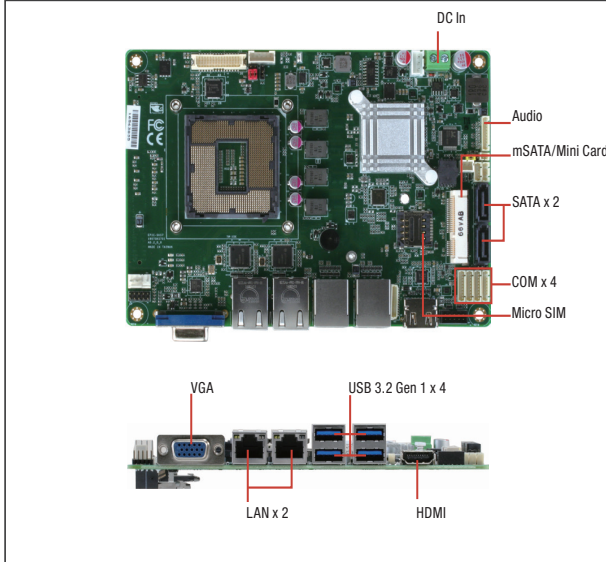


# EPIC-KBS7

EPIC Board with 6th/7th Generation Intel® Core™ Processors (Socket Type)



## Features

- 6th/7th Generation Intel® Core™ Processors (Socket Type)
- DDR4 2133 SODIMM x 1 (Non-ECC, up to 16GB)
- VGA x 1, HDMI x 1, LVDS x 1 (Optional)
- SATA 6Gb/s x 2
- RJ-45 GbE x 2
- USB 3.2 Gen 1 x 4, USB 2.0 x 2
- mSATA/Mini Card x 1
- COM Port x 4, GPIO 8-bit
- Support +9V to +24Vin (Wide Voltage Input)

## Specifications

System	
Form Factor	4" EPIC Board
CPU	6th/7th Generation Intel Core™ Processor (up to 35W/54W): Intel® Core™ i7-7700T (4C/8T, 2.9 GHz, 35W) Intel® Core™ i5-7500T (4C/4T, 2.7 GHz, 35W) Intel® Core™ i3-7100T (2C/4T, 3.4 GHz, 35W) Intel® Core™ i7-6700TE (4C/8T, 2.4 GHz, 35W) Intel® Core™ i5-6500TE (4C/4T, 2.3 GHz, 35W) Intel® Core™ i3-6100TE (2C/4T, 2.7 GHz, 35W)
Chipset	Intel® 100 Series Mobile Chipset (H110/Q170)
Memory Type	DDR4 2133, Single channel SODIMM x 1, Up to 16GB (Non-ECC Support)
BIOS	UEFI
Wake On Lan	Yes
Watchdog Timer	255 Levels
Security	—
RTC Battery	Lithium Battery 3V/240mAh
Dimension	4.53" x 6.50" (115mm x 165mm)
OS Support	Windows 10 (64bit) Ubuntu 21.04/Kernel 5.11.0-13-generic
Power	
Power Requirement	+9V to +24V (Optional: +12V)
Power Supply Type	AT/ATX
Connector	Phoenix 2-Pin Connector
Power Consumption	Intel® Core™ i7-6700TE, DDR4 16GB, 3.50A @12V, 49.8W
Display	
Controller	Intel® HD Graphics 630 Intel® HD Graphics 530 (by CPU sku)
LVDS/eDP	LVDS x 1, Dual Channel 24/48bit, up to 1920 x 1080 (Q170 sku support only)
Display Interface	VGA x 1, up to 1920 x 1080 HDMI x 1, up to 3840 x 2160 @60Hz
Multiple Display	Up to 3 Simultaneous Displays
Audio	
CODEC	Realtek ALC897
Audio Interface	Line-In/Line-Out/Mic
Speaker	—
External I/O	
Ethernet	Intel®i210-AT, 1GbE RJ-45 x 2
USB	USB 3.2 Gen 1 x 4
Serial Port	—
Video	VGA x 1, up to 1920 x 1080 HDMI x 1, up to 3840 x 2160 @60Hz

Internal I/O	
USB	USB 2.0 x 2
Serial Port	COM 2 (RS-232/422/485, supports 5V/12V/RI) COM 1, COM 3, COM 4 (RS-232 only, supports RI only)
Video	LVDS x 1 (Q170 sku support only) LVDS Inverter 5V/12V @2A
SATA	SATA 6Gb/s x 2 +5V SATA Power Connector x 1 (Total up to 5V@2A) (Up to 5V@1A, shared with 2 x 2.5" SSD as limitation with 170X000592)
Audio	Audio Header x 1
DIO/GPIO	GPIO 8-bit
SMBus/I2C	SMBus/I2C (Default: SMBus)
Touch	—
Fan	4 Pin Smart Fan
SIM	Micro SIM x 1 (Optional)
Front Panel	Power Button, Reset Button, Power LED, SATA LED, Buzzer
Others	—
Expansion	
Mini PCI-E/mSATA	Full Size mSATA/mPCIe (Default: mSATA) (H110 SKU mPCIe by BOM Optional, Q170 SKU mPCIe selected by BIOS)
M.2	—
Others	—
Environment & Certification	
Operating Temperature	32°F ~ 140°F (0°C ~ 60°C)
Storage Temperature	-40°F ~ 185°F (-40°C ~ 85°C)
Operating Humidity	0% ~ 90% relative humidity, non-condensing
MTBF (Hours)	393,440
EMC	CE/FCC Class A

## Packing List

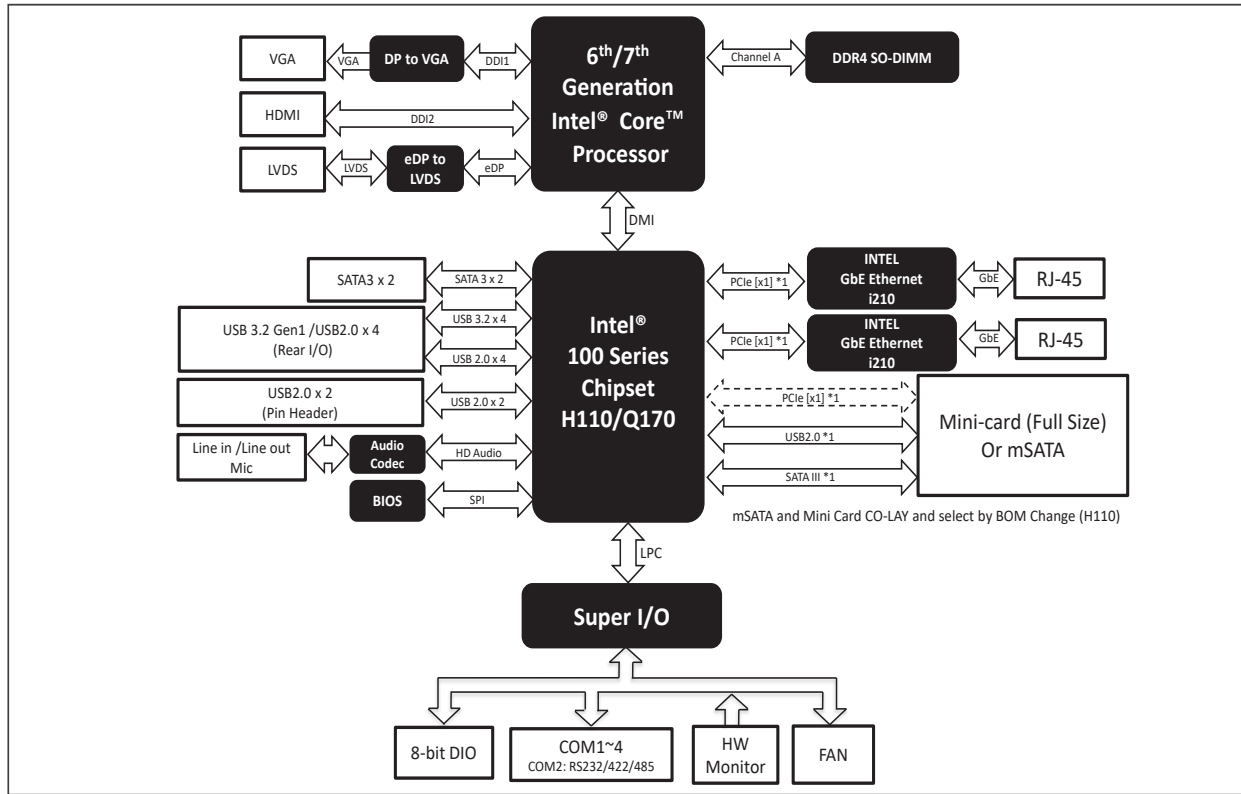
- EPIC-KBS7 x 1
- CPU Cover x 1
- SATA Cable x 2
- SATA Power Cable x 1
- Screw kit x 1

## Optional Accessories

Part Number	Description	QTY
1702002010	Power Cable (2pin), Length 10cm	1
1709100254	Audio Cable (3pin), Length 25cm	1
1700050207	USB Cable (5pin), Length 20cm	2
1701090150	COM Cable (9pin), Length 15cm	4
170X000592	Dual SATA Power Cable, Length 20cm	1
EPIC-KBS7-FAN01	79*79*61mm. Silver. Recommended for operating temperature 0°C ~ 60°C (54W/35W)	1
EPIC-KBS7-FAN02	60*60*30mm. Silver. Recommended for operating temperature 0°C ~ 55°C (35W)	1

# EPIC-KBS7

## Block Diagram



## Dimension

Unit: mm



## Ordering Information

Part Number	CPU	Memory	Display	Storage	LAN	USB	COM Port	Expansion	TPM	Power	Operating Temperature	Others
EPIC-KBS7-A11-00A1	LGA1151 Socket Type (with H110E)	DDR4 SODIMM x 1	VGA x 1, HDMI x 1	SATA 6Gb/s x 2	GbE x 2	USB3.2 Gen1 x 2, USB2.0 x 4	RS232/422/485 x 1, RS232 x 3	mSATA x 1 (Mini-PCIe by BOM Change)	—	+9V to +24V (2 Pin Phoenix Connector)	0°C ~ 60°C	GPIO 8 bits
EPIC-KBS7-A11-00A2	LGA1151 Socket Type (with Q170E)	DDR4 SODIMM x 1	LVDS x 1, VGA x 1, HDMI x 1	SATA 6Gb/s x 2	GbE x 2	USB3.2 Gen1 x 2, USB2.0 x 4	RS232/422/485 x 1, RS232 x 3	mSATA x 1 (Mini-PCIe selected by BIOS)	—	+9V to +24V (2 Pin Phoenix Connector)	0°C ~ 60°C	GPIO 8 bits, Micro SIM x 1

## Assured Systems

Assured Systems is a leading technology company with over 1,500 regular clients in 80 countries, deploying over 85,000 systems to a diverse customer base in 12 years of business. We offer high-quality and innovative rugged computing, display, networking and data collection solutions to the embedded, industrial, and digital-out-of-home market sectors.

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