

Manual

Advantech

SOM-DH3000

Development Board for COM-HPC Client Pinout Modules

FORTEC
UNITED STATES



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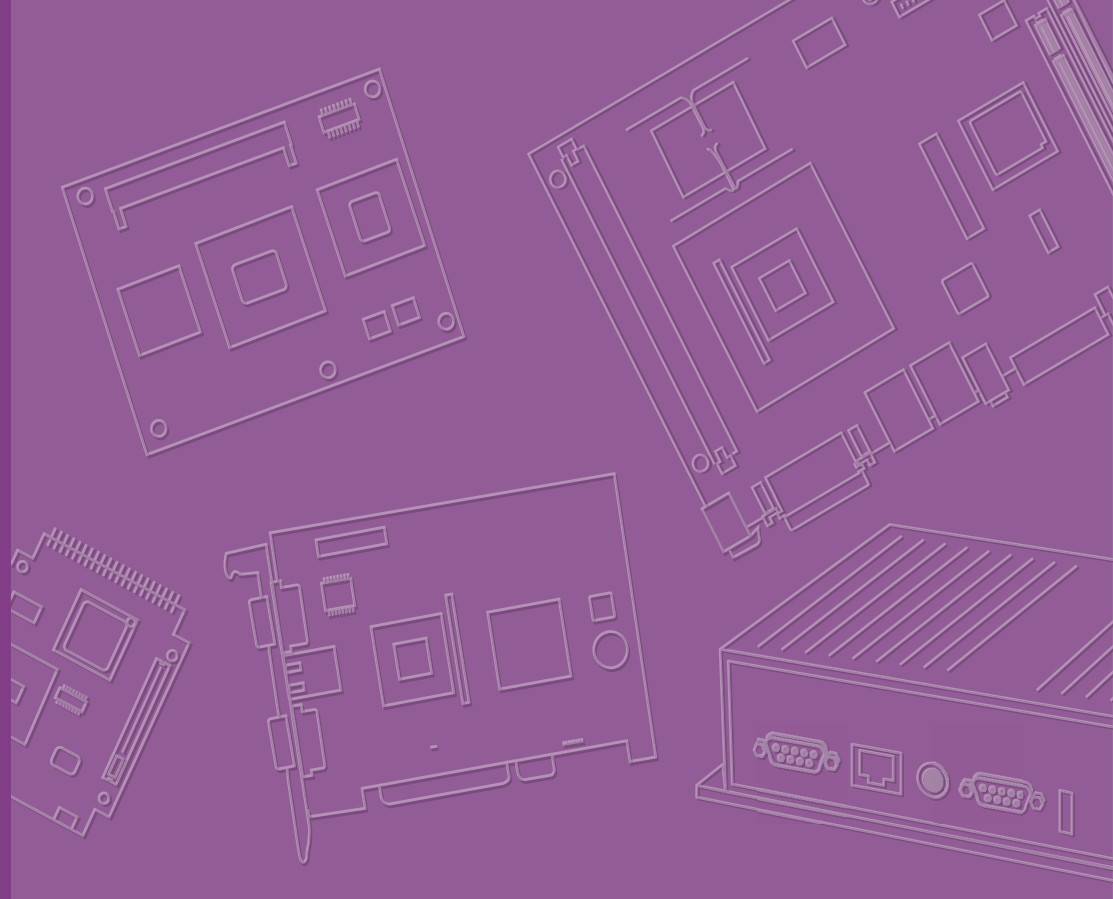


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UNITED KINGDOM



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User Manual



SOM-DH3000



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Product Warranty (2 years)

Advantech warrants 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 that have been repaired or altered by persons other than repair personnel authorized by Advantech, or products that 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 customers never need to use our repair service. If an Advantech product is defective, it will be repaired or replaced free of charge during the warranty period. For out-of-warranty repairs, customers will be billed according to the cost of replacement materials, service time, and freight. Please consult your dealer for more details.

If you believe your product to be defective, follow the steps outlined below.

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 displayed 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 a return merchandise authorization (RMA) number from your dealer. This allows us to process your return more quickly.
4. Carefully pack the defective product, a completed Repair and Replacement Order Card, and a proof of purchase date (such as a photocopy of your sales receipt) into a shippable container. Products returned without a proof of purchase date are not eligible for warranty service.
5. Write the RMA number clearly on the outside of the package and ship the package prepaid to your dealer.

Declaration of Conformity

CE

This product has passed the CE test for environmental specifications when shielded cables are used for external wiring. We recommend the use of shielded cables. This type of cable is available from Advantech. Please contact your local supplier for ordering information.

Test conditions for passing also include the equipment being operated within an industrial enclosure. In order to protect the product from damage caused by electrostatic discharge (ESD) and EMI leakage, we strongly recommend the use of CE-compliant industrial enclosure products.

FCC Class B

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 instruction manual, 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 assistance.

FM

This equipment has passed FM certification. According to the National Fire Protection Association, work sites are categorized into different classes, divisions, and groups based on hazard considerations. This equipment is compliant with the specifications for Class I, Division 2, Groups A, B, C, and D indoor hazards.

Technical Support and Assistance

1. Visit the Advantech website at www.advantech.com/support to obtain the latest product information.
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 calling:
 - 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 that if not observed can cause personal injury!



Caution! Cautions are included to help prevent hardware damage and data losses. For example,



“Batteries are at risk of exploding if incorrectly installed. Do not attempt to recharge, force open, or heat the battery. Replace the battery only with the same or equivalent type as recommended by the manufacturer. Discard used batteries according to the manufacturer's instructions.”

Note! Notes provide additional optional information.



Document Feedback

To assist us with improving this manual, we welcome all comments and constructive criticism. Please send all feedback in writing to support@advantech.com.

Selection Guide w/ P/N

Part No.	Description
SOM-DH3000-00A1	COM-HPC Development Board for Client Pinout with 5 mm in height Board-to-Board Connector

Packing List

Check that the items listed below are included and in good condition before system installation. If any item does not accord with the list, contact your dealer immediately.

Part No.	Description	Quantity
1700008941	M Cable SATA 7P/SATA 7P 32CM C=R 180/180D W/Lock	2 x

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 the PC chassis before manual handling. Do not touch any components on the CPU card or other cards while the PC is powered on.
- Disconnect the power before making any configuration changes. A sudden rush of power after connecting a jumper or installing a card may damage sensitive electronic components.

Safety Instructions

1. Read these safety instructions carefully.
2. Retain this user manual for future reference.
3. Disconnect the equipment from all power outlets before cleaning. Use only a damp cloth for cleaning. Do not use liquid or spray detergents.
4. For pluggable equipment, the power outlet socket must be located near the equipment and easily accessible.
5. Protect the equipment from humidity.
6. Place the equipment on a reliable surface during installation. Dropping or letting the equipment 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. Ensure that the voltage of the power source is correct before connecting the equipment to a power outlet.
9. Position the power cord away from high-traffic areas. 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 from transient overvoltage.
12. Never pour 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 any of the following occurs, have the equipment checked by service personnel:
 - The power cord or plug is damaged.
 - Liquid has penetrated the equipment.
 - The equipment has been exposed to moisture.
 - The equipment is malfunctioning, or does not operate according to the user manual.
 - The equipment has been dropped and damaged.
 - The equipment shows obvious signs of breakage.
15. Do not leave the equipment in an environment with a storage temperature of below -20 °C (-4 °F) or above 60 °C (140 °F) as this may damage the components. The equipment should be kept in a controlled environment.
16. **CAUTION:** Batteries are at risk of exploding if incorrectly replaced. Replace only with the same or equivalent type as recommended by the manufacturer. Discard used batteries according to the manufacturer's instructions.
17. In accordance with IEC 704-1:1982 specifications, the sound pressure level at the operator's position does not exceed 70 dB (A).

DISCLAIMER: These instructions are provided according to IEC 704-1 standards. Advantech disclaims all responsibility for the accuracy of any statements contained herein.

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Chapter 1

General Information

This chapter details background information on the SOM-DH3000 Development Board for COM-HPC.

Sections include:

- Introduction
- Functional Block Diagram
- Product Specifications

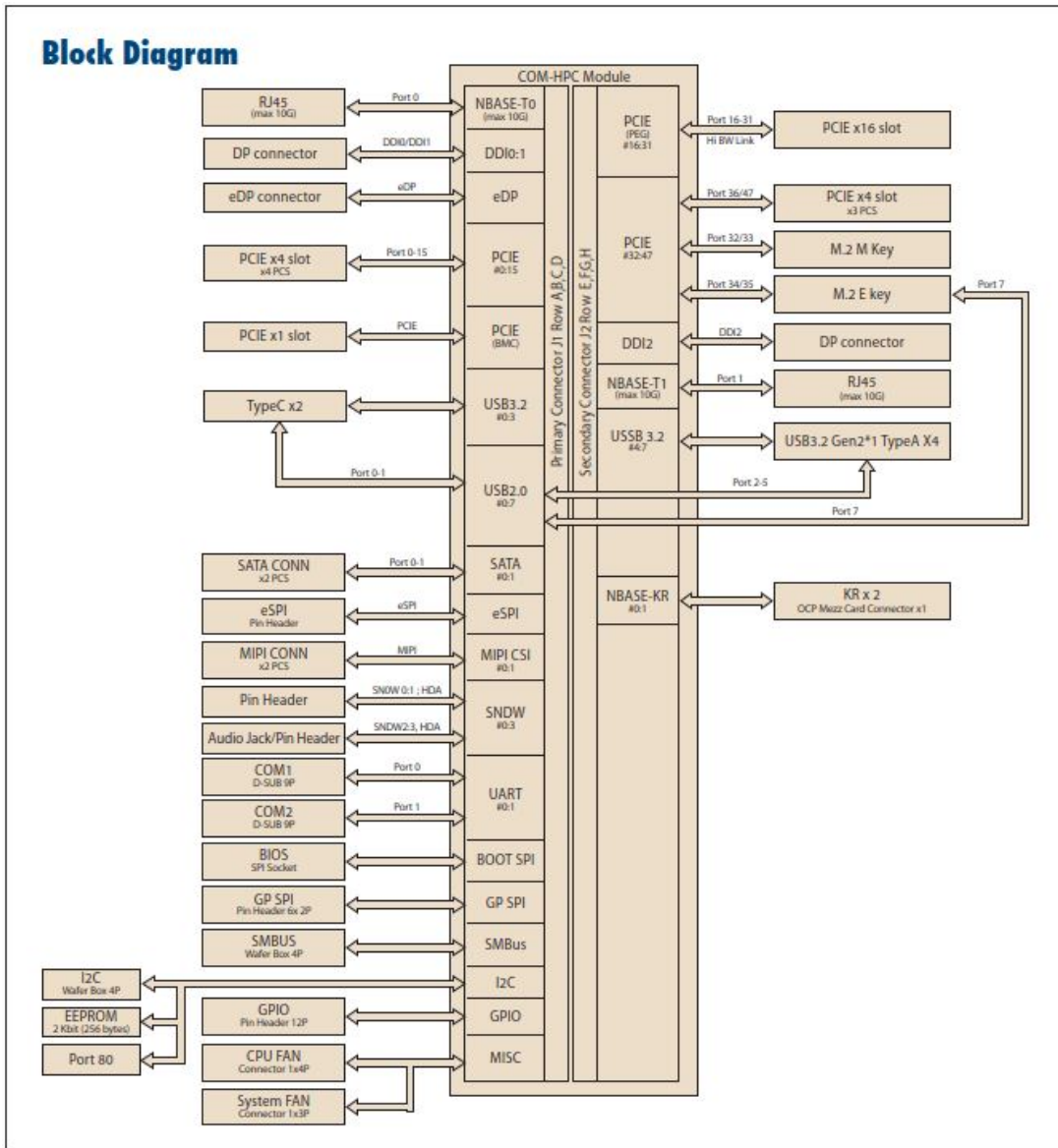
1.1 Introduction

The Advantech SOM-DH3000 development carrier board complies with PICMG COM-HPC Pin-out standards and is compatible with corresponding form-factor modules. It uses 400 pin connectors and supports several display connectors (eDP, DP++, HDMI) and USB types (USB 3.0 Type A and Type C). It also supports M.2 E-Key connectors and HD audio. It is designed to fulfill multiple applications for end customers and can emulate required functions as a reference design board. Indeed, customers can integrate the SOM-DH3000 directly into their product as an application board.

Acronyms

Term	Define
AC'97	Audio CODEC (Coder-Decoder)
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 micro-controllers to communicate with each other within a vehicle without a host computer
DDI	Digital Display Interface – containing DisplayPort, HDMI/DVI, and SDVO
EAPI	Embedded Application Programmable Interface Software interface for COM Express [®] specific industrial function <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	Watchdog Timer

1.2 Block Diagram



Chapter 2

Mechanical Information

This chapter details mechanical information on the SOM-DH3000 Development Board for COM-HPC

Sections include:

- Board Information
- Mechanical Diagrams
- Assembly Diagrams

2.1 Board Information

The figures below indicate the main chips on SOM-DH3000 Development Board for COM-HPC.

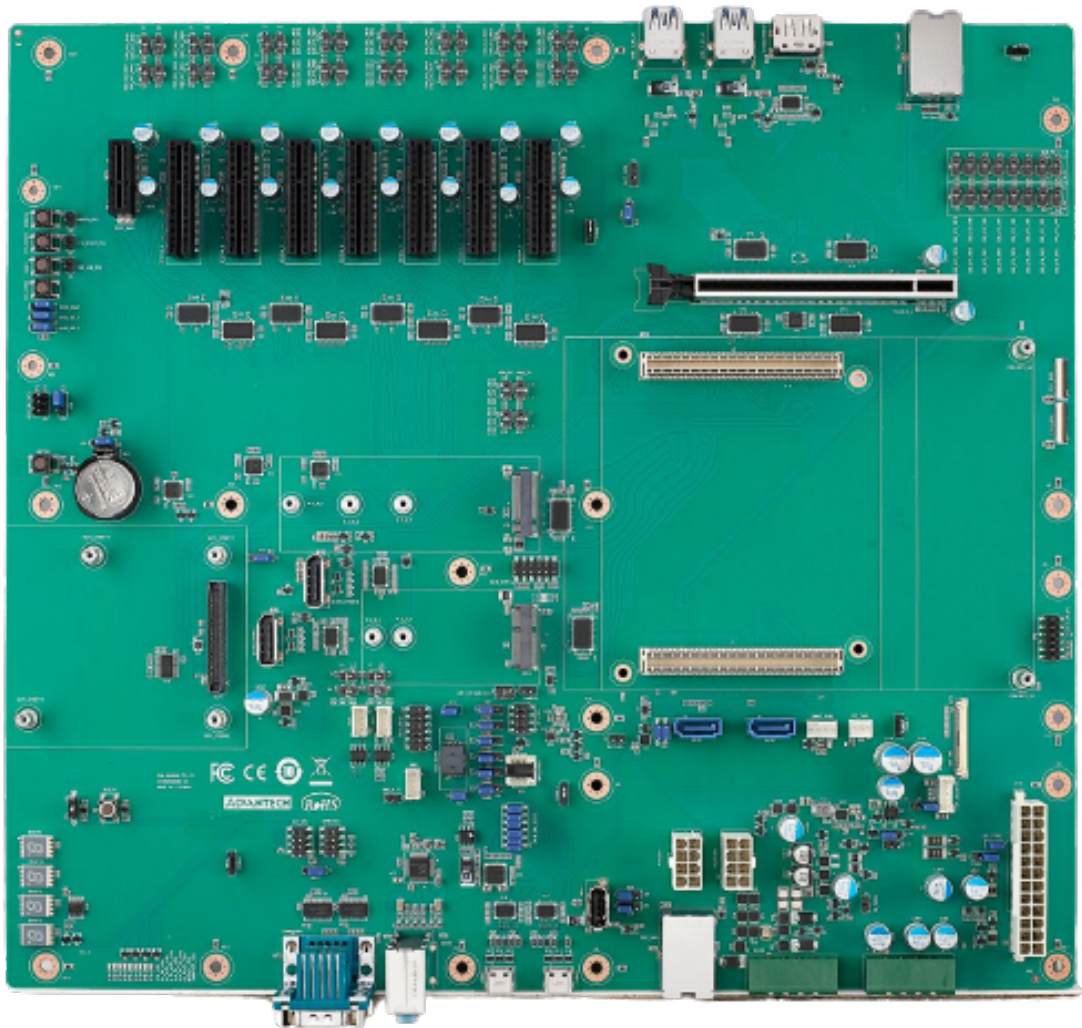


Figure 2.1 Board Chips ID - Front

2.2 Mechanical Diagram

For more information regarding the following 2D/3D models, please visit the Advantech COM support service website: <http://com.advantech.com>.

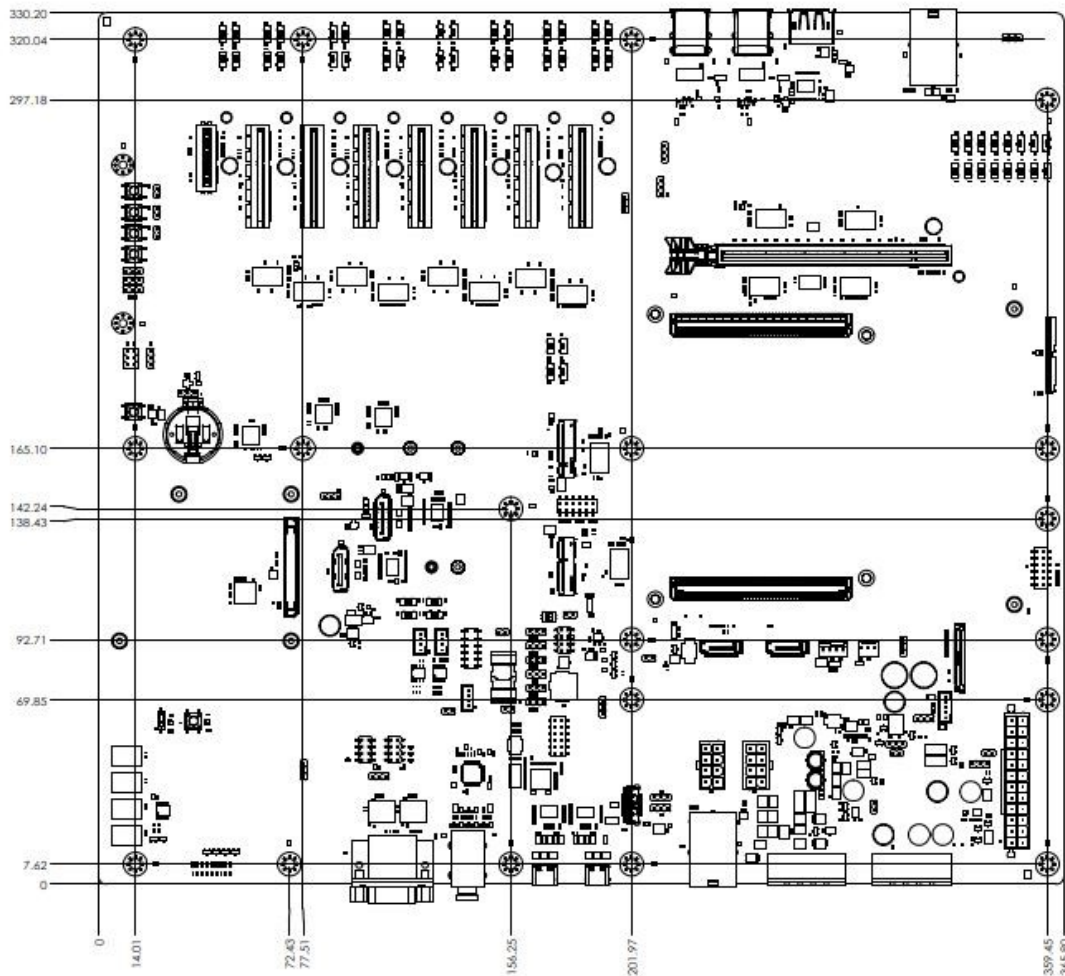


Figure 2.2 Board Mechanical Diagram - Front



Figure 2.3 Board Mechanical Diagram - Side 1



Figure 2.4 Board Mechanical Diagram - Side 2

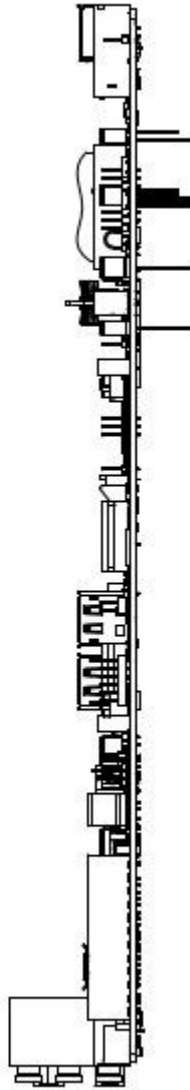


Figure 2.5 Board Mechanical Diagram - Side 3

2.3 Assembly Diagram

These figures demonstrate the order of assembly for attaching the thermal module and COM module to carrier board.

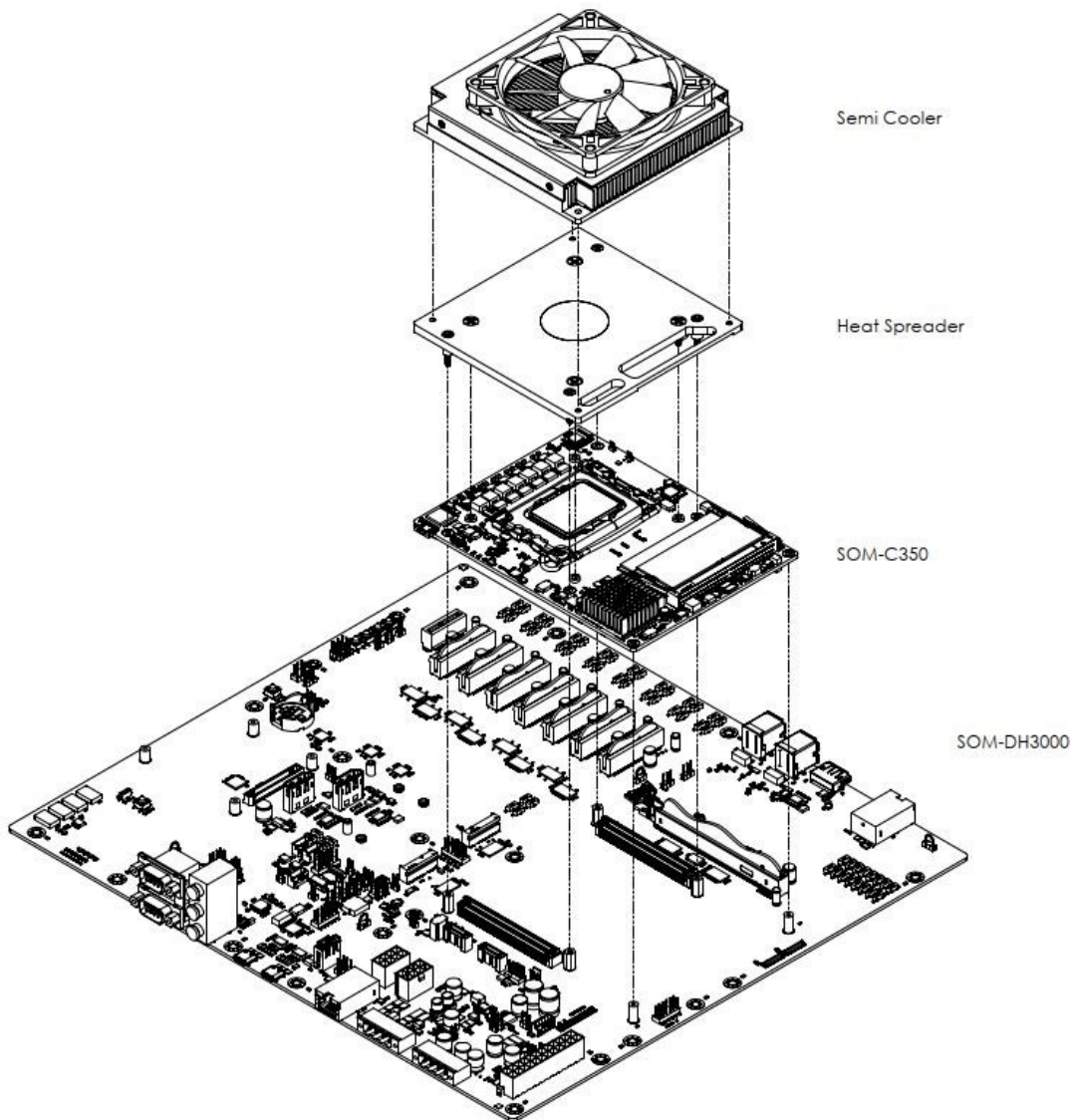


Figure 2.6 Assembly Diagram

Chapter 3

Connectors and Jumper Settings

This chapter details information on the connector and jumper settings for the SOM-DH3000 Development Board for COM-HPC.

3.1 SOM-DH3000 Connectors and Jumper Settings

3.1.1 Connector Locations

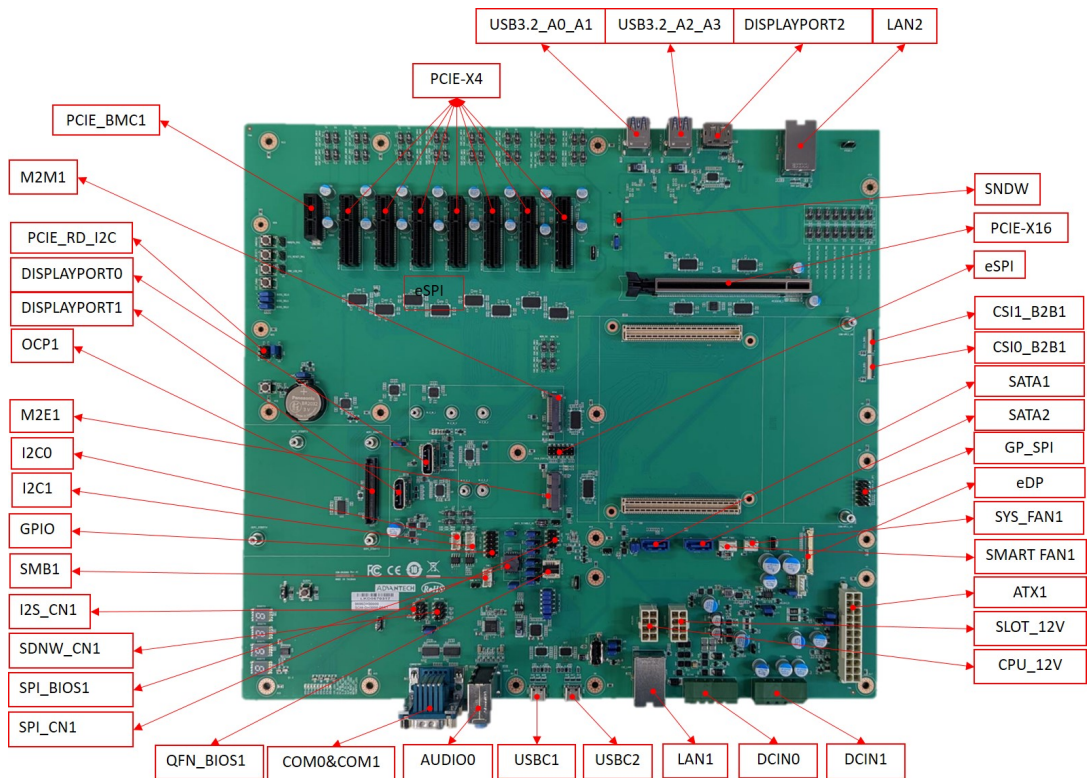


Figure 3.1 Connector Locations

3.1.2 Jumper Locations

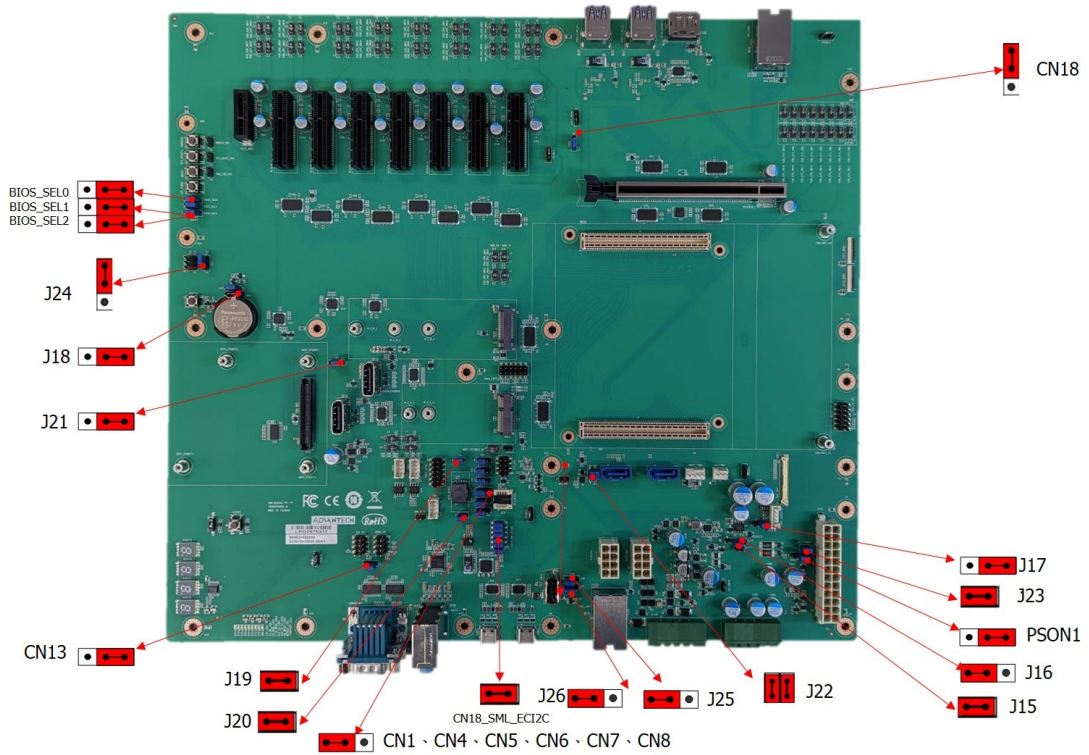


Figure 3.2 Jumper Locations

3.1.3 Switch Locations

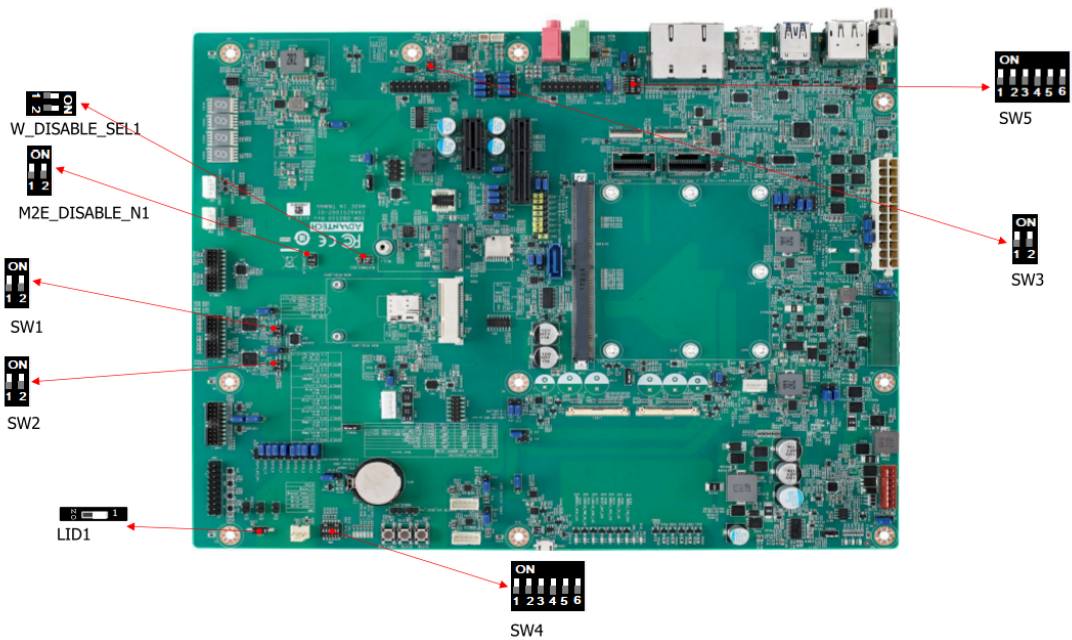


Figure 3.3 Switch Locations

3.1.4 I/O Connector Locations

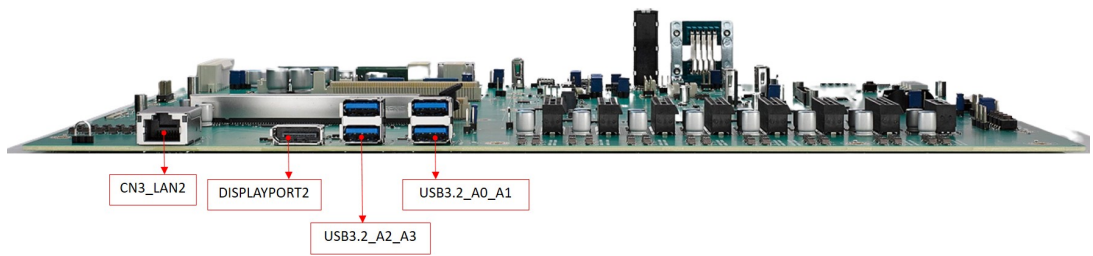


Figure 3.4 I/O Connector Locations

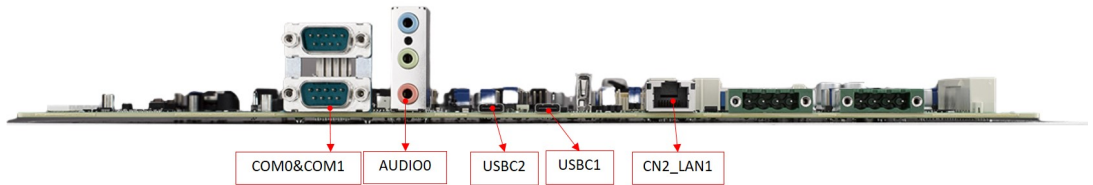


Figure 3.5 I/O Connector Locations

3.1.5 Button Locations

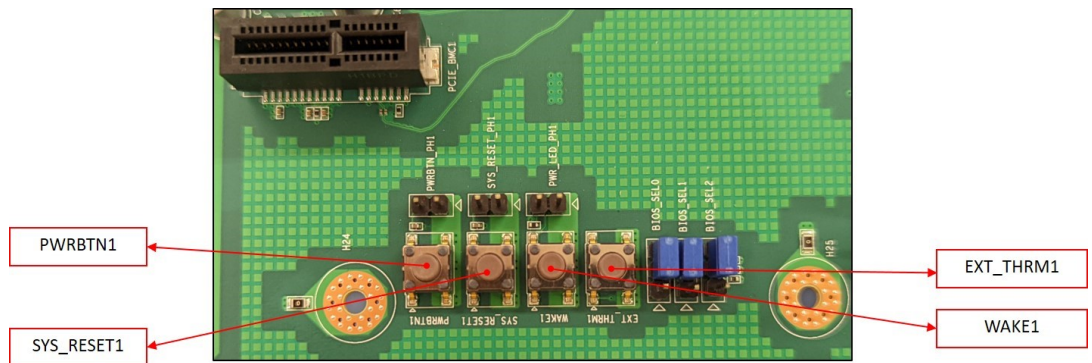


Figure 3.6 Button Locations

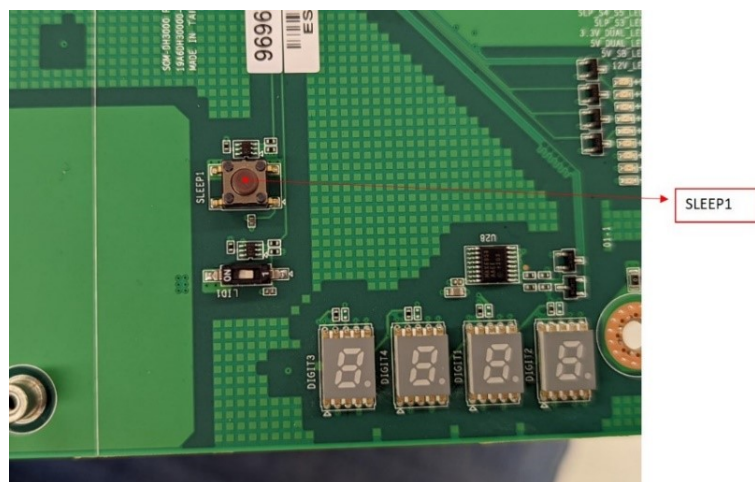


Figure 3.7 Button Location

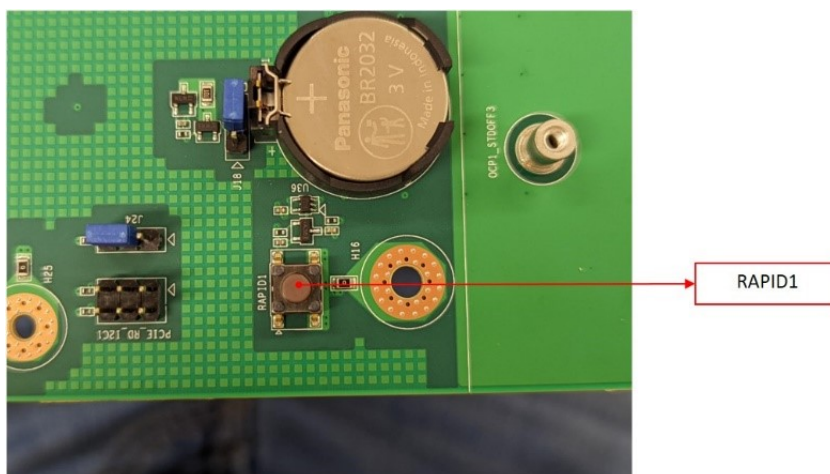


Figure 3.8 Button Location

3.1.6 LED Locations

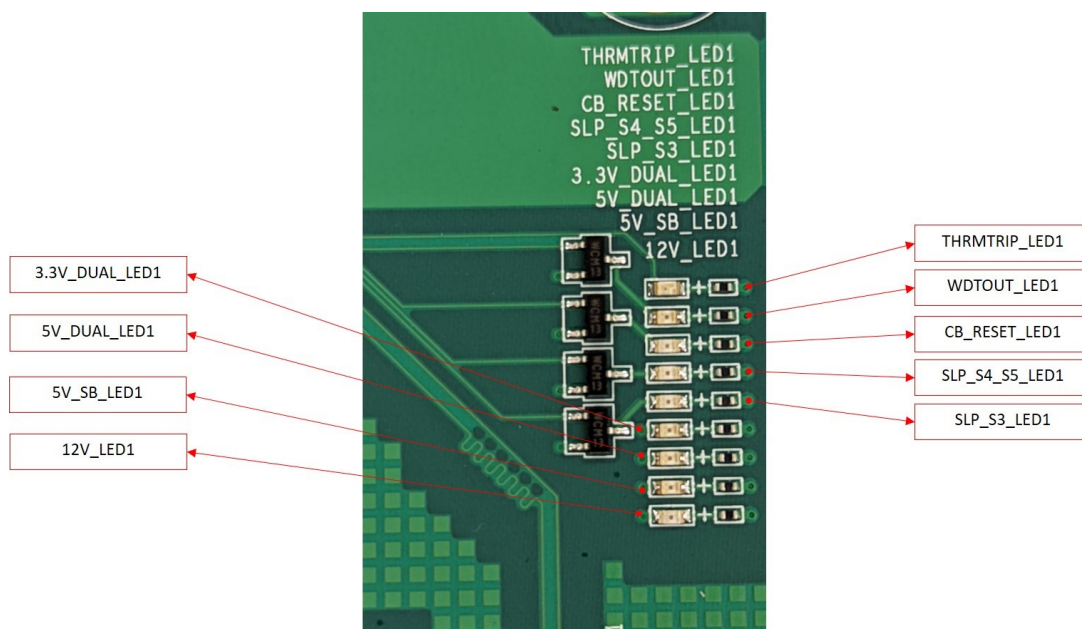


Figure 3.9 LED Location

3.1.7 Connector List

Table 3.1: Connector List			
Label	Function	Label	Function
ATX1	ATX Connector	GPIO1	GPIO Pin Header
DCIN0	Wide Range DC Input Connector0	M2E1	M.2_key_E Connector
DCIN1	Wide Range DC Input Connector1	M2M1	M.2_key_M Connector
SLOT_12V	Slot power Connector	OCP1	OCP Card Connector
CPU_12V	CPU power Connector	DISPLAY-PORT0~2	Display Port 0~2 Connector
LAN1~2	RJ45 LAN Connector	PCIE_RD_I2C	I2S Wafer Box for PCIe Re-driver
USBC1~2	USBC 3.2 Gen2 Type_C port	PCIE_BMC1	PCIe x1 BMC slot
AUDIO1	AUDIO Jack	PCIE_X4_1~7	PCIe x4 slot
COM0~1	COM Port0~1 Connector (Tx, Rx)	USB3.2_A0~A3	USB3.2 Gen2 Type_A port
QFN_BIOS	QFN SPI BIOS Socket	CN17_SNDW	Sound Wire PIN HEADER
SPI_BIOS1	SOT8 SPI BIOS Socket	PCIE_X16	PCIe x16 slot
SPI_CN1	SPI BIOS PIN HEADER	CN16_ESPI	ESPI PIN HEADER
SDNW_CN1	Sound Wire 1 PIN HEADER	BH1	RTC Battery Connector
I2S_CN1	I2S Wafer Box	SMART_FAN1	Smart Fan Connector
SMB1	SMBus Wafer Box	SYS_FAN1	System Fan Connector
I2C0~1	I2C 0~1 Wafer Box	SATA 1~2	SATA Port Connector
		CSI0~1_B2B1	CSI Connector

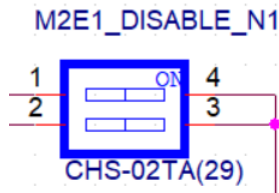
3.1.8 Jumper, Switch, and Button List

Table 3.2: Table 3.2: Jumper, Switch and Button List			
Label	Function	Label	Function
J17	eDP Inverter power +5V/+12V	SLEEP1	Sleep Button
J23_Type2	COM_HPC Type pin 2	LID1	LID Switch
PSOEN1	ATX / AT Mode Selection	RAPID1	Rapid shutdown button
J16, J15	eDP Panel power +5V/+3V/+12V	EXT_THRM1	External Thermal Trip Button
J22	COM_HPC Module +V5SB supply	WAKE1	Wake Button
J25, J26	VDC / ATX mode Selection	SYS_RESET1	Reset Button
J19	+Vcc_Boot_SPI	PWRBTN1	Power Button
J20	BOOT_SPI_CS Chip Select	EQX_UXX-SWXX	PCIe Re-driver EQ Setting Switch
J18	Clear CMOS		
J21	OCP_MDIO_I2C SEL		
J24	PCIE_RD_MODE_SELECT		
CN13	I2S_VDD +3.3V/+1.8V		
CN18_SML_E-CI2C	U21 PD controller SML & EC I2C Bus		
BIOS_SEL0~2	BIOS Select 0~2		
PWRBTN_PH1	PWRBTN Pin Header		
SYS_RESET_PH1	System Reset BTN Pin Header		
PWR_LED_PH1	Power LED Pin Header		
CN18	PCIe GFX Lane Reversal		
BATLOW1	BATLOW Pin Header		
TAMPER1	TAMPER Pin Header		
CB_PWROK	Carrier Board Power OK		
SMB_ALT1	SMBus Alert Pin Header		

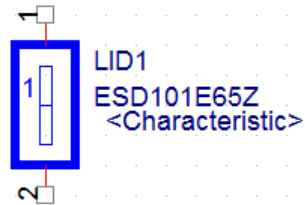
3.1.9 LED Function List

Table 3.3: LED Function List	
Location	Function
THRMTRIP_LED1	THRMTRIP Indicate.
WDTOUT_LED1	Carrier Board Watch Dog out Indicate.
CB_RESET_LED1	Carrier Board Reset Indicate.
SLP_S4_S5_LED1	SLP_S4_S5 Signal Ready Indicate.
SLP_S3_LED1	SLP_S3 Signal Ready Indicate.
3.3V_DUAL_LED1	Carrier Board ATX 3.3V_DUAL ready Indicate.
5V_DUAL_LED1	Carrier Board ATX 5V_DUAL ready Indicate.
5V_SB_LED1	Carrier Board ATX 5V Standby ready Indicate.
12V_LED1	Carrier Board ATX 12V ready Indicate.

3.1.10 Switch Setting



Dip Switch	1-4	2-3	Function
SW_HDMI_EQ1	ON	ON	WiFi & BT Disable
	OFF	ON	WiFi Disable
	ON	OFF	BT Disable
	OFF	OFF	NA [Default]



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

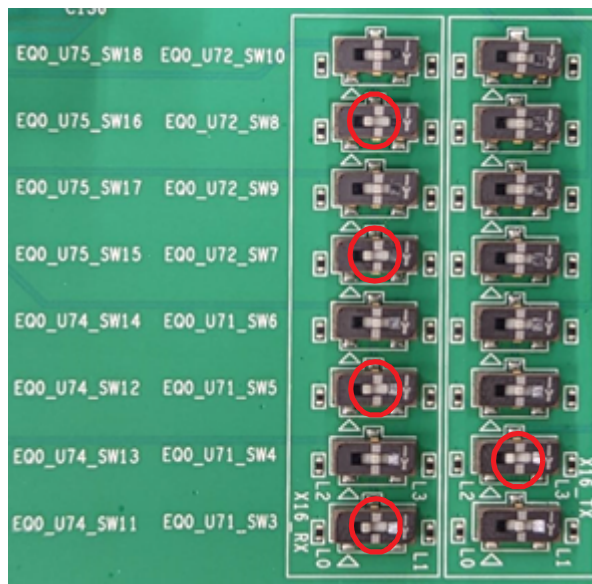


Table 3.6: X16_EQ_SW			
PCIE_TX	SW	PCIE_RX	SW
L0~L3	L2	L0~L3	L0
L4~L7	F	L4~L7	L0
L8~L11	F	L8~L11	L0

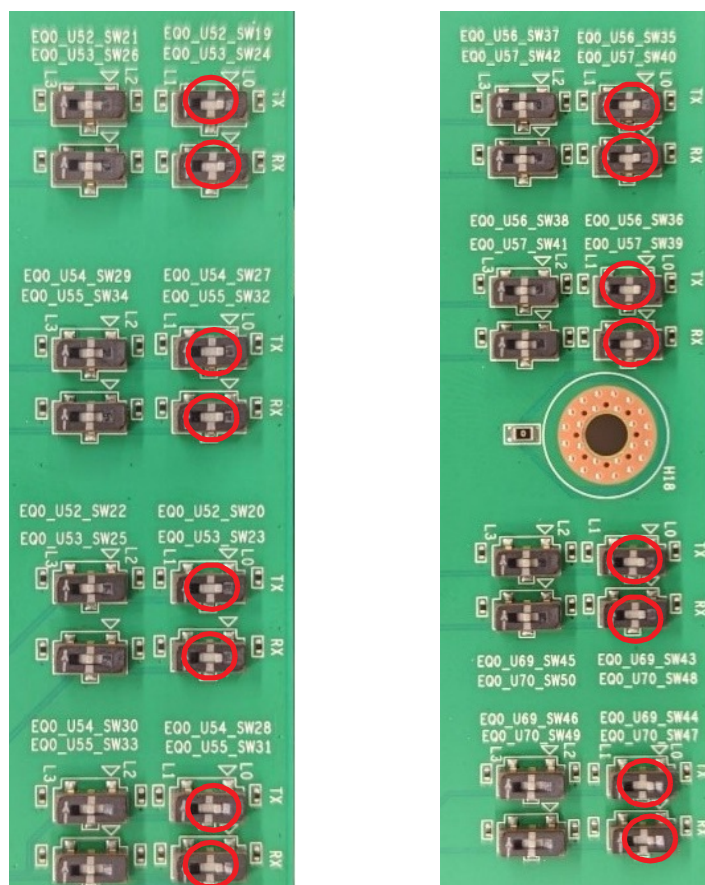


Table 3.7: PCIEX4_EQ_SW			
PCIE_TX	SW	PCIE_RX	SW
PCIEX4_2	L0	PCIEX4_2	L0
PCIEX4_1	L0	PCIEX4_2	L0
PCIEX4_3	L0	PCIEX4_2	L0
PCIEX4_4	L0	PCIEX4_2	L0
PCIEX4_7	L0	PCIEX4_2	L0
PCIEX4_6	L0	PCIEX4_2	L0
PCIEX4_5	L0	PCIEX4_2	L0
PCIEX4_BMC1	L0	PCIEX4_BMC1	L0

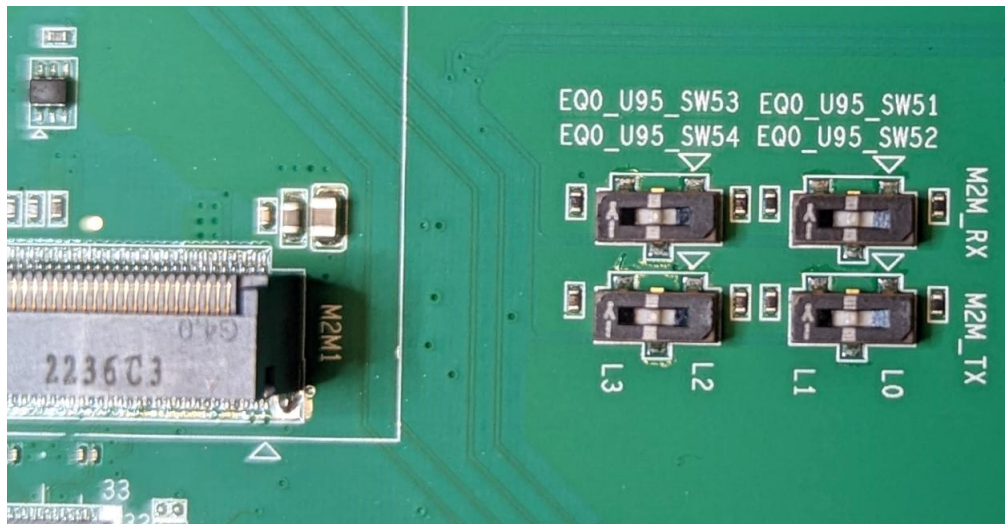


Table 3.8: M2M1_EQ_SW

M2M_TX	SW	M2M_RX	SW
L0~L3	F	L0~L3	F

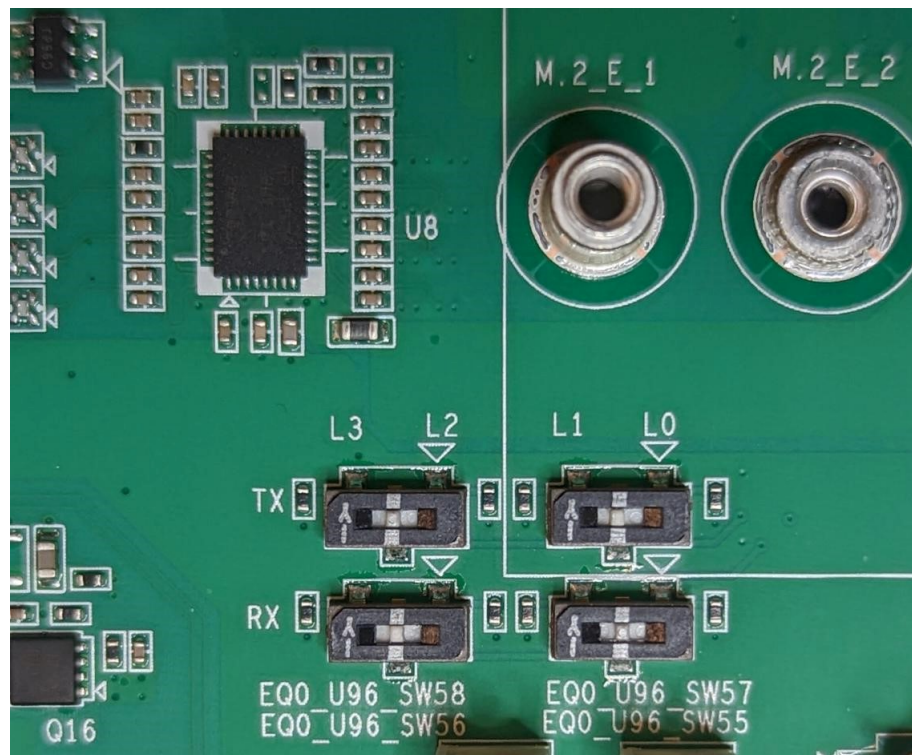


Table 3.9: M2E1_EQ_SW

M2E_TX	SW	M2E_RX	SW
L0~L3	F	L0~L3	F

3.1.11 Connector Pin Definition

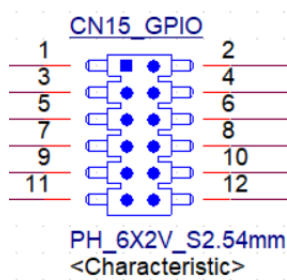


Table 3.10: CN15_GPIO GPIO Pin Header

Pin	Signal	Pin	Signal
1	GPIO0	2	GPIO6
3	GPIO1	4	GPIO7
5	GPIO2	6	GPIO8
7	GPIO3	8	GPIO9
9	GPIO4	10	GPIO10
11	GPIO5	12	GPIO11

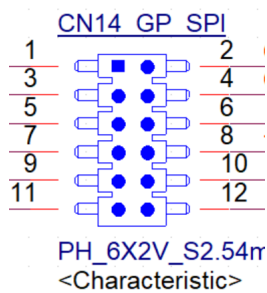


Table 3.11: CN14_GP_SPI Pin Header

Pin	Signal	Pin	Signal
1	GPSPi_CLK	2	GPSPi_MISO
3	PLTRST#_OTHER2	4	GPSPi_MOSI
5	GPSPi_CS0#	6	+V3.3
7	GPSPi_ALERT#	8	+V1.8_DUAL
9	GND	10	PLTRST#_OTHER2
11	+V5_DUAL	12	+V5

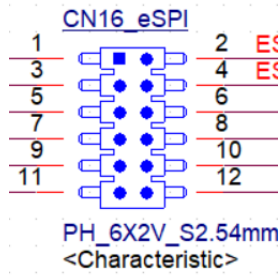


Table 3.12: CN16_eSPI Pin Header

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#

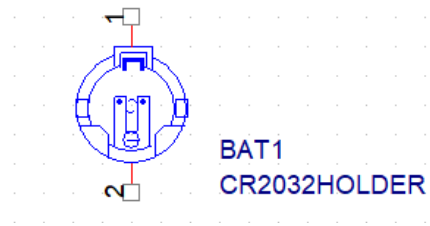


Table 3.13: BAT1 RTC Battery Connector

Pin	Signal
1	+VBAT_BH
2	GND

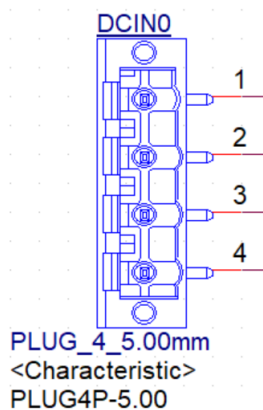


Table 3.14: DCIN0 Wide Range DC Input Connector2

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

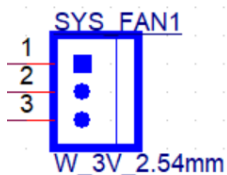


Table 3.15: SYS_FAN1 System Fan Connector

Pin	Signal
1	SYS_FAN_SENSE
2	+V12
3	GND

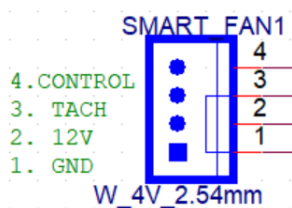


Table 3.16: SMART_FAN1 Smart Fan Connector

Pin	Signal
1	GND
2	+V12
3	FANTACH_R1
4	FANPWM_R

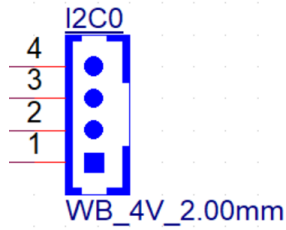


Table 3.17: I2C0 I2C Wafer Box(+3.3V)

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

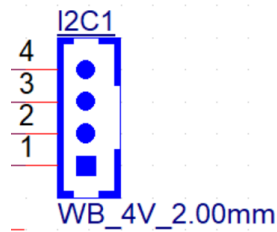


Table 3.18: I2C1 I2C Wafer Box(+1.8V)

Pin	Signal
1	GND
2	I2C_DAT
3	I2C_CLK
4	+V1.8_DUAL

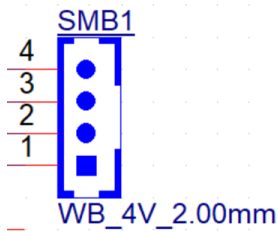


Table 3.19: SMB1 SMBus Wafer Box

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

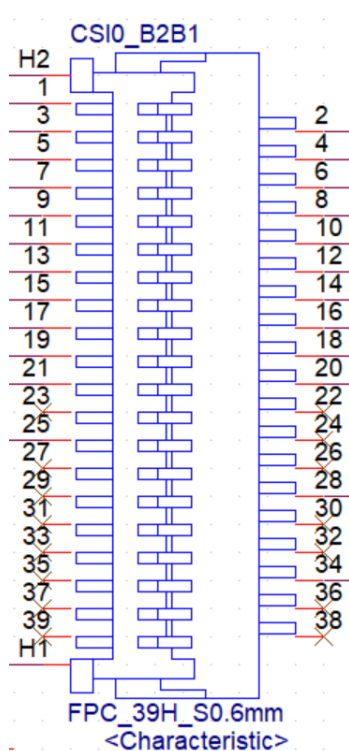


Table 3.20: CSIO_B2B1 Connector

Pin	Signal	Pin	Signal
1	+V3.3	2	+V3.3
3	CSIO_RX0+	4	CSIO_RX0-
5	GND	6	CSIO_RX1+
7	CSIO_RX1-	8	GND
9	CSIO_RX2+	10	CSIO_RX2-
11	CSIO_RST#	12	CSIO_RX3+
13	CSIO_RX3-	14	GND
15	CSIO_CLK+	16	CSIO_CLK-
17	GND	18	CSIO_I2C_CLK
19	CSIO_I2C_DAT	20	CSIO_ENA
21	CSIO_MCLK	22	NC
23	NC	24	NC
25	GND	26	NC
27	NC	28	GND
29	NC	30	NC
31	NC	32	NC
33	NC	34	GND
35	NC	36	NC
37	NC	38	NC
39	NC		

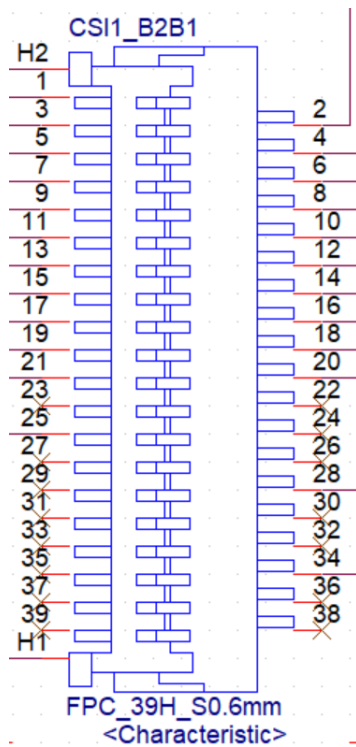


Table 3.21: CSI1_B2B1 Connector

Pin	Signal	Pin	Signal
1	+V3.3	2	+V3.3
3	CSI1_RX0+	4	CSI1_RX0-
5	GND	6	CSI1_RX1+
7	CSI1_RX1-	8	GND
9	CSI1_RX2+	10	CSI1_RX2-
11	CSI1_RST#	12	CSI1_RX3+
13	CSI1_RX3-	14	GND
15	CSI1_CLK+	16	CSI1_CLK-
17	GND	18	CSI1_I2C_CLK
19	CSI1_I2C_DAT	20	CSI1_ENA
21	CSI1_MCLK	22	NC
23	NC	24	NC
25	GND	26	NC
27	NC	28	GND
29	NC	30	NC
31	NC	32	NC
33	NC	34	GND
35	NC	36	NC
37	NC	38	NC
39	NC		

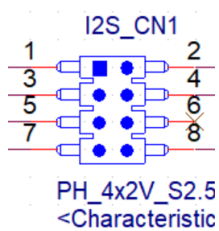


Table 3.22: Table 3.22: I2S_CN1 Bus Connector			
Pin	Signal	Pin	Signal
1	I2S_VDD	2	I2S_DIN
3	I2S_LRCLK	4	I2S_CLK
5	I2S_DOUT	6	NC
7	GND	8	I2S_MCLK

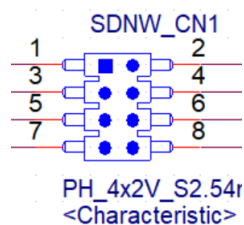


Table 3.23: SDNW_CN1 Connector			
Pin	Signal	Pin	Signal
1	+V1.8	2	SNDW_CLK2
3	SNDW_CLK3	4	SNDW_DAT2
5	SNDW_DAT3	6	SNDW_DMIC_CLK1
7	GND	8	SNDW_DMIC_DAT1

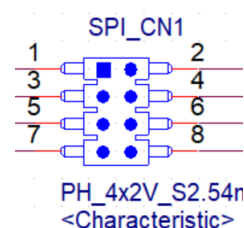
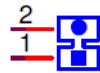
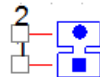


Table 3.24: SPI_CN1 SPI BIOS Pin Header			
Pin	Signal	Pin	Signal
1	+V3.3M_SPI_J	2	GND
3	Q_SPI_PH_CS#	4	Q_SPI_PH_CLK
5	Q_SPI_PH_MISO	6	Q_SPI_PH_MOSI
X		8	NC



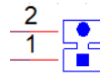
PWRBTN_PH1
PH_2x1V_2.54mm
<Characteristic>

Table 3.25: PWRBTN_PH1 PWRBTN Pin Header	
Pin	Signal
1	GND
2	PWRBTN#



PWRBTN_PH1
PH_2x1V_2.54mm
<Characteristic>

Table 3.26: SYS_RESET_PH1 SYS RESET Pin Header	
Pi	Signal
1	GND
2	PM_EXTRST#



BATLOW1
PH_2x1V_2.54mm

Table 3.27: SATA_ACT_PH1 SATA ACT# Pin Header	
Pin	Signal
1	GND
2	BATLOW#



PWRBTN_PH1
PH_2x1V_2.54mm
<Characteristic>

Table 3.28: PWR_LED_PH1 Power LED Pin Header	
Pin	Signal
1	GND
2	Pull-up via 330 ohm to +V5

3.1.11.1 PCIE Slot List

Slot Location	COM-HPC port
PCle x4_1	PCIE00~PCIE03
PCle x4_2	PCIE04~PCIE07
PCle x4_3	PCIE08~PCIE11
PCle x4_4	PCIE12~PCIE15
PCle x4_5	PCIE36~PCIE39
PCle x4_6	PCIE40~PCIE43
PCle x4_7	PCIE44~PCIE47
PCle_BMC1	PCIE_BMC
PCIEX16_1	PCIE16~PCIE31
M2M1	PCIE32~PCIE33
M2E1	PCIE34~PCIE35

3.1.12 Jumper Setting

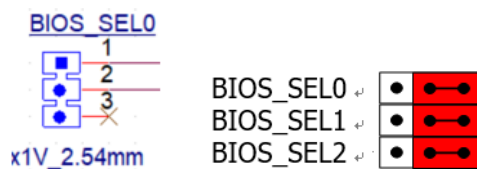


Table 3.29: BIOS_SEL Pin Header

Pin	Function
1	BIOS_SEL 2~0
2	100ohm to GND
3	NC



Table 3.30: J25, J26 SOM-DH3000 Voltage Input (VIN) Selection

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



Table 3.31: J22 COMe Module +V5SB Supply	
Pin	Function
1-X	Not supply +V5SB to COMe Module
3-X	
31-2	Supply +V5SB to COMe Module [Default]
3-4	



Table 3.32: BATLOW1	
Pin	Function
1-2	Battery Low
1-X	Normal [Default]



Table 3.33: PSON1 ATX/AT Mode Selection	
Pin	Function
1-2	AT Mode
2-3	ATX Mode [Default]



Table 3.34: J19 Carrier Board SPI power supply	
Pin	Function
1-2	Carrier Board SPI power supply [Default]
1-X	Carrier Board SPI no power



Table 3.35: J23 COM_HPC Type pin 2	
Pin	Function
1-2	COM_HPC Type pin 2 supply
1-X	COM_HPC Type pin 2 Not supply [Default]

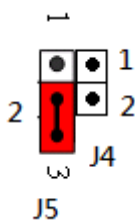


Table 3.36: J15, J16 EDP Panel PWR selection	
Pin	Function
J16 2-3	+VEDP_PANEL_PWR is +V3.3 [Default]
J16 1-2	+VEDP_PANEL_PWR is +V5
J15 2 – J16 2	+VEDP_PANEL_PWR is +V12



Table 3.37: CB_PWROK Power ok signal Pull Down\Floating Selection	
Pin	Function
X-X	Normal
1-2	POWROK to GND



Table 3.38: J6 LVDS_INVERTER Selection	
Pin	Function
1-2	INVERTER is +V5 [Default]
2-3	INVERTER is +V12

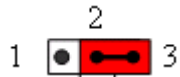


Table 3.39: J18 Normal Operation/Clear COMS Selection	
P	Function
1-2	Clear CMOS
2-3	Normal Operation [Default]



Table 3.40: J7 PCIE_RD_MODE_SELECT	
Pin	Function
1-2	I2C Mode
2-3	Pin Mode [Default]



Table 3.41: CN13 I2S_VDD	
Pin	Function
1-2	+V3.3 [Default]
2-3	+V1.8

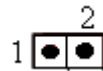


Table 3.42: SMB_ALT1 SMB_ALT#	
Pin	Function
1-2	SMBus Alert
1-X	Normal [Default]



Table 3.43: J10 ESPI EN & Disable SEL	
Pin	Function
1-2	ESPI EN
2-3	ESPI Disable



Table 3.44: CN5/CN6/CN7/CN8				
CN5	CN6	CN7	CN8	Function
(1-2)[Default]	(1-2)[Default]	(1-2)[Default]	(1-2)[Default]	Bring up with SO8 package SPI ROM from Carrier Board.
(2-3)	(2-3)	(2-3)	(2-3)	Bring up with QFN package SPI ROM from Carrier Board.

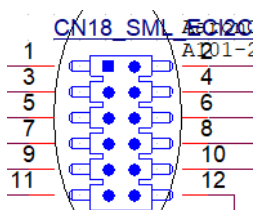


Table 3.45: CN18_SML_ECI2C			
Pin	Signal	Pin	Signal
1	USB_PD_I2C_CLK	2	I2C_EC_SCL_A
3	USB_PD_I2C_DAT	4	I2C_EC_SDA_A
5	USB_PD_ALERT#	6	I2C_EC_ALT#_A
7	PD_SML_SCL	8	I2C_SOC_SCL_A
9	PD_SML_DAT	10	I2C_SOC_SDA_A
11	PMCALERT#	12	I2C_SOC_ALT#_A
	Jumper 1-X		[Default]
	Jumper 3-X		[Default]
	Jumper 5-X		[Default]
	Jumper 7-X		[Default]
	Jumper 9-X		[Default]
	Jumper 11-X		[Default]

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For more information please contact:

Headquarters

Germany



FORTEC
GROUP

FORTEC Elektronik AG
Augsburger Str. 2b
82110 Germering

Phone: +49 89 894450-0
E-Mail: info@fortecag.de
Internet: www.fortecag.de

Fortec Group Members

Austria



FORTEC
INTEGRATED

FORTEC Integrated GmbH Office Vienna
Nuschinggasse 12
1230 Wien

Phone: +43 1 8673492-0
E-Mail: info@fortec-integrated.de
Internet: www.fortec-integrated.de

Germany



FORTEC
INTEGRATED

FORTEC Integrated GmbH
Augsburger Str. 2b
82110 Germering

Phone: +49 89 894363-0
E-Mail: info@fortec-integrated.de
Internet: www.fortec-integrated.de

Switzerland



FORTEC
SWITZERLAND

FORTEC Switzerland AG
Bahnhofstraße 3
5436 Würenlos

Phone: +41 44 7446111
E-Mail: info@fortec.ch
Internet: www.fortec.ch

United Kingdom



FORTEC
UNITED KINGDOM

FORTEC Technology UK Ltd.
Osprey House, 1 Osprey Court
Hinchingbrooke Business Park
Huntingdon, Cambridgeshire, PE29 6FN

Phone: +44 1480 411600
E-Mail: info@fortec.uk
Internet: www.fortec.uk

USA



FORTEC
UNITED STATES

FORTEC US, Corp.
87 Raynor Avenue, Unit 1
Ronkonkoma, NY 11779

Phone: +1 631 5804360
E-Mail: info@fortec.us
Internet: www.fortec.us