB for Module [Default]
3-4	Enable ATX 5 VSB for Module [Default]
All Open	Disable ATX 5 VSB for Module.


Table 1.21: J9: PEG Function Enable/Disable Selection

Pin	Function
1-2	Disable PEG
2-3	Enable PEG [Default]


Table 1.22: J10, J11: SOM-DB5720 Voltage Input (VIN) Selection

J10	J11	Function
1-2	1-2	+VDC DCIN
2-3	2-3	+V12 ATX [Default]


Table 1.23: J12, J13: LVDS Panel Voltage Selection

Pin	Function
1-2	+V5
2-3	+V3 [Default]
2-4	+V12



Table 1.24: J14: LVDS Inverter Voltage Selection

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

1.2.9 Switch Settings Table



Table 1.25: SIO_SW1 & SIO_SW1SIO LPC Bus On-Off Switch

Dip Switch	1-8	2-7	3-6	4-5	Function
SIO_SW1 ~ SIO_SW2	ON	ON	ON	ON	SIO Enable [Default]
	OFF	OFF	OFF	OFF	SIO Disable

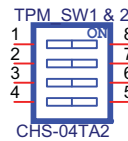


Table 1.26: TPM_SW1 & TPM_SW2TPM LPC Bus On-Off Switch

Dip Switch	1-8	2-7	3-6	4-5	Function
TPM_SW1~ TPM_SW2	ON	ON	ON	ON	TPM Enable [Default]
	OFF	OFF	OFF	OFF	TPM Disable

1.3 SOM-EA20

1.3.1 Connector and Jumper Location

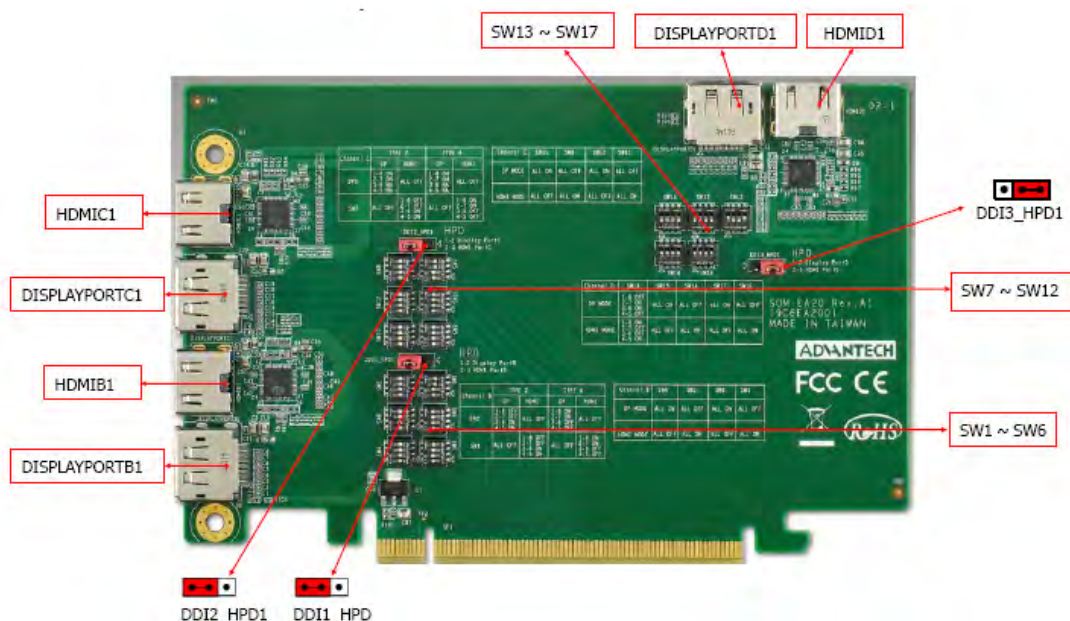


Table 1.27: Connector, Jumper, Switch List

Label	Function
DISPLAYPORTB1	DisplayPort B Connector
HDMIB1	HDMI Port B Connector
DISPLAYPORTC1	DisplayPort C Connector
HDMIC1	HDMI Port C Connector
DISPLAYPORTD1	DisplayPort D Connector
HDMID1	HDMI Port D Connector
DDI1_HPDI	DisplayPort B / HDMI Port B Hot Plug Detection
DDI2_HPDI	DisplayPort C / HDMI Port C Hot Plug Detection
DDI3_HPDI	DisplayPort D / HDMI Port D Hot Plug Detection
SW1 ~ SW6	DDI1 DisplayPort B / HDMI Port B Switch
SW7 ~ SW12	DDI2 DisplayPort C / HDMI Port C Switch
SW13 ~ SW17	DDI3 DisplayPort D / HDMI Port D Switch

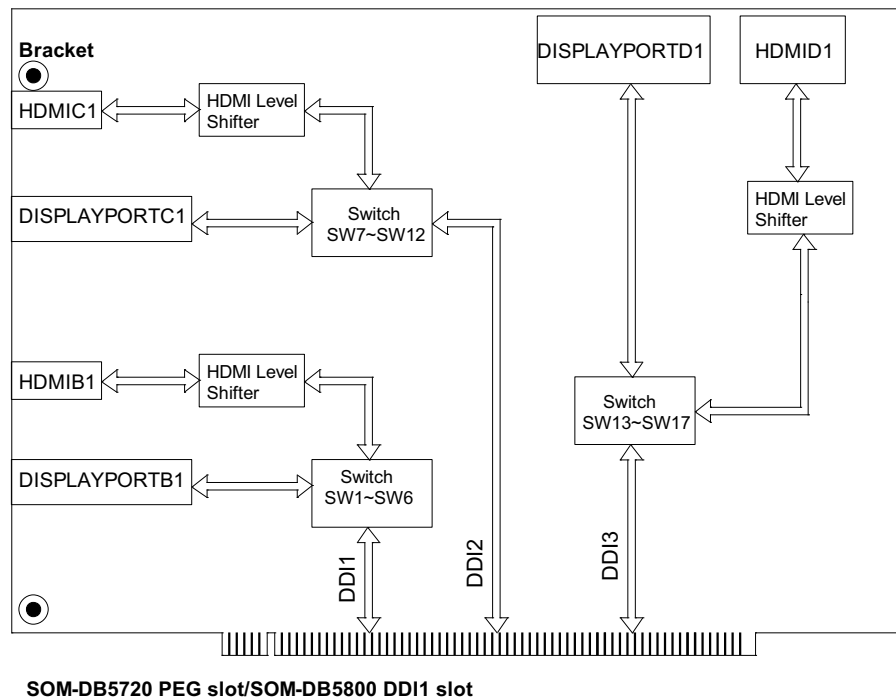
Note! SW1 ~ SW17 have different settings for SOM-DB5800 or SOM-DB5720, please see details in Switch Setting chapter.



Note! SOM-DB5720 does not support HDMID1 & DISPLAYPORTD1.



1.3.2 Block Diagram



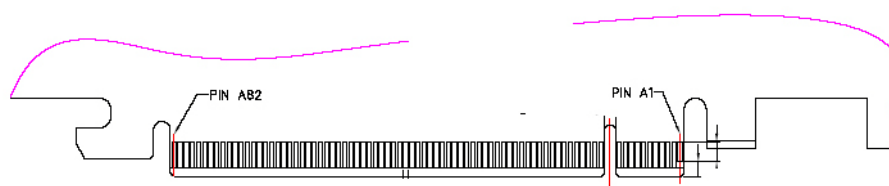
1.3.3 Golden Finger Pin Definition

Table 1.28: DDI1 Digital Display Interface Pin Definition

Pin	Signal	Pin	Signal	Pin	Signal	Pin	Signal
A1	HDMIC_CTRL_CLK	A22	NC	A43	DDI2_CTRLCLK_AUX+	A64	DDI3_HPD
A2	+V12	A23	GND	A44	DDI2_CTRLDAT_A_AUX-	A65	NC
A3	+V12	A24	GND	A45	GND	A66	GND
A4	GND	A25	DPB_AUXP_C	A46	GND	A67	GND
A5	NC	A26	DPB_AUXN_C	A47	DDI2_HPD	A68	NC
A6	NC	A27	GND	A48	NC	A69	NC
A7	NC	A28	GND	A49	GND	A70	GND
A8	NC	A29	DDI1_HPD	A50	NC	A71	GND
A9	+V3.3	A30	NC	A51	GND	A72	NC
A10	+V3.3	A31	GND	A52	NC	A73	NC
A11	PLTRST#	A32	NC	A53	NC	A74	GND
A12	GND	A33	NC	A54	GND	A75	GND
A13	NC	A34	GND	A55	GND	A76	NC
A14	NC	A35	DDI1_CTRLCLK_AUX+	A56	NC	A77	NC
A15	GND	A36	DDI1_CTRLDATA_AUX-	A57	NC	A78	GND
A16	NC	A37	GND	A58	GND	A79	GND
A17	NC	A38	GND	A59	GND	A80	NC
A18	GND	A39	NC	A60	DDI3_CTRLCLK_AUX+	A81	NC

Table 1.28: DDI1 Digital Display Interface Pin Definition

A19	NC	A40	NC	A61	DDI3_CTRLDAT A_AUX-	A82	GND
A20	GND	A41	GND	A62	GND		
A21	NC	A42	GND	A63	GND		
<hr/>							
Pin	Signal	Pin	Signal	Pin	Signal	Pin	Signal
B1	+V12	B22	GND	B43	GND	B64	GND
B2	+V12	B23	DDI1_PAIR2+	B44	GND	B65	GND
B3	+V12	B24	DDI1_PAIR2-	B45	DDI2_PAIR3+	B66	NC
B4	GND	B25	GND	B46	DDI2_PAIR3-	B67	NC
B5	NC	B26	GND	B47	GND	B68	GND
B6	NC	B27	DDI1_PAIR3+	B48	NC	B69	GND
B7	GND	B28	DDI1_PAIR3-	B49	GND	B70	NC
B8	+V3.3	B29	GND	B50	DDI3_PAIR0+	B71	NC
B9	NC	B30	NC	B51	DDI3_PAIR0-	B72	GND
B10	+V3.3_DUAL	B31	HDMIB_CTRL_D ATA	B52	GND	B73	GND
B11	NC	B32	GND	B53	GND	B74	NC
B12	NC	B33	DDI2_PAIR0+	B54	DDI3_PAIR1+	B75	NC
B13	GND	B34	DDI2_PAIR0-	B55	DDI3_PAIR1-	B76	GND
B14	DDI1_PAIR0+	B35	GND	B56	GND	B77	GND
B15	DDI1_PAIR0-	B36	GND	B57	GND	B78	NC
B16	GND	B37	DDI2_PAIR1+	B58	DDI3_PAIR2+	B79	NC
B17	HDMIB_CTRL _CLK	B38	DDI2_PAIR1-	B59	DDI3_PAIR2-	B80	GND
B18	GND	B39	GND	B60	GND	B81	HDMIC_CTRL_D ATA
B19	DDI1_PAIR1+	B40	GND	B61	GND	B82	NC
B20	DDI1_PAIR1-	B41	DDI2_PAIR2+	B62	DDI3_PAIR3+		
B21	GND	B42	DDI2_PAIR2-	B63	DDI3_PAIR3-		



1.3.4 Switch Settings

SOM-EA20 on SOM-DB5720 PEG Slot [Default]

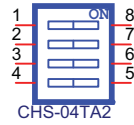


Table 1.29: SW1 ~ SW5: DDI1 DisplayPort B / HDMI Port B Switch

Function	Dip Switch	1-8	2-7	3-6	4-5
DDI1 DisplayPort B	SW1,SW3,SW5	OFF	OFF	OFF	OFF
	SW2	OFF	OFF	ON	ON
	SW4,SW6	ON	ON	ON	ON
DDI1 HDMI Port B	SW1	OFF	OFF	ON	ON
	SW3,SW5	ON	ON	ON	ON
	SW2,SW4,SW6	OFF	OFF	OFF	OFF

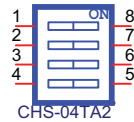


Table 1.30: SW7 ~ SW12: DDI2 DisplayPort C / HDMI Port C Switch

Function	Dip Switch	1-8	2-7	3-6	4-5
DDI2 DisplayPort C	SW7,SW9,SW11	OFF	OFF	OFF	OFF
	SW8	ON	ON	-	-
	SW10,SW12	ON	ON	ON	ON
DDI2 HDMI Port C	SW7	OFF	OFF	ON	ON
	SW9,SW11	ON	ON	ON	ON
	SW8,SW10,SW12	OFF	OFF	OFF	OFF

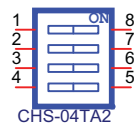


Table 1.31: SW13 ~ SW17: DDI3 DisplayPort D / HDMI Port D Switch

Function	Dip Switch	1-8	2-7	3-6	4-5
DDI3 DisplayPort D	SW13	OFF	ON	ON	OFF
	SW14,SW16	OFF	OFF	OFF	OFF
	SW15,SW17	ON	ON	ON	ON
DDI3 HDMI Port D	SW13	ON	OFF	OFF	ON
	SW14,SW16	ON	ON	ON	ON
	SW15,SW17	OFF	OFF	OFF	OFF

SOM-EA20 on SOM-DB5800 DDI1 Slot

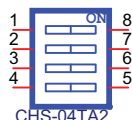


Table 1.32: SW7 ~ SW12: DDI2 DisplayPort C / HDMI Port C Switch

Function	Dip Switch	1-8	2-7	3-6	4-5
DDI1 DisplayPort B	SW1,SW3,SW5	OFF	OFF	OFF	OFF
	SW2	ON	ON	OFF	OFF
	SW4,SW6	ON	ON	ON	ON
DDI1 HDMI Port B	SW1	ON	ON	OFF	OFF
	SW3,SW5	ON	ON	ON	ON
	SW2,SW4,SW6	OFF	OFF	OFF	OFF

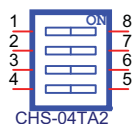


Table 1.33: SW7 ~ SW12: DDI2 DisplayPort C / HDMI Port C Switch

Function	Dip Switch	1-8	2-7	3-6	4-5
DDI2 DisplayPort C	SW7,SW9,SW11	OFF	OFF	OFF	OFF
	SW8	ON	ON	-	-
	SW10,SW12	ON	ON	ON	ON
DDI2 HDMI Port C	SW7	ON	ON	OFF	OFF
	SW9,SW11	ON	ON	ON	ON
	SW8,SW10,SW12	OFF	OFF	OFF	OFF

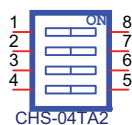


Table 1.34: SW13 ~ SW17 DDI3 DisplayPort D / HDMI Port D Switch

Function	Dip Switch	1-8	2-7	3-6	4-5
DDI3 DisplayPort D	SW13	OFF	ON	ON	OFF
	SW14,SW16	OFF	OFF	OFF	OFF
	SW15,SW17	ON	ON	ON	ON
DDI3 HDMI Port D	SW13	ON	OFF	OFF	ON
	SW14,SW16	ON	ON	ON	ON
	SW15,SW17	OFF	OFF	OFF	OFF

1.3.5 Jumper Settings



Table 1.35: DDI1_HPDP1 DDI1 DisplayPort B / HDMI Port B Hot Plug Selection

Pin	Function
1-2	DDI1 DisplayPort B Hot Plug Detection
2-3	DDI1 HDMI Port B Hot Plug Detection [Default]

Table 1.36: DDI2_HPDP1 DDI2 DisplayPort C / HDMI Port C Hot Plug Selection

Pin	Function
1-2	DDI2 DisplayPort C Hot Plug Detection
2-3	DDI2 HDMI Port C Hot Plug Detection [Default]

Table 1.37: DDI3_HPDP1: DDI3 DisplayPort D / HDMI Port D Hot Plug Selection

Pin	Function
1-2	DDI3 DisplayPort D Hot Plug Detection
2-3	DDI3 HDMI Port D Hot Plug Detection [Default]

1.4 SOM-EA10

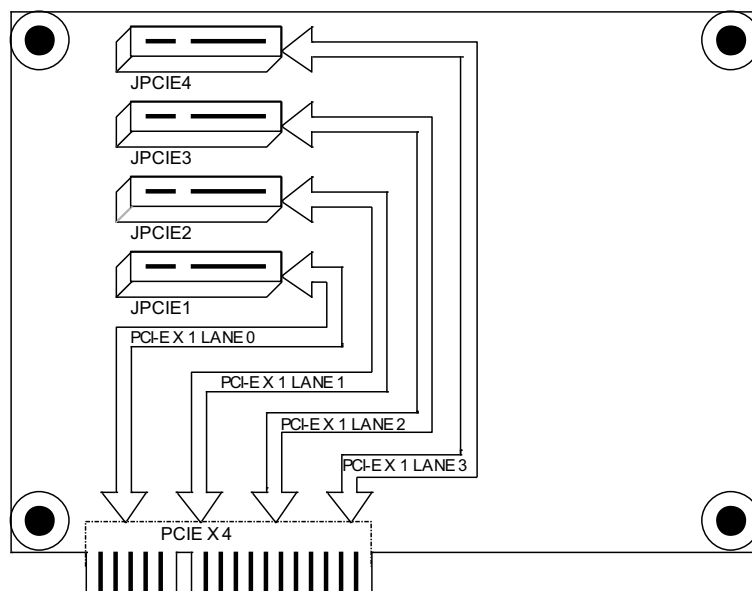
1.4.1 Connector Location



Table 1.38: 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

1.4.2 Block Diagram



1.5 SOM-EA04

1.5.1 Connector Location

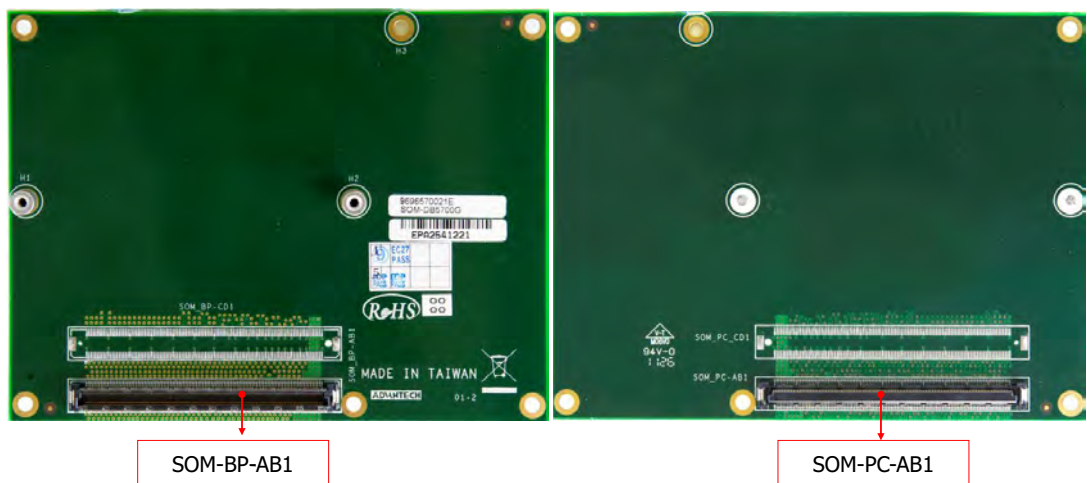
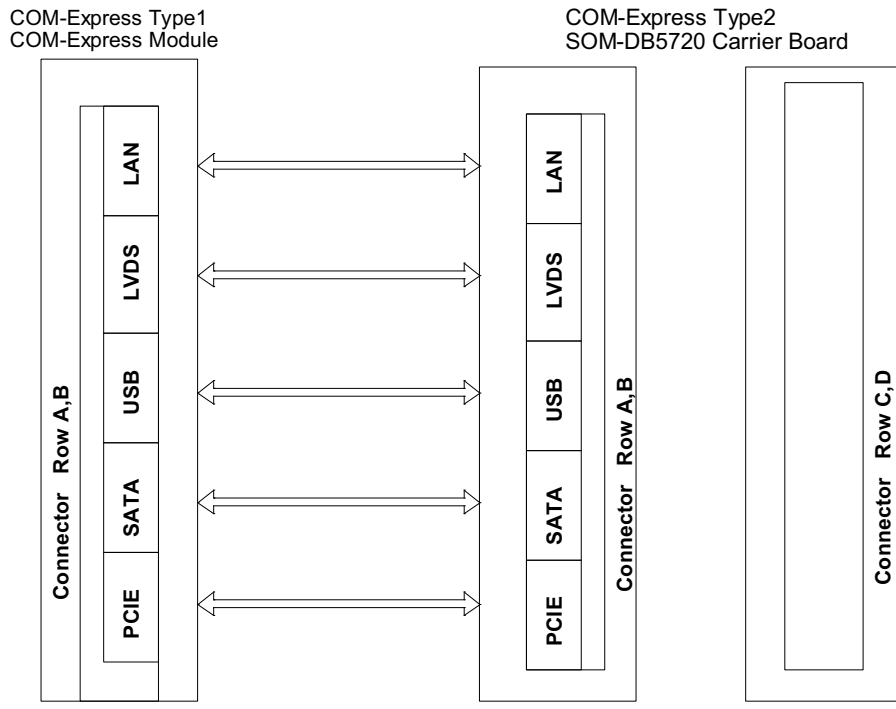


Table 1.39: Connector List

Label	Function
SOM-BP-AB1	Type1 COM-Express A & B Connector
SOM-PC-AB1	Type2 COM-Express A & B Connector

1.5.2 Block Diagram



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