



EPS-KBLHE

7th Gen Intel® Core™ i7/i5/i3 Fanless Rugged Embedded System

- > 7th Generation Intel® Core™ i7/i5/i3 Processor
- > Mobile Intel® QM175 Chipset
- > One 260-pin SODIMM Socket Up to 16GB DDR4 2400MHz SDRAM
- > Rich I/O, 1 SATA III, 1 Mini PCIe, 1 M.2, 1 Line-Out, 1 Mic-In, 2 LAN, 2 HDMI, 2 USB 2.0, 4 USB 3.0, 2 COM
- > Fanless Operating from -10°C~ 50/60°C
- > 12V DC Power Input (Factory Option 9~36V)
- > Support TPM 2.0

+ Spec

System Information

Processor	Intel® Core™ i7-7820EQ Processor (8M Cache, up to 3.70 GHz) Intel® Core™ i5-7440EQ Processor (6M Cache, up to 3.60 GHz) Intel® Core™ i3-7100E Processor (3M Cache, 2.90 GHz)
Platform Controller Hub	Mobile Intel® QM175 Chipset
System Memory	1 x 260-Pin DDR4 2400MHz SO-DIMM up to 16 GB
Watchdog Timer	H/W Reset, 1sec. ~ 65535sec. and 1sec./step
H/W Status Monitor	Monitoring System Temperature, Voltage and FAN Status with Auto Throttling Control
SBC	ECM-KBLH

Expansion

Expansion	1 x mPCIe (PCIe/SATA/USB 2.0) 1 x M.2 B-Key (PCIe/SATA/USB 2.0/3.0)
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Storage

Storage	2 x 2.5" Drive Bay 1 x M.2(B-Key) 1 x mSATA
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I/O

USB Port	2 x USB 2.0 4 x USB 3.0
COM Port	1 x RS-232 1 x RS-232/422/485 (Jumper)
Antenna	2 x Antenna Mounting

Display

Graphic Chipset	Processor Graphics, Intel® HD Graphics 630
Spec. & Resolution	2 x HDMI: Max. Resolution 4096x2304 @ 30Hz
Multiple Display	Dual Display

Audio

Audio Codec	Realtek ALC233 supports 2.1-CH
Audio Interface	Mic-In, Line-Out

Certifications

Certification Information	CE, FCC Class B
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Ethernet

LAN Chipset	1 x Intel® I210AT 1 x Intel® I219LM
Ethernet Interface	10/100/1000 Base-Tx Gigabit Ethernet Compatible
LAN Port	2 x RJ-45

Power Requirement

DC Input	+12V Factory Option w/EPM-1712 supports typical 12/24 Vdc (+9V~+36V) in Terminal Block
DC Input Connector	Lockable DC Jack
ACPI	Single Power ATX Support S0, S3, S4, S5 ACPI 1.0b and 2.0 Compliant
Power Mode	AT/ATX (ATX is default setting)
Adapter	Input: 100 ~ 240Vac/ 50 ~ 60Hz Output: 12V/10A AC-DC 120W Adapter

Mechanical & Environmental

Operating Temperature	With extended temperature peripherals: -10°C ~ 50°C (14°F ~ 122°F) with air flow
Storage Temperature	-40°C ~ 75°C (-40°F ~ 167°F)
Operating Humidity	40°C @ 95% Relative Humidity, Non-condensing



Dimension (W x L x H)	240mm x 230mm x 72mm
Weight	4.5KG
Vibration Test	With SSD: 5Grms, IEC 60068-2-64, Random, 10 ~ 500Hz, 1hr/3 axis
Shock Test	With SSD: 50Grms, IEC 60068-2-27, Half Sine, 11ms
Mounting Kit	Wall Mount kit (Standard)
Power Requirement	+12V Factory Option w/EPM-1712 supports typical 12/24 Vdc (+9V~+36V) in Terminal Block
ACPI	Single Power ATX Support S0, S3, S4, S5 ACPI 1.0b and 2.0 Compliant
Power Mode	AT/ATX (ATX is default setting)
Drop	ISTA 2A, IEC-60068-2-32 Test : Ed
Construction	Aluminum + Metal
Software Support	
OS Information	Win 10, Linux
Ordering Information	
Ordering Information	EPS-KBLHE-78-A1-1R 7 th Gen Intel® Core™ Processor Core™ i7-7820EQ Fanless Rugged Embedded System EPS-KBLHE-74-A1-1R 7 th Gen Intel® Core™ Processor Core™ i5-7440EQ Fanless Rugged Embedded System EPS-KBLHE-71-A1-1R 7 th Gen Intel® Core™ Processor Core™ i3-7100E Fanless Rugged Embedded System