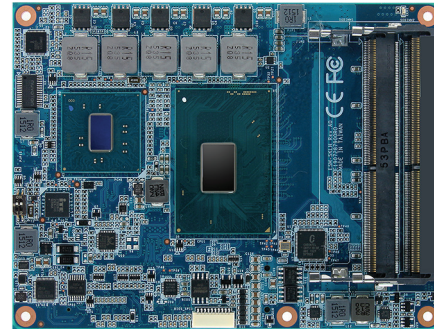


ESM-KBLH

7th Gen Intel Core™ Processor i7/i5/i3 Type6 COMe
Basic Module with Intel® QM175 Chipset

Features

- Onboard 7th Gen Intel® Core™ i7/i5/i3 Processor
- Two 260-pin SoDIMM DDR4 SDRAM slot up to 32GB
- Dual-channel 18/24-bit LVDS, VGA, DP/HDMI/DVI, eDP Option
- Intel® I219LM Gigabit Ethernet PHY
- 8 PCIe x1, 4 SATA, 8 USB 2.0, 4 USB 3.0
- HD Audio Interface
- Type 6 Rev 2.1 Pin-out
- TPM 2.0



Specifications

System	
CPU	7th Gen Intel® Core™ i7-7820EQ 4-Core 3.0GHz processor 7th Gen Intel® Core™ i5-7440EQ 4-Core 2.9GHz processor 7th Gen Intel® Core™ i3-7100E, 2-Core, 2.9GHz processor
BIOS	AMI uEFI BIOS, 128Mbit SPI Flash ROM
System Chipset	Intel® QM175 Express Chipset
System Memory	2 x 260-Pin DDR4 2400/2133MHz SO-DIMM up to 32 GB
Expansion	8 x PCIe x1
I/O Chip	EC ITE IT8528E
Storage	1 x 2.5" Drive Bay (7mm) 1 x M.2 (B-KEY, 2242) 1 x mSATA
Supported OS	Win 10 Linux (Kernel>4.5) (64-bit)
External I/O	
MIO	1 x SMBus 1 x LPC 1 x I2C
USB	8 x USB 2.0 4 x USB 3.0
COM	2 x UART
SATA	4 x SATA III
DIO	1 x 8-bit GPIO
Display	
Chipset	Intel® Kabylake SoC integrated Graphics
Resolution	HDMI 1.4: 4096 x 2160 @24Hz (only one display output); DP 1.2: 4096 x 2304 @60Hz (only one display output); eDP 1.4 (optional): 4096 x 2304 @60Hz (only one display output); LVDS (via eDP-to-LVDS): 1920 x 1080 @60Hz; VGA (via DP-to-VGA): 1920 x 1080 @60Hz
Multiple Display	(VGA+DP)+HDMI+DDI LVDS+(VGA+DP)+DDI LVDS+(VGA+DP)+HDMI LVDS+HDMI+DDI
LVDS	CH7511B (eDP to LVDS)

Audio	
Chipset	Realtek ALC892
Ethernet	
LAN Chip	1 x Intel® i219LM
Ethernet Interface	10/100/1000 Base-Tx GbE compatible
Mechanical & Environment	
Power Requirement	+9V ~ +19V
ACPI	Single Power ATX Support S0, S3, S4, S5 ACPI 5.0 Compliant
Power Type	AT/ATX
Operating Temp.	0 ~ 60°C (32 ~ 140°F) (Standard)
Storage Temp.	-40 ~ 75°C (-40 ~ 167°F)
Op Humidity	0%~90% Relative Humidity, Non-condensing
Form Factor	COM Express Modules
Dimensions	5" x 3.7" (125mm x 95mm)
Weight	0.44lbs (0.2kg)
Certification Information	CE FCC Class B

Ordering Info	
ESM-KBLH-7820EQ	Intel QM175 Core i7-7820EQ Type6 COMe Module
ESM-KBLH-7440EQ	Intel QM175 Core i5-7440EQ Type6 COMe Module
ESM-KBLH-7100E	Intel QM175 Core i3-7100E Type6 COMe Module
EEV-EX14	COM Express Type 6 Carrier Board (uATX) for Evaluation



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* All product specifications and images are subject to change without notice. Last update: 09/18/2017