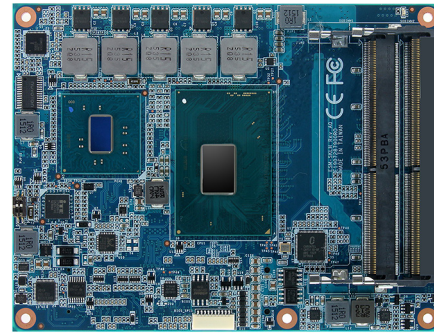


## Features

- 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  Please note: CPU coolers are not included. Please see Ordering Info tab for more details.
System Chipset	Intel® QM175 Express Chipset
System Memory	2 x 260-Pin DDR4 2400/2133MHz SoDIMM up to 32 GB
Audio	Intel® High Definition Audio
Ethernet	LAN1: Intel® i219LM Gigabit Ethernet Controller
BIOS	AMI uEFI BIOS, 128Mbit SPI Flash ROM
I/O Chip	EC ITE IT8528E
Expansion	8 x PCIe x1
OS Support	Win 10, Linux (Kernel>4.5) (64-bit)
Display	
Chipset	Intel® Kaby Lake 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
DDI	HDMI DVI DisplayPort
Display Output	(VGA+DP++)+HDMI+DDI LVDS+(VGA+DP++)+DDI LVDS+(VGA+DP++)+HDMI LVDS+HDMI+DDI
LCD Interface	CH7511B (eDP to LVDS)

I/O	
USB	8 x USB 2.0 4 x USB 3.0
COM Port	2 x UART
SATA	4 x SATA III
DIO	1 x 8-bit GPIO
MIO	1 x SMBus, 1 x LPC, 1 x I2C

Mechanical & Environment	
Power Requirement	+9V ~ +19V
ACPI	Single Power ATX Support S0, S3, S4, S5 ACPI 5.0 Compliant
Power Type	AT/ATX
Operating Temperature	0°C ~ 60°C (32°F ~ 140°F) (Standard)
Storage Temperature	-40°C ~ 75°C (-40°F ~ 167°F)
Operating Humidity	40°C @ 95% Relative Humidity, Non-condensing
Certification	CE FCC Class B
Dimensions	5" x 3.7" (125mm x 95mm)
Form Factor	COM Express Modules
Weight	0.44 lbs (0.2kg)

Ordering Info	
ESM-KBLH-7820	Intel® QM175 Core i7-7820EQ 3.0GHz Quad Core Type6 COMe Basic Module
ESM-KBLH-7440	Intel® QM175 Core i5-7440EQ 2.9GHz Quad Core Type6 COMe Basic Module
ESM-KBLH-7100	Intel® QM175 Core i3-7102E 2.1GHz Dual Core Type6 COMe Basic Module
EEV-EX14-A3R	mATX Carrier Board Board for COMe Type 6 A2
ACC-ESMKBLH-CL-1R	Cooler for ESM-KBLH/ESM-KBLA W/FAN H=45.65mm
ACC-ESMKBLH-SD-1R	Heatspreader for ESM-KBLH W/O FAN H=8.0mm (for ESM-KBLH/ESM-KBLA/ESM-SKLH/ESM-SKLA)

\* All product specifications and images are subject to change without notice. Last update: 2021/02/12