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PQ7-C200

User's Manual



Version 1.0

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Table of Contents

How to Use This Manual

Chapter 1 Introduction.....	1-1
1.1 Product Feature.....	1-1
1.2 System Architecture	1-3
Chapter 2 Mechanics	2-1
2.1 Mechanical Drawing	2-1
2.2 Module and Baseboard Assemble Guide	2-2
Chapter 3 Hardware Description	3-1
3.1 Connector Allocation	3-1

How to Use This Manual

The manual describes how to configure your PQ7-C200 to meet various operating requirements. It is divided into five chapters, with each chapter addressing a basic concept and operation of this Q_{SEVEN} Module.

Chapter 1 : Introduction. Presents what you have in the box and give you an overview of the product specifications and basic system architecture for this model of evaluative board.

Chapter 2 : Mechanics. Describes the definition and location for Jumpers that you can easily configure your system.

Chapter 3 : Hardware. Specifies all connector on evaluative board location, and mentions what the default setting by jumper for each connector.

The content of this manual and EC declaration document is subject to change without prior notice. These changes will be incorporated in new editions of the document. **Portwell** may make supplement or change in the products described in this document at any time.

Updates to this manual, technical clarification, and answers to frequently asked questions will be shown on the following web site: <http://www.portwell.com.tw>

Chapter 1

Introduction

Q_{SEVEN}, a new industrial computer platform in “Module board” and “Carrier board” architecture, equipped processor, chipset, memory and single Ethernet controller on it. The On-The-Shelf Module board allows users to create their own Carrier board easily and quickly since most critical parts are ready on Module board. Q_{SEVEN} Module board offers expansion interfaces such as PCI Express, SATA, LPC, LVDS, USB, SDVO and Audio etc. that could support variety functions depending on Carrier board design.

The Carrier board was customized design to fit in different mechanical requirements. In the meanwhile, its variety functions were also customized to meet the application. Compares to the platform that designed from nothing, Q_{SEVEN} architecture platform only needs to develop Carrier board. Users could keep their know-how which related to their core competence in the Carrier board.

The evaluative board described here is the Q_{SEVEN} Reference Platform design for evaluation of Q_{SEVEN} Modules.

1.1 Product Feature

- **MXM Connector**

Interface for PQ7 modules

- **Expansion Interfaces from Module**

- SDVO (Serial Digital Video Output)

- A maximum pixel clock of 160 MHz is supported on the SDVO interface.
- Implemented for SDVO-to-VGA transmitter, CH7317A, to support VGA.

- PCI Express

- One PCI Express x1 link for XIO2000A
- One PCI Express x1 link for PCI Express x1 slot

- LVDS

- Supports maximum 112MHz single channel LVDS interface
- Single channel LVDS interface support: 24 bpp
- Maximum Panel resolution supported up to 1366 x 768

- Ethernet MDI

- Two Intel 82541PI Gigabit Ethernet controllers are equipped on PQ7-C200

- USB

- Support eight USB 2.0 ports
- Port 0/1 to one USB header, J14 (Port 1 support Client USB)
- Port 2/3 to rear USB port
- Port 4/5 to rear USB port
- Port 6/7 to one USB header

- SATA

- Support four SATA ports
- SATA Port 0, 1 to J32/J33 are supported from PQ7 module, except PQ7-M100G.
- Extra two SATA ports, J27/J28, are supported from VT6421A.

- SDIO1.1

- Support one SD card slot

- HDA

- For ALC262-VC2 to support LINE-IN/LINE-OUT/MIC-IN to a jack on rear.

- LPC

- For SIO, W83627DHG to support legacy IO, one RS232/422/485 selectable port on rear IO, one RS232 header, one GPIO header, one header for front panel IO including power button, power reset, IDE/SATA HDD & SD card activity LED and Suspend LED.

● **Outline Dimension (L X W):**

170mm x 170mm

● **Operating Temperature:**

0°C ~ 60°C

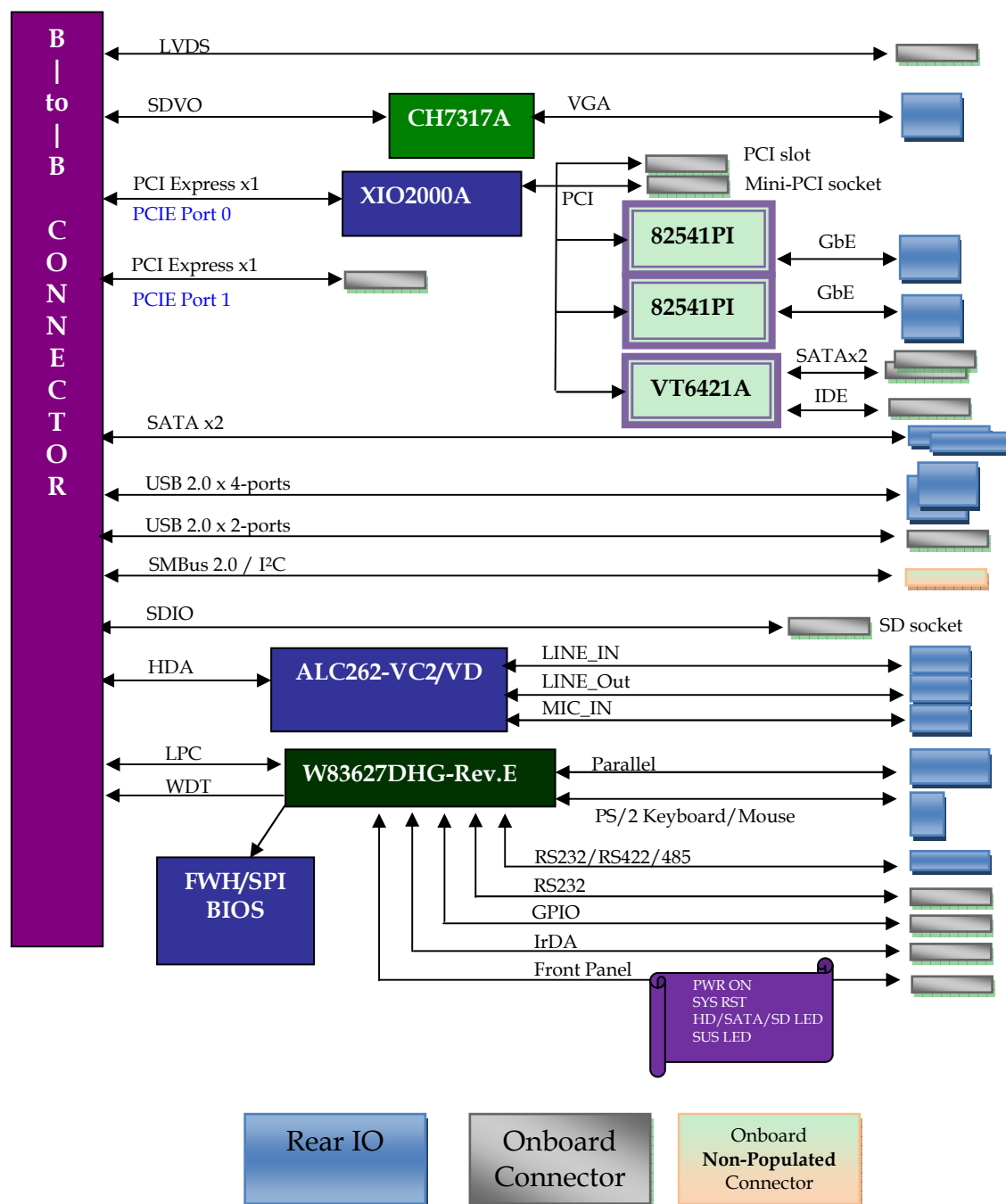
● **Storage Temperature:**

-40°C ~ 70°C

● **Relative Humidity:**

5% ~ 90%, non-condensing

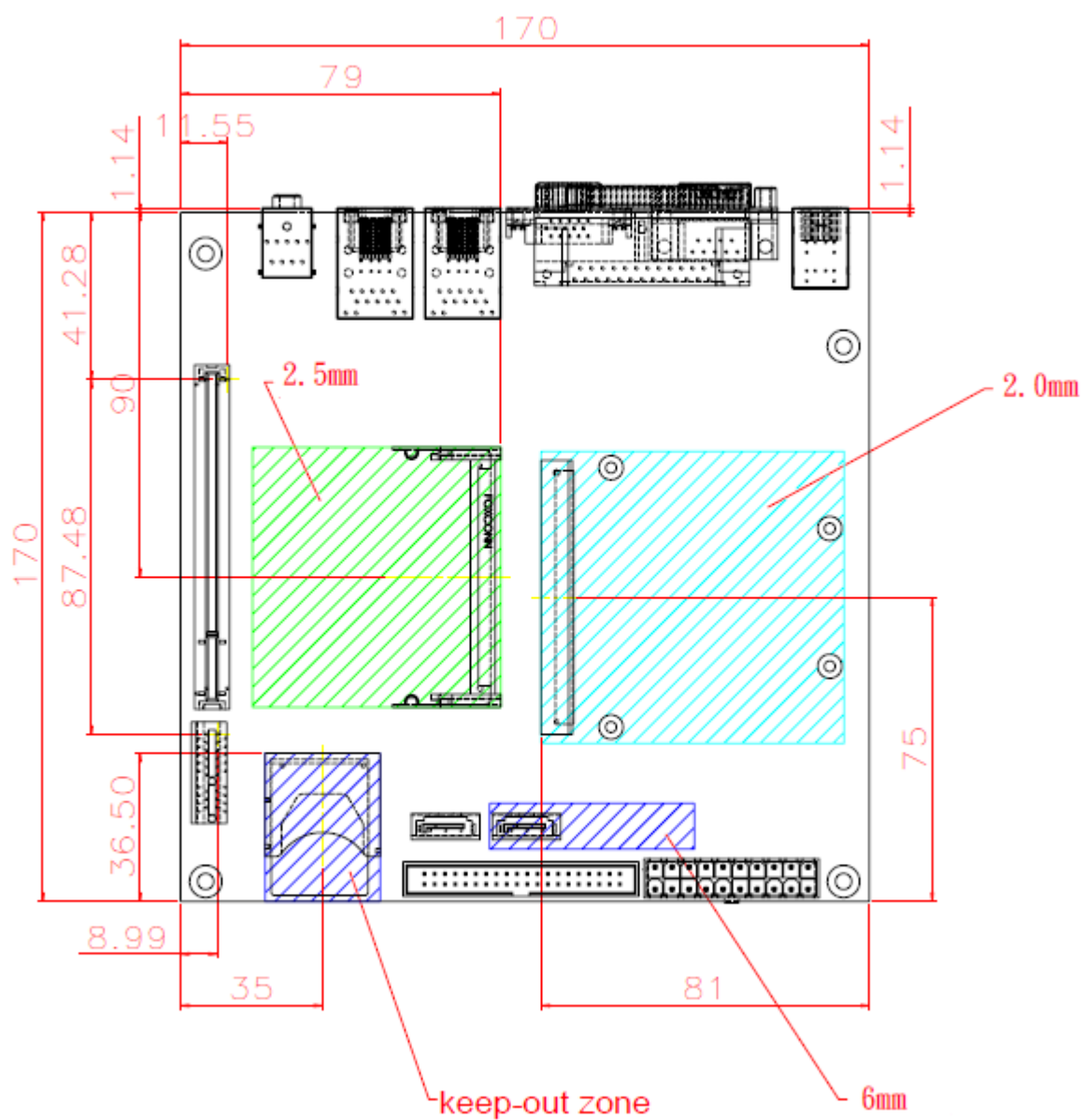
1.2 System Architecture



PQ7-C200 System Block Diagram

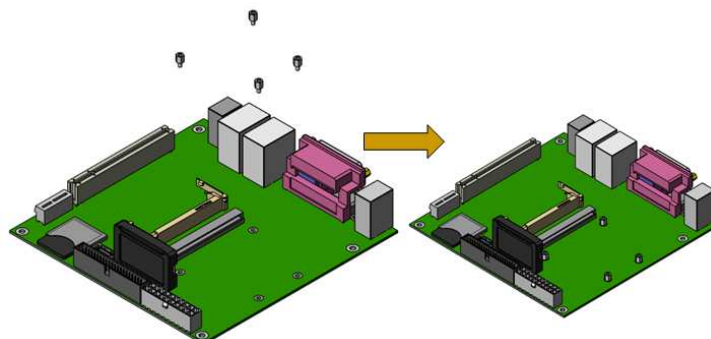
Chapter 2 Mechanics

2.1 Mechanical Drawing

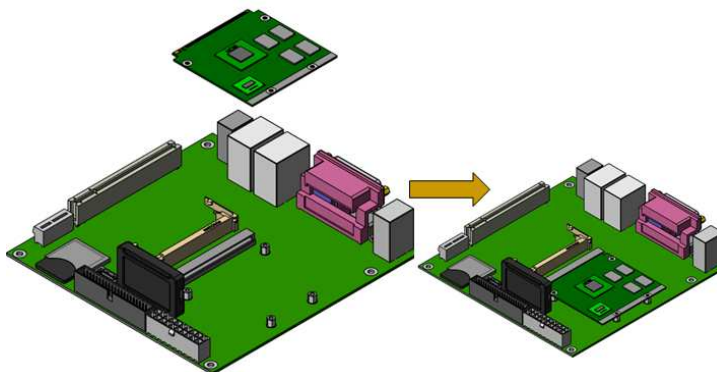


2.2 Module and Baseboard Assemble Guide

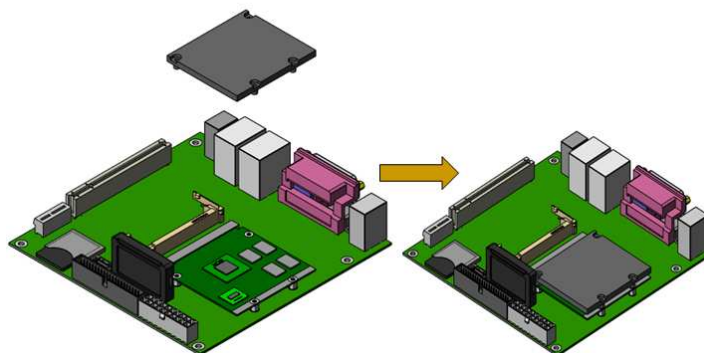
STEP.1 Assy. four M2.5 copper pillar via baseboard to your chassis with standoff



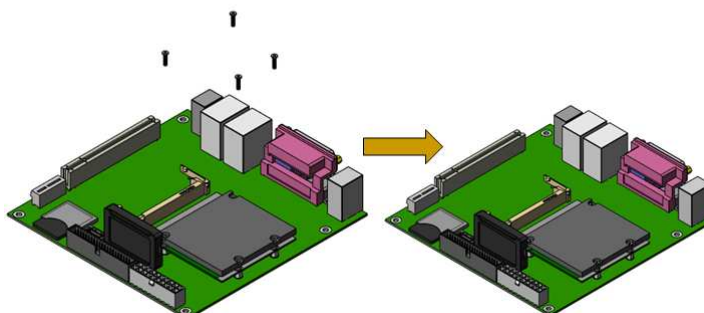
STEP.2 Assy. Module and make sure it's screw hole is level at copper pillar's



STEP.3 Assy. heat spreader, and make sure it's screw hole is level at module's



STEP.4 use M2.5 screw to lock heat spreader, module and baseboard



Chapter 3

Hardware Description

This chapter gives the definitions and shows the positions of jumpers, headers and connector. All of the configuration jumpers on Portwell evaluative Carrier PQ7-C200 are in the proper position. The default settings shipped from factory are marked with a star (★).

3.1 Connector Allocation

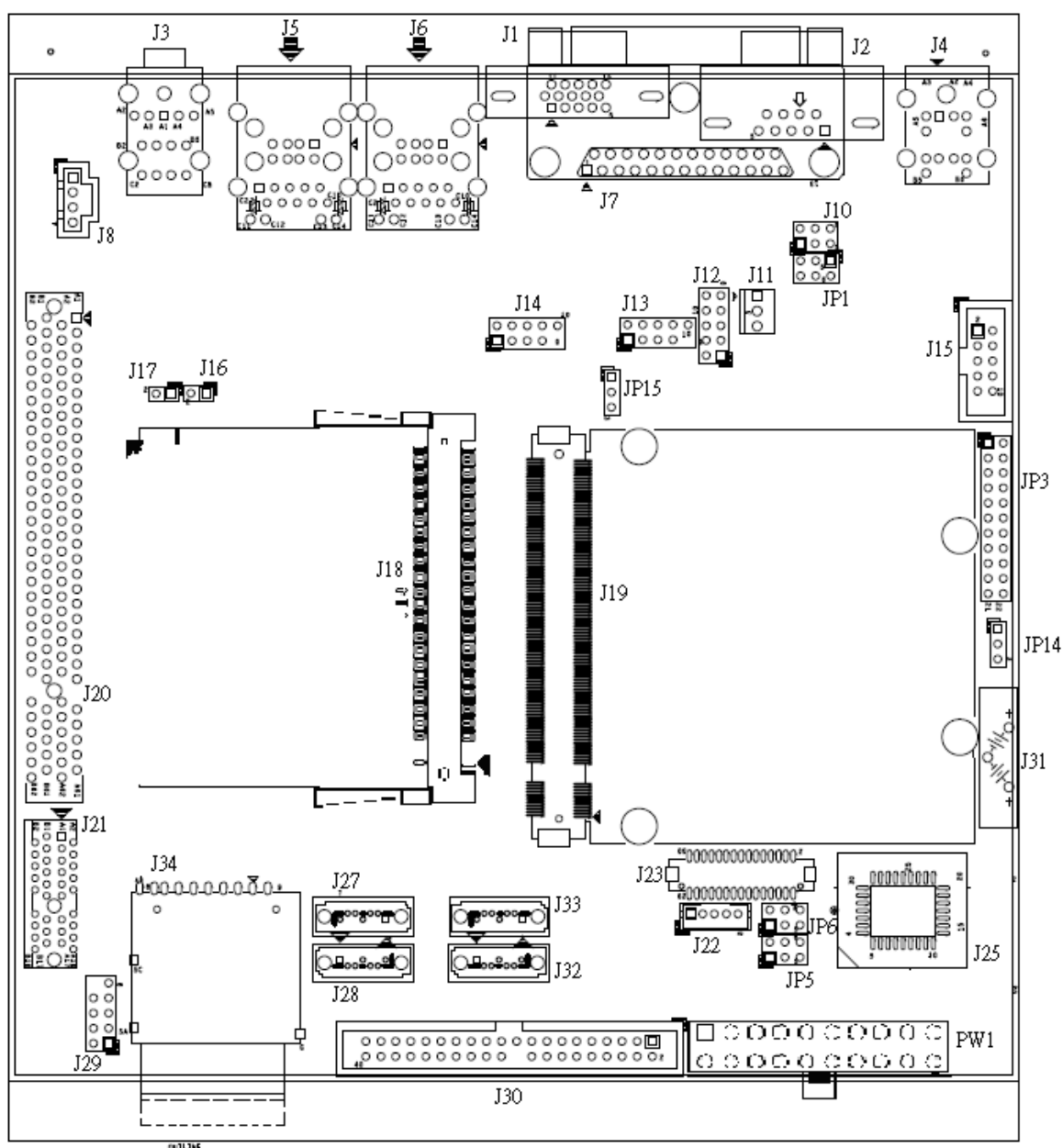


Figure 2-1 PQ7-C200 Jumper & Connector Location

JP1 : RS232 / IrDA Selection

JP1	Function
1-3 Short,2-4 Short	COM port ★
3-5 Short,4-6 Short	IrDA

JP3 : COM1(J2) Interface Selection

JP2	Function
5-6,9-11,10-12,15-17,16-18 Short	RS-232 ★
3-4,7-9,8-10,13-15,14-16,21-22 Short	RS-422
1-2,7-9,8-10,19-20 Short	RS-485

JP5 : LVDS Power Level

JP5	Function
1-3 Short	3.3V ★
3-5 Short	5V

JP6 : LVDS Back-light Power Level

JP6	Function
1-3 Short, 2-4 Short	3.3V ★
3-5 Short, 4-6 Short	5V

JP7 : Auto Power Button Selection

JP7	Function
Open	Disable ★
Short	Enable

JP8 : BIOS Disable Selection

JP8	Function
Open	Disable
Short	Enable ★

JP14 : CMOS Clear

JP14	Function
1-2 Short	Normal Operation ★
2-3 Short	Clear CMOS Contents

JP15 : USB Client Selection

JP15	Function
1-2 Short	Enable USB Client ★
2-3 Short	Disable USB Client

Connector Function List

Connector	Description	Remark
J1	On-board VGA CRT Connector	
J2	COM1 Serial Port1 Connector	
J3	Audio Jack	
J4	PS/ 2 Keyboard/ Mouse Connector	
J5	Primary USBx2 + LAN Connector	
J6	Secondary USBx2 + LAN Connector	
J7	Parallel Port Header	
J8	Audio CD-in Connector	
J10	IrDA Connector	
J11	3-pin Fan Header	
J12	General Purpose I/O Header	
J13	3rd pairs of USB Header	
J14	4th pairs of USB Header	
J15	COM2 Serial Port2 Header	
J16	External LAN1 port Link/ Act LED	
J17	External LAN2 port Link/ Act LED	
J18	Mini-PCI Connector	
J19	MXM Connector	
J20	PCI Connector	
J21	PCI-Express x1 Connector	
J22	LVDS Panel Connector	
J23	LVDS Panel Back-light Power Connector	
J25	Firmware hub socket	
J27	SATA1 Connector	
J28	SATA2 Connector	
J29	Front panel Connector	
J30	IDE Connector	
J31	Battery Connector	
J32	SATA4 Connector (For PQ7-M101G only)	
J33	SATA3 Connector (For PQ7-M101G only)	
J34	SD Connector	
JP1	RS232 / IrDA Selection	
JP3	COM1 Interface Selection	

JP5	LVDS Power Level	
JP6	LVDS Back-light Power Level	
JP7	Auto Power Button Selection	
JP8	BIOS Disable Selection	
JP14	CMOS Clear	
JP15	USB Client Selection	

Pin Assignments of Connectors

J1 : On-board VGA CRT Connector

PIN No.	Signal Description
1	Red
2	Green
3	Blue
4	Monitor ID0 (MONID0) (5V I/F)
5	Ground
6	Ground
7	Ground
8	Ground
9	+5V
10	Ground
11	Monitor ID1 (MONID1) (5V I/F)
12	VGA DDC Data (5V I/F)
13	Horizontal Sync. (HSYNC) (5V I/F)
14	Vertical Sync. (VSYNC) (5V I/F)
15	VGA DDC Clock (5V I/F)

J2 : COM1 Serial Port Connector

PIN No.	Signal Description		
	RS-232	RS-422	RS-485
1	DCD (Data Carrier Detect)	TX-	DATA-
2	RXD (Receive Data)	TX+	DATA+
3	TXD (Transmit Data)	RX+	N/C
4	DTR (Data Terminal Ready)	RX-	N/C
5	GND (Ground)	GND	GND
6	DSR (Data Set Ready)	N/C	N/C
7	RTS (Request to Send)	N/C	N/C
8	CTS (Clear to Send)	N/C	N/C
9	RI/5V/12V	N/C	N/C

J4 : PS/ 2 Keyboard/ Mouse Connector

PIN No.	Signal Description
B1	Mouse Data
A1	Keyboard Data
A3,B3	Ground
A4,B4	5V Dual
A2,A6,B2,B6	N/C
B5	Mouse Clock
A5	Keyboard Clock

J5 : Primary USBx2 + LAN Connector

PIN No.	Signal Description	PIN No.	Signal Description (Top Con.)
1	MDI0+ (MDI0P)	1	5V Dual
2	MDI0- (MDI0N)	2	USB1-
3	MDI1+ (MDI1P)	3	USB1+
4	MDI2+ (MDI2P)	4	Ground
5	MDI2- (MDI2N)	5	5V Dual
6	MDI1- (MDI1N)	6	USB0-
7	MDI3+ (MDI3P)	7	USB0+
8	MDI3- (MDI3N)	8	Ground

J6 : Second USBx2 + LAN Connector

PIN No.	Signal Description	PIN No.	Signal Description (Top Con.)
1	MDI0+ (MDI0P)	1	5V Dual
2	MDI0- (MDI0N)	2	USB1-
3	MDI1+ (MDI1P)	3	USB1+
4	MDI2+ (MDI2P)	4	Ground
5	MDI2- (MDI2N)	5	5V Dual
6	MDI1- (MDI1N)	6	USB0-
7	MDI3+ (MDI3P)	7	USB0+
8	MDI3- (MDI3N)	8	Ground

J7 : Parallel Port Connector

PIN No.	Signal Description	PIN No.	Signal Description
1	Strobe#	14	Auto Form Feed#
2	Data 0	15	Error#
3	Data 1	16	Intialization#
4	Data 2	17	Printer Select IN#
5	Data 3	18	Ground

6	Data 4	19	Ground
7	Data 5	20	Ground
8	Data 6	21	Ground
9	Data 7	22	Ground
10	Acknowledge#	23	Ground
11	Busy	24	Ground
12	Paper Empty	25	Ground
13	Printer Select		

J10 : IrDA Connector

PIN No.	Signal Description
1	IRRX
2	Ground
3	Ground
4	NC
5	IRTX
6	VCC

J11 : 3-pin Fan Connector

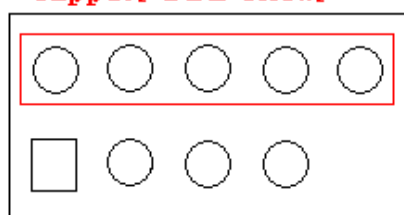
PIN No.	Signal Description
1	Ground
2	+12V
3	Fan Speed Detecting signal

J12 : General Purpose I/O Connector

PIN No.	Signal Description	PIN No.	Signal Description
1	General Purpose I/O Port 0 (GPIO0)	2	General Purpose I/O Port 4 (GPIO4)
3	General Purpose I/O Port 1 (GPIO1)	4	General Purpose I/O Port 5 (GPIO5)
5	General Purpose I/O Port 2 (GPIO2)	6	General Purpose I/O Port 6 (GPIO6)
7	General Purpose I/O Port 3 (GPIO3)	8	General Purpose I/O Port 7 (GPIO7)
9	Ground	10	+5V

J13 : 3rd pairs of USB Header

PIN No.	Signal Description	PIN No.	Signal Description
1	5V Dual	2	5V Dual
3	USB-	4	USB-
5	USB+	6	USB+
7	Ground	8	Ground
9		10	N/C

J14 : 4th pairs of USB Header**support USB client**

PIN No.	Signal Description	PIN No.	Signal Description
1	5V Dual	2	5V Dual
3	USB-	4	USB- (Support USB Client)
5	USB+	6	USB+ (Support USB Client)
7	Ground	8	Ground
9		10	N/C

J15 : COM2 Serial Port BOX Header

PIN No.	Signal Description
	RS-232
1	DCD (Data Carrier Detect)
2	RXD (Receive Data)
3	TXD (Transmit Data)
4	DTR (Data Terminal Ready)
5	GND (Ground)
6	DSR (Data Set Ready)
7	RTS (Request to Send)
8	CTS (Clear to Send)
9	RI/5V/12V
10	N/C

J16 : External LAN1 port Link/Act LED

PIN No.	Signal Description
1	L1_ACT#
2	L1_LINKLED#

J17 : External LAN2 port Link/Act LED

PIN No.	Signal Description
1	L2_ACT#
2	L2_LINKLED#

J18: Mini-PCI Connector

PIN No.	Signal Description	PIN No.	Signal Description
1	N/C	2	N/C
3	N/C	4	N/C
5	N/C	6	N/C
7	N/C	8	N/C
9	N/C	10	N/C
11	N/C	12	N/C
13	N/C	14	N/C
15	N/C	16	N/C
17	INTA-	18	VCC
19	VCC3	20	INTB-
21	N/C	22	N/C
23	GND	24	3.3VAUX
25	S_PCLK1	26	S_RST-
27	GND	28	VCC3
29	S_REQ-1	30	S_GNT-1
31	VCC3	32	GND
33	SAD31	34	PME#
35	SAD29	36	N/C
37	GND	38	SAD30
39	SAD27	40	VCC3
41	SAD25	42	SAD28
43	N/C	44	SAD26
45	SCBE-3	46	SAD24
47	SAD23	48	IDSEL
49	GND	50	GND
51	SAD21	52	SAD22
53	SAD19	54	SAD20
55	GND	56	S_PAR
57	SAD17	58	SAD18

59	SCBE-2	60	SAD16
61	S_IRDY-	62	GND
63	VCC3	64	S_FRAME-
65	N/C	66	S_TRDT-
67	S_SERR-	68	S_STOP-
69	GND	70	VCC3
71	S_PERR-	72	S_DEVSEL-
73	SCBE-1	74	GND
75	SAD14	76	SAD15
77	GND	78	SAD13
79	SAD12	80	SAD11
81	SAD10	82	GND
83	GND	84	SAD9
85	SAD8	86	SCBE-0
87	SAD7	88	VCC3
89	VCC3	90	SAD6
91	SAD5	92	SAD4
93	N/C	94	SAD2
95	SAD31	96	SAD0
97	VCC	98	N/C
99	SAD1	100	N/C
101	GND	102	KEY
103	N/C	104	ME66EN
105	N/C	106	N/C
107	N/C	108	N/C
109	N/C	110	N/C
111	N/C	112	N/C
113	N/C	114	GND
115	N/C	116	N/C
117	N/C	118	N/C
119	N/C	120	N/C
121	N/C	122	N/C
123	N/C	124	N/C

J19 : MXM Connector

PIN No.	Signal Description	PIN No.	Signal Description
1	GND	2	GND
3	N/C	4	N/C
5	N/C	6	N/C
7	N/C	8	N/C
9	N/C	10	N/C
11	N/C	12	N/C
13	N/C	14	N/C
15	N/C	16	SLP_S5#

17	WAKE#	18	SLP_S3#
19	VSB3	20	PWRBTN#_PM
21	N/C	22	N/C
23	GND	24	GND
25	GND	26	PWROK_Q7
27	VSB3	28	RST_SYS#
29	N/C	30	N/C
31	N/C	32	N/C
33	VCC	34	GND
35	N/C	36	N/C
37	N/C	38	N/C
39	GND	40	GND
41	BIOS_DISABLE#	42	SLOT2_CLK
43	SLOT2_CD#	44	SD2_LED
45	SLOT2_CMD	46	SLOT2_WP
47	SD2PWR#	48	SLOT2_DATA1
49	SLOT2_DATA0	50	SLOT2_DATA3
51	SLOT2_DATA2	52	N/C
53	N/C	54	N/C
55	N/C	56	N/C
57	GND	58	GND
59	HDA_SYNC	60	SMB_CLK
61	HDA_RST#	62	SMB_DATA
63	HDA_BITCLK	64	N/C
65	HDA_SDATAIN0	66	I2C_CLK
67	HDA_SDATAOUT	68	I2C_DAT
69	PM_THRM#	70	WDTO
71	GND	72	N/C
73	DF_USB_PN7	74	GND
75	DF_USB_PN7	76	DF_USB_PN6
77	DF_USB_PP7	78	DF_USB_PP6
79	USB_6_7_OC#	80	USB_4_5_OC#
81	DF_USB_PN5	82	DF_USB_PN4
83	DF_USB_PP5	84	DF_USB_PP4
85	USB_2_3_OC	86	USB_0_1_OC#
87	DF_USB_PN3	88	DF_USB_PN2
89	DF_USB_PP3	90	DF_USB_PP2
91	N/C	92	N/C
93	DF_USB_PN1	94	DF_USB_PN0
95	DF_USB_PP1	96	DF_USB_PP0
97	GND	98	GND
99	LA_DATAP0	100	LB_DATAP0
101	LA_DATAN0	102	LB_DATAN0
103	LA_DATAP1	104	LB_DATAP1
105	LA_DATAN1	106	LB_DATAN1

107	LA_DATAP2	108	LB_DATAP2
109	LA_DATAN2	110	LB_DATAN2
111	L_VDDEN	112	L_BKLTEN
113	LA_DATAP3	114	LB_DATAP3
115	LA_DATAN3	116	LB_DATAN3
117	GND	118	GND
119	DF_LA_CLKP	120	DF_LB_CLKP
121	DF_LA_CLKN	122	DF_LB_CLKN
123	L_BKLTCTL	124	N/C
125	N/C	126	LVDS_BLC_DAT
127	N/C	128	LVDS_BLC_CLK
129	N/C	130	N/C
131	SDVO_CLK	132	N/C
133	SDVO_CLK#	134	N/C
135	GND	136	GND
137	SDVO_GREEN	138	N/C
139	SDVO_GREEN#	140	N/C
141	GND	142	GND
143	SDVO_BLUE	144	SDVO_TVCLKIN
145	SDVO_BLUE#	146	SDVO_TVCLKIN#
147	GND	148	N/C
149	SDVO_RED	150	SDVO_CTRLDATA
151	SDVO_RED#	152	SDVO_CTRLCLK
153	N/C	154	N/C
155	DF_CLK_PCIE+	156	PCIE_WAKE#
157	DF_CLK_PCIE-	158	RST#
159	GND	160	GND
161	N/C	162	N/C
163	N/C	164	N/C
165	GND	166	GND
167	N/C	168	N/C
169	N/C	170	N/C
171	N/C	172	EXCD1_PERST#
173	DF_PCIE_TX2+	174	PCIE_RX2+
175	DF_PCIE_TX2-	176	PCIE_RX2-
177	N/C	178	N/C
179	DF_PCIE_TXP1	180	PCIE_RXP1
181	DF_PCIE_TXN1	182	PCIE_RXN1
183	GND	184	GND
185	LPC_AD0	186	LPC_AD1
187	LPC_AD2	188	LPC_AD3
189	CLK_LPC_FWH	190	LPC_FRAME#
191	LPC_SERIRQ	192	LPC_LDRQ#
193	V3.3A_RTC	194	SPKR
195	N/C	196	N/C

197	GND	198	GND
199	N/C	200	N/C
210	N/C	202	N/C
203	N/C	204	H_A20M#
205	VSB5	206	VSB5
207	N/C	208	N/C
209	N/C	210	N/C
211	VCC	212	VCC
213	VCC	214	VCC
215	VCC	216	VCC
217	VCC	218	VCC
219	VCC	220	VCC
221	VCC	222	VCC
223	VCC	224	VCC
225	VCC	226	VCC
227	VCC	228	VCC
229	VCC	230	VCC

J20 : PCI Connector

PIN No.	Signal Description	PIN No.	Signal Description
A01	TRST# (Pull-Low)	B01	-12V
A02	12 V	B02	4.7K Pull-Low
A03	PTMS (2.7K Pull-high 5V)	B03	GND
A04	PTDI (2.7K Pull-high 5V)	B04	N/C
A05	VCC	B05	VCC
A06	PIRQ#B	B06	VCC
A07	PIRQ#F	B07	PIRQ#D
A08	VCC	B08	PIRQ#G
A09	N/C	B09	N/C
A10	VCC	B10	N/C
A11	N/C	B11	N/C
A12	GND	B12	GND
A13	GND	B13	GND
A14	N/C	B14	NC
A15	PCIRST#	B15	GND
A16	VCC	B16	PCI Clock
A17	PGNT#0	B17	GND
A18	GND	B18	PREQ#0
A19	PME#	B19	VCC
A20	AD30	B20	AD31
A21	VCC3	B21	AD29
A22	AD28	B22	GND
A23	AD26	B23	AD27

A24	GND	B24	AD25
A25	AD24	B25	VCC3
A26	IDSEL (AD20)	B26	C/BE#3
A27	VCC3	B27	AD23
A28	AD22	B28	GND
A29	AD20	B29	AD21
A30	GND	B30	AD19
A31	AD18	B31	VCC3
A32	AD16	B32	AD17
A33	VCC3	B33	C/BE#2
A34	FRAME#	B34	GND
A35	Ground	B35	IRDY#
A36	TRDY#	B36	VCC3
A37	GND	B37	DEVSEL#
A38	STOP#	B38	GND
A39	VCC3	B39	LOCK#
A40	N/C	B40	PERR#
A41	N/C	B41	VCC3
A42	GND	B42	SERR#
A43	PAR	B43	VCC3
A44	AD15	B44	C/BE#1
A45	VCC3	B45	AD14
A46	AD13	B46	Ground
A47	AD11	B47	AD12
A48	GND	B48	AD10
A49	AD9	B49	GND
A50	KEY	B50	KEY
A51	KEY	B51	KEY
A52	C/BE#0	B52	AD8
A53	VCC3	B53	AD7
A54	AD6	B54	VCC3
A55	AD4	B55	AD5
A56	Ground	B56	AD3
A57	AD2	B57	GND
A58	AD0	B58	AD1
A59	VCC	B59	VCC
A60	4.7K Pull-High VCC	B60	4.7K Pull-High VCC
A61	VCC	B61	VCC
A62	VCC	B62	VCC

J21 : PCI-Express x1 Connector

(NOTE: J21, PCI Express x1 slot is not standard pin-out definition; it must collocate with specific riser card. Portwell provide two cards, PER-4210R (AA1-3072) with one PCI Express slot on it, PEP-592R (AA1-3049) with one PCI Express slot and one PCI slot)

PIN No.	Signal Description	PIN No.	Signal Description
A01	NC	B01	Ground
A02	NC	B02	DF_CLK_PCIE2
A03	Ground	B03	DF_CLK_PCIE#2
A04	NC	B04	Ground
A05	NC	B05	NC
A06	Ground	B06	NC
A07	NC	B07	Ground
A08	NC	B08	NC
A09	Ground	B09	NC
A10	NC	B10	NC
A11	NC	B11	PCIE_WAKE#
A12	RST#	B12	Ground
A13	Ground	B13	NC
A14	NC	B14	NC
A15	NC	B15	Ground
A16	Ground	B16	DF_PCIE_TXP2
A17	DF_PCIE_RXP2	B17	DF_PCIE_TXN2
A18	DF_PCIE_RXN2	B18	Ground

J22 : LVDS Panel Back-light Power Connector

PIN No.	Signal Description
1	Backlight Power (select by JP5)
2	Ground
3	+12V
4	LVDS_PMW
5	+5V

J23 : LVDS Panel Caonnector

PIN No.	Signal Description	PIN No.	Signal Description
1	LA_DATAP0	2	LA_DATAN0
3	LA_DATAP1	4	LA_DATAN1
5	LA_DATAP2	6	LA_DATAN2
7	LA_DATAP3	8	LA_DATAN3
9	DF_LA_CLKP	10	DF_LA_CLKN
11	LB_DATAP0	12	LB_DATAN0

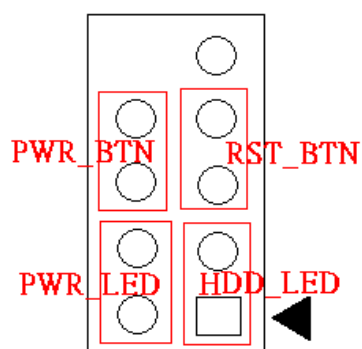
13	LB_DATAP1	14	LB_DATAN1
15	LB_DATAP2	16	LB_DATAN2
17	LB_DATAP3	18	LB_DATAN3
19	DF_LB_CLKP	20	DF_LB_CLKN
21	LVDS_BLC_DAT	22	LVDS_BLC_CLK
23	Ground	24	L_BKLTCTL
25	Ground	26	Ground
27	VDD_LVDS	28	VDD_LVDS
29	N/C	30	VDD_LVDS

J25 : Firmware hub socket**J27/J28 : FIRST Primary/Secondary SATA Connector**

PIN No.	Signal Description
1	Ground
2	SATATX+
3	SATATX-
4	Ground
5	SATARX-
6	SATARX+
7	Ground

J29 : Front panel Connector

Note: Power Button : J29-pin 6 and J29-pin 8
Reset Button : J29-pin 5 and J29-pin 7
Power LED : J29-pin 2 and J29-pin 4
HDD LED : J29-pin 1 and J29-pin 3



PIN No.	Signal Description	PIN No.	Signal Description
1	HD_LED_P	2	FP PWR/SL_P
3	HD_LED_N	4	FP PWR/SL_N
5	RST_SW_N	6	PWR_SW_P
7	RST_SW_P	8	PWR_SW_N
9	RSVD_DNU	10	

J30 : IDE Connector

PIN No.	Signal Description	PIN No.	Signal Description
1	RESET#	2	Ground
3	Data 7	4	Data 8
5	Data 6	6	Data 9
7	Data 5	8	Data 10
9	Data 4	10	Data 11
11	Data 3	12	Data 12
13	Data 2	14	Data 13
15	Data 1	16	Data 14
17	Data 0	18	Data 15
19	Ground	20	N/C
21	DMA REQ	22	Ground
23	IOW#	24	Ground
25	IOR#	26	Ground
27	IOCHRDY	28	Pull-down
29	DMA ACK#	30	Ground
31	INT REQ	32	N/C
33	SA1	34	N/C
35	SA0	36	SA2
37	HDC CS0#	38	HDC CS1#
39	HDD Active#	40	Ground

J31 : Battery Connector

PIN No.	Signal Description
1	3V Battery In
2	3V Battery In
3	Ground

J32/J33 : SECOND Primary/Secondary SATA Connector

PIN No.	Signal Description
1	Ground
2	SATATX+
3	SATATX-
4	Ground
5	SATARX-
6	SATARX+
7	Ground

J34 : SD Connector