



RoHS EmQ-i240A Qseven R2.1 CPU Module Installation Guide

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RoHS EmQ-i240A Qseven R2.1 CPU Module Installation Guide



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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

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.

Packing List

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



1 x EmQ-i240A Qseven® CPU Module



1 x Quick Installation Guide

Ordering Information

EmQ-i240A-N4200-8GB	Intel® Pentium® N4200 Qseven R2.1 CPU module w/ 8GB memory soldered on module, -20~85°C
EmQ-i240A-N3350-8GB	Intel® Celeron® N3350 Qseven R2.1 CPU module w/ 8GB memory soldered on module, -20~85°C
EmQ-i240A-WT-E3950- 8G	Intel® Atom® x7-E3950 Qseven R2.1 CPU module w/ 8GB memory soldered on module, -40~85°C
EmQ-i240A-WT-E3940- 8G	Intel® Atom® x7-E3940 Qseven R2.1 CPU module w/ 8GB memory soldered on module, -40~85°C
EmQ-i240A-WT-E3930- 8G	Intel® Atom® x5-E3930 Qseven R2.1 CPU module w/ 8GB memory soldered on module, -40~85°C

Optional Accessories

PBQ-900L	Qseven R2.0 w/ EPIC form factor carrier board
HS-240A-F1	Heat Spreader, W/PAD, 70*65*8mm for N-Series
HS-240A-F2	Heat Spreader, W/PAD, 70*65*8mm for E-Series
CBK-06-900L-00	Cable kit: 2 x COM cable 1 x USB cable 1 x SATA cable 1 x SATA Power cable 1 x Audio cable

Specifications

Form Factor	Qseven® CPU Module
CPU	Soldered onboard Intel Pentium® N4200 2.5GHz/Celeron® N3350 2.4GHz processor
System Memory	Soldered onboard LPDDR4 8GB
BIOS	AMI UEFI BIOS (Legacy)
USB	6 x USB 2.0 ports 2 x USB 3.0 ports
Expansion Bus	4 x PCIe lanes, I2C Interface
Storage	2 x Serial ATA ports Soldered onboard eMMC 5.0 32GB (OEM Request)
Ethernet controller	1 x Intel® i210IT PCIe GbE controller
Audio	HD link
Graphics Chipset	Integrated in Intel® Gen9 graphic
Graphics Interface	Dual Channel 24-bit LVDS, with resolution up to 1920×1200
	1 x DDI port
OS Support	Windows 10 64-bit Linux: Ubuntu
Power Requirement	DC 5V, 5VSB
Power Consumption	2A@5V with N4200
Operating Temp.	-20°C ~ 85°C (-4~185°F)
Operating Humidity	10 ~ 95% @ 85°C (non-condensing)
Dimension (L x W)	70 x 70 mm (2.76" x 2.76")

Driver (6.7A) Installation

To install the drivers, please go to our website at www.arbor-technology.com and download the driver pack from the product

Windows 10 (64-bit)

Driver Path

Audio

\Apollolake-i240x\Audio\7687_PG436_Win10_Win8.1_Win8_Win7_WHQLx64

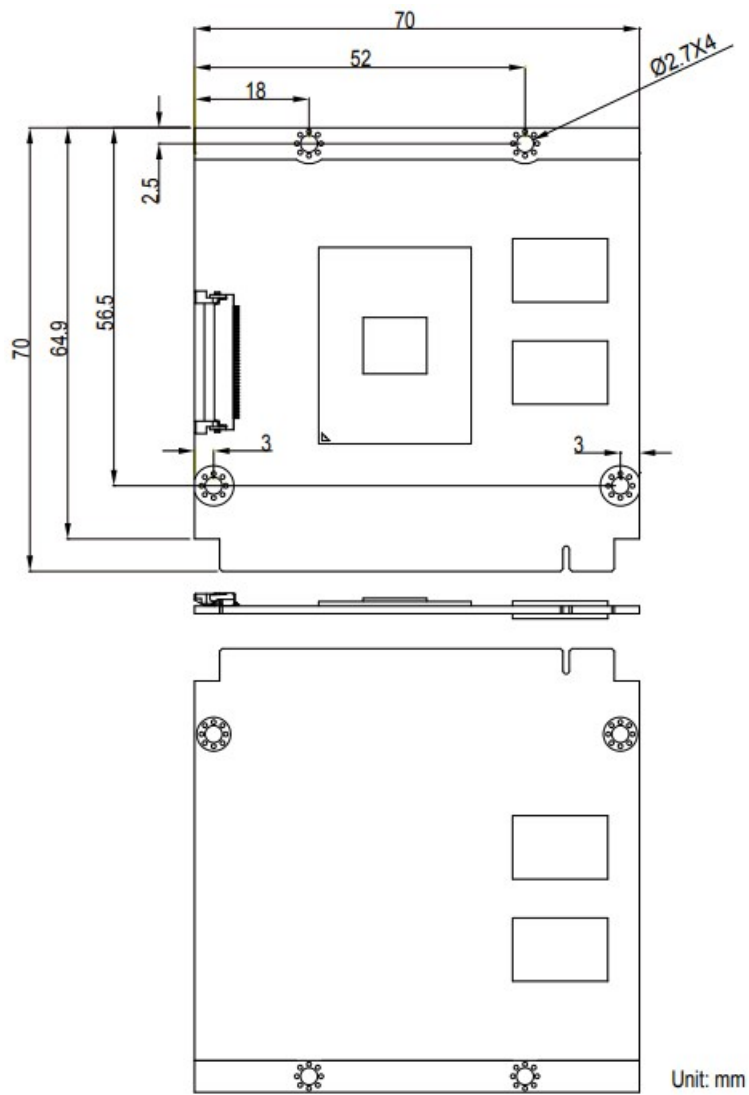
Chipset \Apollolake-i240x\Chipset

Ethernet \Apollolake-i240x\LAN

Graphics \Apollolake-i240x\Graphic

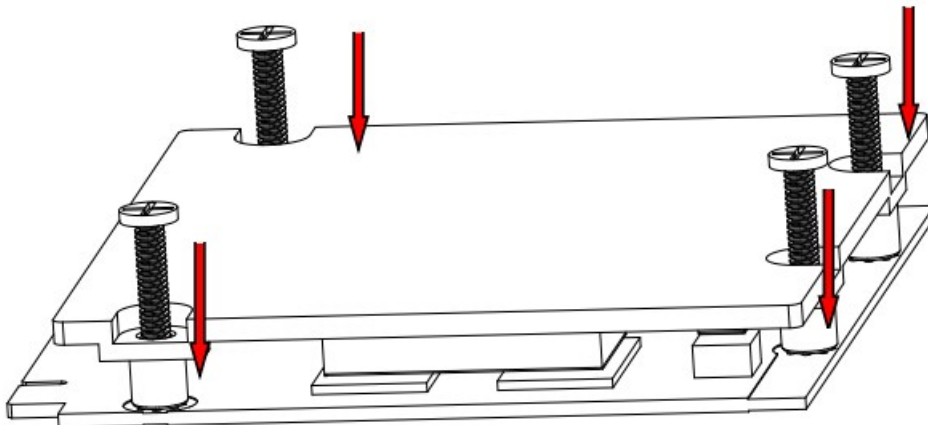
Serial IO \Apollolake-i240x\Serial IO\SerialIO_30.100.1620.02_APL_PV_Win10\x64

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

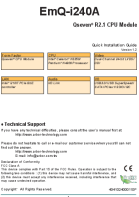
Pin Signal Pin Signal

1. GND 2 GND
2. LAN1_MDI3- 4 LAN1_MDI2-
3. LAN1_MDI3+ 6 LAN1_MDI2+
4. LAN_LINK100# 8 LAN_LINK_1000#
5. LAN1_MDI1- 10 LAN1_MDI0-
6. LAN1_MDI1+ 12 LAN1_MDI0+
7. LED_LINK# 14 LAN_ACT#
8. GBE_CTREF (N/C) 16 SLP_S4#
9. WAKE# 18 SLP_S3#
10. SUS_STAT# 20 Q7_PWR_BTN#
11. SLEEP# 22 LID#
12. GND 24 GND KEY KEY
13. GND 26 CB_PWRGD
14. Q7_BATLOW# 28 Q7_RSTBTN#
15. SATA_TXP0_C 30 SATA_TXP1_C
16. SATA_TXN0_C 32 SATA_TXN1_C
17. Q7_HDD_ACT# 34 GND
18. SATA_RXP0_C 36 SATA_RXP1_C
19. SATA_RXN0_C 38 SATA_RXN1_C
20. GND 40 GND
21. BIOS_DISABLE# 42 SD_CLK#
22. SD_CD# 44 SDIO_LED (N/C)
23. SD_CMD 46 SD_WP
24. SD_PWR# 48 SD_DATA1
25. SD_DATA0 50 SD_DATA3
26. SD_DATA2 52 RSVD (N/C)
27. RSVD (N/C) 54 RSVD (N/C)
28. RSVD (N/C) 56 USB_OTG_PEN (N/C)
29. GND 58 GND
30. AZ_SYNC 60 SMB_CLK_RESUME
31. AZ_RST# 62 SMB_DATA_RESUME
32. AZ_BIT_CLK 64 Q7_SMB_ALERT#
33. AZ_SDATA_IN 66 I2C_CLK0
34. AZ_SDATA_OUT 68 I2C_DATA0
35. THRM# 70 WDTRIG#
36. THRMTRIP# 72 WDOUT(N/C)
37. GND 74 GND
38. USB3TXN0 76 USB3_RXN0
39. USB3TXP0 78 USB3_RXP0
40. USB_6_7_OC# (N/C) 80 USB_4_5_OC#(N/C)
41. USB_5N 82 USB_4N
42. USB_5P 84 USB_4P

43. USB_OC2/3 86 USB_OC0/1
44. USB_3N 88 USB_2N
45. USB_3P 90 USB_2P
46. USB_CC (N/C) 92 Q-7_USB_ID(N/C)
47. USB_1N 94 USB_0N
48. USB_1P 96 USB_0P
49. GND 98 GND
50. VDS_A0+ 100 LVDS_B0+
51. LVDS_A0- 102 LVDS_B0-
52. LVDS_A1+ 104 LVDS_B1+
53. LVDS_A1- 106 LVDS_B1-
54. LVDS_A2+ 108 LVDS_B2+
55. LVDS_A2- 110 LVDS_B2-
56. Q7_VDDEN 112 Q7_BKLTEN
57. LVDS_A3+ 114 LVDS_B3+
58. LVDS_A3- 116 LVDS_B3-
59. GND 118 GND
60. LVDS_A_CLK+ 120 LVDS_B_CLK+
61. LVDS_A_CLK- 122 LVDS_B_CLK123 Q7_LCD_BKLT_CTRL
62. GP_1-Wire_Bus (N/C)
63. LVDS_I2C_DAT 126 eDP0_HPD#/LVDS_BLC_DAT (N/C)
64. VDS_I2C_CLK 128 eDP1_HPD#/LVDS_BLC_CLK (N/C)
65. CAN0_TX (N/C) 130 CAN0_RX (N/C)
66. Q7_DDI0_TXP3 132 USB3_TXN1
67. Q7_DDI0_TXN3 134 USB3_TXP1
68. GND 136 GND
69. Q7_DDI0_TXP1 138 DDI0_AUXP
70. Q7_DDI0_TXN1 140 DDI0_AUXN
71. GND 142 GND
72. Q7_DDI0_TXP2 144 USB3_RXN1
73. Q7_DDI0_TXN2 146 USB3_RXP1
74. GND 148 GND
75. Q7_DDI0_TXP0 150 DDI0_DDI0_DDCDATA
76. Q7_DDI0_TXN0 152 DDI0_DDC_DDCCLK
77. Q7_DDI0_HPDET#_R 154 DP_HDP#_RSV
78. Q7_PCIE_CLKP1 156 PCIE_WAKE#
79. Q7_PCIE_CLKN1 158 PLTRST#_BUFF
80. GND 160 GND
81. Q7_PCIE_TXP3 162 PCIE_RXP3
82. Q7_PCIE_TXN3 164 PCIE_RXN3
83. GND 166 GND
84. Q7_PCIE_TXP2 168 PCIE_RXP2
85. Q7_PCIE_TXN2 170 PCIE_RXN2

- 86. Q7_UART1_TXD 172 Q7_UART1_RTS
- 87. Q7_PCIE_TXP1 174 PCIE_RXP1
- 88. Q7_PCIE_TXN1 176 PCIE_RXN1
- 89. Q7_UART1_RXD 178 Q7_UART1_CTS#
- 90. Q7_PCIE_TXP0 180 PCIE_RXP0
- 91. Q7_PCIE_TXN0 182 PCIE_RXN0
- 92. GND 184 GND
- 93. LPC_LAD0 186 LPC_LAD1
- 94. LPC_LAD2 188 LPC_LAD3
- 95. LPC_CLK1 190 LPC_LFRAME#
- 96. LPC_SERIRQ 192 LPC_LDRQ#
- 97. VCC_RTC 194 Q7_SPKR
- 98. FAN_TACHOIN (N/C) 196 FAN_PWMOUT
- 99. GND 198 GND
- 100. Q7_SPI_MOSI 200 Q7_SPI_CS#0
- 101. Q7_SPI_MISO 202 Q7_SPI_CS#1
- 102. Q7_SPI_CLK 204 MFG_NC4 (N/C)
- 103. VCC_5V_SB 206 VCC_5V_SB
- 104. MFG_NC0 (N/C) 208 MFG_NC2 (N/C)
- 105. MFG_NC1 (N/C) 210 MFG_NC3 (N/C)
- 106. N/C 212 N/C
- 107. N/C 214 N/C
- 108. N/C 216 N/C
- 109. N/C 218 N/C
- 110. VCC 220 VCC
- 111. VCC 222 VCC
- 112. VCC 224 VCC
- 113. VCC 226 VCC
- 114. VCC 228 VCC
- 115. VCC 230 VCC

Documents / Resources



EmQ-i240A
Qseven R2.1 CPU Module

RoHS Compliant

Technical Support

EmQ-i240A Qseven R2.1 CPU Module, EmQ-i240A, EmQ-i240A CPU Module, Qseven R2.1 CPU Module, CPU Module, Module

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