

EmQ-i2200

Qseven® R2.0 CPU Module

Quick Installation Guide

Version 1.1

Form Factor
<i>Qseven® CPU Module</i>

CPU
<i>Intel® Celeron™ Processor N3160</i>

Video
<i>Dual-Channel 24-bit LVDS/ DisplayPort & HDMI selectable port</i>

LAN
<i>Intel® i210AT PCIe GbE controller</i>

Audio
<i>HD Link</i>

I/O
<i>USB2.0/ USB SuperSpeed/ SATA/ PClex1/ SDIO/ I2C/ UART</i>

◆ Technical Support

If you have any technical difficulties, please consult the user's manual first at:
<http://www.arbor-technology.com/>

Please do not hesitate to call or e-mail our customer service when you still can not find out the answer.

<http://www.arbor-technology.com/>

E-mail: info@arbor.com.tw

Declaration of Conformity

FCC Class A

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions : (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.



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Packing List

Before starting with the installation, make sure the following items are shipped:



1 x EmQ-i2200 Qseven® CPU Module



1 x Driver CD



1 x Quick Installation Guide

Ordering Information

EmQ-i2200-N3160-4G	Intel® Celeron N3160 Quad Core Qseven® R2.0 CPU Module w/4GB memory soldered on module
HS-2200-F1	Heat spreader, 70x65x8mm
HS-0000-W3	Universal evaluation Heatsink for Qseven® CPU module
PBQ-900L	Qseven R2.0 w/ EPIC form factor Carrier Board
CBK-06-900L-00	Cable kit 1 x USB cable 2 x COM cables 1 x SATA cable 1 x SATA power cable 1 x AUDIO cable

Specifications

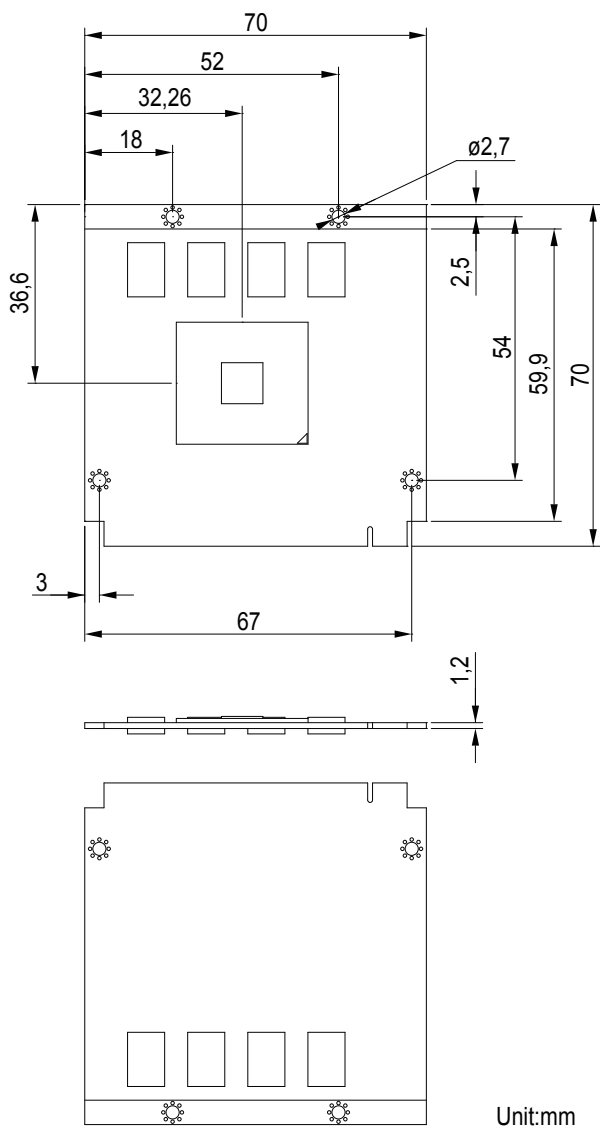
Form Factor	Qseven® CPU Module
CPU	Soldered onboard Intel® Celeron Processor N3160
System Memory	Soldered onboard 4GB DDR3L SDRAM
Graphics Chipset	Integrated Intel® HD Graphic 400
Ethernet controller	1 x Intel® i210AT PCIe GbE controller
Audio	HD Link
BIOS	AMI BIOS
Serial Port	1 x UART port (TX, RX, RTX, CTS#)
Serial ATA	2 x Serial ATA ports w/ 600MB/s HDD transfer rate
USB	4 x USB 2.0 ports 2 x SuperSpeed ports
Graphics Interface	LCD: Dual Channels 24-bit LVDS, resolution up to 2048x1536
	1 x DisplayPort / HDMI selectable port
Expansion Bus	3 x PCIe x1, SDIO, I2C
Power Requirement	2A@5V with N3160 (Normal)
Operating Temp.	-20°C ~ 70°C (-4°F ~ 158°F)
Operating Humidity	10 ~ 95% @ 70°C (non-condensing)
Dimension (L x W)	70 x 70 mm (2.76" x 2.76")

Paths to the Drivers on CD

Windows 8.1 (64-bit)

Driver	Path
Audio	\i220x\Audio
Chipset	\i220x\Chipset\Chipset_10.1.1.11_Public
Ethernet	\i220x\Ethernet
Graphics	\i220x\Graphic\IntelR Graphics Driver Production Version 15.40.14.64.4352
USB3.0	\i220x\USB3.0\win8.1\Intel(R) USB 3.0 eXtensible PV 1.0.0.42
Serial IO	\i220x\Serial IO\win8.1 64bit\SerialIO_BSW_x64
TXE	\i220X\TXE\win8.1\Installers

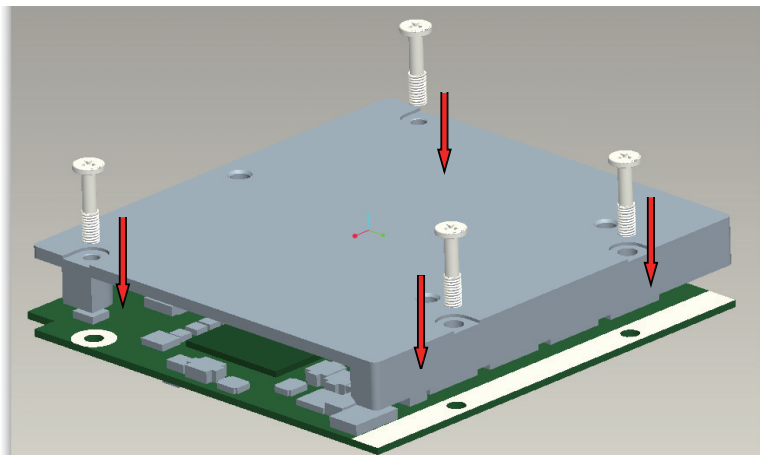
Board Dimensions



Heat Spreader Installation

To install the heat spreader:

See the illustration below. Mount the heat spreader to the board. Fix the heat spreader in place with four screws.



Connector Pin Assignment

Pin	Signal	Pin	Signal	Pin	Signal	Pin	Signal
1	GND	2	GND	65	HDA_SDI	66	I2C_CLK
3	GBE_MDI3-	4	GBE_MDI2-	67	HDA_SDO	68	I2C_DAT
5	GBE_MDI3+	6	GBE_MDI2+	69	THRM#	70	WDTRIG#
7	GBE_LINK100#	8	GBE_LINK1000#	71	THRMTRIP#	72	WDOUT
9	GBE_MDI1-	10	GBE_MDI0-	73	GND	74	GND
11	GBE_MDI1+	12	GBE_MDI0+	75	USB_SSTX0-	76	USB_SSRX0-
13	GBE_LINK#	14	GBE_ACT#	77	USB_SSTX0+	78	USB_SSRX0-
15	GBE_CTREF (N/C)	16	SUS_S5#	79	USB_6_7_OC# (N/C)	80	USB_4_5_OC#
17	WAKE#	18	SUS_S3#	81	USB_SSTX1-	82	USB_SSRX1-
19	SUS_STAT#	20	PWRBTN#	83	USB_SSTX1+	84	USB_SSRX1+
21	SLP_BTN#	22	LID_BTN#	85	USB_2_3_OC#	86	USB_0_1_OC#
23	GND	24	GND	87	USB_P3-	88	USB_P2-
	KEY		KEY	89	USB_P3+	90	USB_P2+
25	GND	26	PWGIN	91	USB_CC(N/C)	92	USB_ID
27	BATLOW#	28	RSTBTN#	93	USB_P1-	94	USB_P0-
29	SATA0_TX+	30	SATA1_TX+	95	USB_P1+	96	USB_P0+
31	SATA0_TX-	32	SATA1_TX-	97	GND	98	GND
33	SATA_ACT#	34	GND	99	LVDS_A0+	100	LVDS_B0+
35	SATA0_RX+	36	SATA1_RX+	101	LVDS_A0-	102	LVDS_B0-
37	SATA0_RX-	38	SATA1_RX-	103	LVDS_A1+	104	LVDS_B1+
39	GND	40	GND	105	LVDS_A1-	106	LVDS_B1-
41	BIOS_DISABLE#	42	SDIO_CLK#	107	LVDS_A2+	108	LVDS_B2+
43	SDIO_CD#	44	SDIO_LED (N/C)	109	LVDS_A2-	110	LVDS_B2-
45	SDIO_CMD	46	SDIO_WP	111	LVDS_VDDEN	112	LVDS_BLEN
47	SDIO_PWR#	48	SDIO_DAT1	113	LVDS_A3+	114	LVDS_B3+
49	SDIO_DAT0	50	SDIO_DAT3	115	LVDS_A3-	116	LVDS_B3-
51	SDIO_DAT2	52	SDIO_DAT5 (N/C)	117	GND	118	GND
53	SDIO_DAT4 (N/C)	54	SDIO_DAT7 (N/C)	119	LVDS_A_CLK+	120	LVDS_B_CLK+
55	SDIO_DAT6 (N/C)	56	RSVD (N/C)	121	LVDS_A_CLK-	122	LVDS_B_CLK-
57	GND	58	GND	123	LVDS_BLT_CTRL	124	GP_1-Wire_Bus (N/C)
59	HDA_SYNC	60	SMB_CLK	125	LVDS_I2C_DAT	126	eDP0_HPD#/LVDS_ BLC_DAT (N/C)
61	HDA_RST#	62	SMB_DAT	127	LVDS_I2C_CLK	128	eDP1_HPD#/LVDS_ BLC_CLK (N/C)
63	HDA_BITCLK	64	SMB_ALERT#				

129	CAN0_TX (N/C)	130	CAN0_RX (N/C)
Pin	Signal	Pin	Signal
131	DDIO_TX3+	132	RSVD (N/C)
133	DDIO_TX3-	134	RSVD (N/C)
135	GND	136	GND
137	DDIO_TX1+	138	DDIO_AUX+
139	DDIO_TX1-	140	DDIO_AUX-
141	GND	142	GND
143	DDIO_TX2+	144	RSVD (N/C)
145	DDIO_TX2-	146	RSVD (N/C)
147	GND	148	GND
149	DDIO_TX0+	150	DDIO_DDC_DAT
151	DDIO_TX0-	152	DDIO_DDC_CLK
153	DP_HDMI_HPD#	154	RSVD (N/C)
155	PCIE_CLK_REF+	156	PCIE_WAKE#
157	PCIE_CLK_REF-	158	PCIE_RST#
159	GND	160	GND
161	PCIE3_TX+	162	PCIE3_RX+ (N/C)
163	PCIE3_TX-	164	PCIE3_RX- (N/C)
165	GND	166	GND
167	PCIE2_TX+	168	PCIE2_RX+
169	PCIE2_TX-	170	PCIE2_RX-
171	UART0_TX	172	UART0_RTS
173	PCIE1_TX+	174	PCIE1_RX+
175	PCIE1_TX-	176	PCIE1_RX-
177	UART0_RX	178	UART0_CTS#
179	PCIE0_TX+	180	PCIE0_RX+
181	PCIE0_TX-	182	PCIE0_RX-
183	GND	184	GND
185	LPC_AD0	186	LPC_AD1
187	LPC_AD2	188	LPC_AD3
189	LPC_CLK	190	LPC_FRAME#
191	SERIRQ	192	LPC_LDRQ#
193	VCC_RTC	194	SPKR

195	FAN_TACHOIN (N/C)	196	FAN_PWMOUT
Pin	Signal	Pin	Signal
197	GND	198	GND
199	SPI_MOSI	200	SPI_CS0#
201	SPI_MISO	202	SPI_CS1#
203	SPI_SCK	204	MFG_NC4 (N/C)
205	VCC_5V_SB	206	VCC_5V_SB
207	MFG_NC0 (N/C)	208	MFG_NC2 (N/C)
209	MFG_NC1 (N/C)	210	MFG_NC3 (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