

## Q7BTHD2 QSeven Module



蓝玛科技 Q7BTHD2 QSeven 模块，使用英特尔 Bay Trail-I 平台 SOC，板型尺寸为 70mm x 70mm，符合 QSeven R2.0 标准定义。模块支持表贴 DDR3 内存高达 4GB，可选千兆网卡，支持 LVDS/eDP 和 DDI 显示输出。Q7BTHD2 QSeven 模块可作为低功耗高性能，如能源、交通、医学影像、通信、移动终端、测试/测量等应用，是低功耗高性能的理想解决方案。

### Qseven Module Form Factor

Q7BTHD2 基于 QSeven R2.0 70mm x 70mm 的尺寸，支持高达 4GB DDR3 表贴内存。QSeven 采用 230pin MXM 连接器能够支持 PCI-E、SATA、USB3.0/2.0、LVDS/eDP、DDI 等高速串行差分信号连接。

Q7BTHD2 模块从英特尔 BayTrail 系列 SoC 发布之初开始设计，具有极高的稳定性。因此，原始设备制造商可以专注于核心能力譬如软件和应用开发而不是高速电路设计。原始设备制造商对功能修改、需求变更、性能升级等问题能够轻而易举的实现而无需重新设计产品。

### 设计服务

基于蓝玛科技 Q7BTHD2 QSeven 模块，原始设备制造商在设计自己的载板时，能够得到蓝玛科技的全程服务，如原理图检查和建议、调试协助、Gerber 文件参考、BIOS 客制化等等。蓝玛科技支持原始设备制造商在开发产品任何阶段的载板设计咨询和调试服务。想获得更多信息，请咨询你的 LandmarkTech 销售经理或邮件：[LMT@Landmark-Tech.com](mailto:LMT@Landmark-Tech.com)。

### 订单信息

型号	描述
Q7BTHD2-E3845-4G	QSeven Rev 2.0 Module with Intel Atom™ E3845/1.91 GHz/ 542/792 (Turbo) /TDP-10W /4 Core/2MB Cache, 4GB DDR3L-1333, I-TEMP
Q7BTHD2-E3825-2G	QSeven Rev 2.0 Module with Intel Atom™ E3825 /1.33 GHz/ 533 (No Turbo)/TDP- 6W/2 Core/1MB Cache, 2GB DDR3L-1066, I-TEMP
Q7BTHD2-E3815-2G	QSeven Rev 2.0 Module with Intel Atom™ E3815/1.46 GHz /400 (No Turbo) /TDP-5W /1 Core/512KB Cache, 2GB DDR3L-1066, I-TEMP
Q7BTHD- AHS-0	Q7BTHD module, Active Heat Sink
Q7BTHD- PHS-0	Q7BTHD module, Passive Heat Sink

## Q7BTHD2 Module Specifications

Feature	Function	Description
<b>Form Factor</b>	Type	QSeven R2.0, 70mm x70mm
	Compliance	QSeven R2.0 Form Factor
<b>Processor</b>	E3845	Atom™ E3845 1.91 GHz 542/792 (Turbo) 10W (4C/1333)
	E3825	Atom™ E3825 1.33 GHz 533 (No Turbo) 6W (2C/1066)
	E3815	Atom™ E3815 1.46 GHz 400 (No Turbo) 5W (1C/1066)
<b>Memory</b>	Type	On Board, up to 1333 MT/s
	Capacity	4GB maximum
<b>Flash</b>	16MB SPI flash	16MB SPI flash for BIOS storage
<b>Video</b>	Intel® HD Graphics	LVDS/eDP: 18 bit or 24 bit single/dual channel panel with resolutions up to 1920×1200 pixels at 60 Hz LVDS or eDP
		DDI: HDMI\DP\DVI, up to 2560 x 1600, HDMI up to 1920 x 1200
<b>Networking</b>	Single LAN	Option One 10/100/1000Base-T
<b>Audio</b>		High Definition Audio
		Speaker Out
<b>Storage</b>	SATA	2 SATA ports supporting both 1.5 and 3.0 Gbps operation
<b>PCI Express</b>	PCI Express x1	Option 1 (No Networking): Four PCI Express x1 interface, configurable as one x4; or two x2; or one x2 and two x1; or four x1 port
		Option 2 (with Networking): Three PCI Express x1 interface, configurable as one x2 and one x1; or three x1;
<b>USB</b>	USB2.0	Eight USB 2.0 expansion ports
	USB 3.0	One USB 3.0 expansion port(Build option)
<b>LPC</b>		One LPC interface
<b>SDIO</b>		One SDIO 8-bit for SD/MMC Cards
<b>Power</b>		AT: +5 power rail, primary input
		ATX: +5 standby and +5 power rail input
<b>Power Management</b>		ACPI 5.0 supporting states S0, S3, S4, S5 G3 Or AT mode S0,G3
<b>Miscellaneous</b>		One SMBus
		One I2C Bus
		One SPI Bus
		One UART
		Watchdog timer
<b>BIOS</b>		EFI Firmware

OS	Windows 7	Windows 7 64-bit
		Windows 7 Embedded Compact 64-bit
	Windows 8	Windows 8 Professional
	Linux	Ubuntu 10.04
		Ubuntu 14.04

## Physical Specifications

<b>Physical</b>	Dimensions	70mm x 70mm		
	Compliance	QSeven R2.0 Form Factor		
<b>Environment</b>	Cooling	Forced air	Class EAC1 as defined in the ANSI/VITA 47-2005	
		Conduction	Class ECC1 as defined in the ANSI/VITA 47-2005	
	Temperature	Operating	Up to 2300m (7500 ft), -40 to 85 °C for HD SKUs	
			Derated -1.1 C per 305 m (1000 ft) above 2300 m (7500 ft)	
		Non-operating	-40 to +85 °C	
	Shock	Operating	30G, half sine shock pulse, 11ms duration, 3 times per face	
		Non-Operating/ Unpacked	40G, half sine shock pulse, 11ms duration, 3 times per face (unpacked)	
		Transportation/ Packaged	Fixtured assembly: 50G, 17.4 ms trapezoidal pulse Drop test, 10-up bulk packaging, 30in free-fall, one drop on each of six faces	
	Vibration (random)	Operating	Random 5Hz to 2KHz, 7.7	
			grms, 10min in each of 3 axes	
			5Hz – 20Hz: 0.004g <sup>2</sup> /Hz ramping up to 0.04g <sup>2</sup> /Hz	
			20Hz to 1000Hz: 0.04g <sup>2</sup> /Hz	
			1000Hz to 2000Hz: 0.04g <sup>2</sup> /Hz ramping down to 0.01g <sup>2</sup> /Hz	
		Non-Operating/ Storage	Random 5Hz to 2KHz, 9.7	
			grms, 10min in each of 3 axes	
5Hz – 20Hz: 0.006g <sup>2</sup> /Hz ramping up to 0.06g <sup>2</sup> /Hz				
20Hz to 1000Hz: 0.06g <sup>2</sup> /Hz				
1000Hz to 2000Hz: 0.06g <sup>2</sup> /Hz ramping down to 0.02g <sup>2</sup> /Hz				

	Humidity	Operating	5% to 70% non-condensing. 70%RH@30C, linear Derated to 25%RH@85C for HD SKUs;
		Non-Operating/ Storage	5% to 70% non-condensing
	Altitude	Operating	To 15,000ft (4570m)
		Non-Operating/ Storage	To 40,000ft (12000m)
<b>Regulatory</b>	Safety	UL60700-1, EN60700-1, IEC60700-1	
	RoHS	RoHS compliant	
	EMC	EN55024, EN55022, and FCC Part 15, Subpart B, Class B	