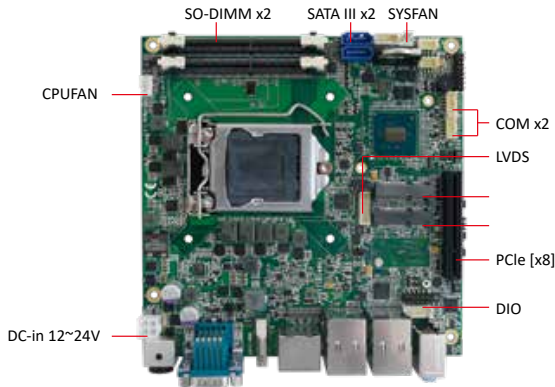


# AMIX-KBL1

Intel® Q170/H110 based Mini-ITX Motherboard supports Intel® 6th & 7th Gen Core™ i7/i5/i3/ Celeron® Processors with HDMI/2 DP/LVDS(eDP), 2 SATA III, 4 COM, 8 USB, Dual Intel® GbE LAN.



## Key Features

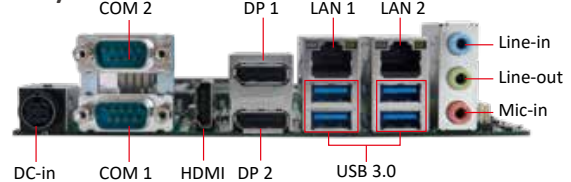
- Intel® 6th/7th Gen Core™ i7/i5/i3/Celeron® processors with Intel® Q170/H110 chipset
- Two 260-pin SO-DIMM up to 32GB DDR4 2133MHz SDRAM
- Multi-Display: HDMI/2 DP/LVDS(eDP)
- 1 PCIe (x8), 2 Mini-PCIe (1 combo mSATA, 1 w/ SIM) expansion slots
- 2 SATA III, 4 COM, 4 USB 3.0 and 4 USB 2.0
- DC-in 12V ~ 24V supports OVP/UVP/REV protection (optional)
- EuP/ErP 2013 Ready
- Support Intel® AMT v11.0 (w/ Q170)

## Product Specification

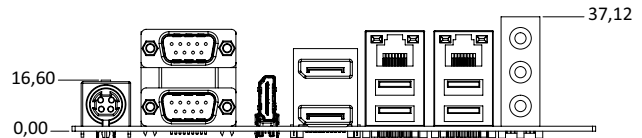
System Processor/Chipset	
Processor	Intel® 6th/7th Gen Core™ i7/i5/i3/ Celeron® 65W processors (LGA1151)
Chipset	Intel® Q170/H110 PCH
BIOS	AMI UEFI Flash ROM
Memory	
Technology	DDR4 SDRAM up to 2133 MHz
Max. capacity	Up to 32GB
Socket	2 x 260-pin SO-DIMM
Display	
Graphics	Intel® HD Gen 9 Graphics
Display interface	1 x LVDS(eDP) (2ch 18/24-bit, co-layout eDP) 1 x HDMI v1.4, 2 x DP v1.2, 1 x eDP v1.3 (optional)
Multi-display	Up to three independent displays (H110 only support Dual-display)
Resolution	HDMI: 4096 x 2160 @ 24Hz (max) DP: 4096 x 2304 @ 60Hz (max) LVDS: 1920 x 1200 @ 60Hz (max) eDP: 1920 x 1080 @ 60Hz (max)
Ethernet	
Interface	10/100/1000 Mbps
Controller	LAN1: Intel® I219 GbE PHY w/ AMT v11.0 (only Q170 w/ Core i7/i5 supports) LAN2: Intel® I210 GbE
Connector	2 x RJ45 (rear I/O)
Audio	
Interface	Line-in, Line-out, Mic-in
CODEC	Realtek ALC662 HD Audio Codec
Expansion Slot	
PCI Express	1 x PCIe (x8)
Mini-PCIe	1 x Half size 1 x Full size w/ SIM (combo mSATA)
SATA	
Max. data transfer rate	6.0Gb/s
Port	2 x SATA III
I/O	
Audio	Line-in, Line-out, Mic-in (rear I/O) Line-out, Mic-in (pin-header)
USB	4 x USB 3.0 (rear I/O) 4 x USB 2.0 (box-header)
COM	2 x RS-232/422/485 (rear I/O) 2 x RS-232 (box-header)
HDMI/VGA/DVI/DP/LVDS	1 x HDMI (rear I/O), 2 x DP (rear I/O) 1 x LVDS (box-header, co-layout eDP) 1 x eDP (box-header, optional)
DIO	1 x 4-in / 4-out Digital I/O (pin-header)
SMBus	1 x SMBus (pin-header)

Power Requirement	
Power connector	1 x ATX (+12V 2x2-pin) 1 x DC-Jack 4-pin
Power type	DC-in 12V ~ 24V
Power mode	AT / ATX (by jumper selection)
Power protection	DC-in OVP/UVP/REV protection (optional)
Watchdog Timer	
Interval	Programmable 1 ~ 255 sec/min
Output	System reset
Environment	
Operating temperature	0°C ~ 60°C (32°F ~ 140°F) standard -20°C ~ 70°C (-4°F ~ 158°F) optional -40°C ~ 70°C (-40°F ~ 158°F) optional
Storage temperature	-40°C ~ 80°C (-40°F ~ 176°F)
Relative humidity	0% ~ 95% (non-condensing)
Form Factor	
Dimensions (L x W)	Mini-ITX 170mm x 170mm (6.69" x 6.69")
Energy	EuP/ErP 2013 Ready

## Rear I/O



## Dimensions



## Ordering Information

Part Number	Description
AMIX-KBL1-Q170	Mini-ITX, Intel 6th and 7th Gen Q170, HDMI/2DP/LVDS, 2SATA/ 4COM/8USB/2LAN, DC(12V~24V)/DC-Jack(Lock)
AMIX-KBL1-H170 (MOQ)	Mini-ITX, Intel 6th and 7th Gen H110, HDMI/2DP/LVDS, 2SATA/ 4COM/8USB/2LAN, DC(12V~24V)/DC-Jack(Lock)

## Optional Accessories

Part Number	Description
NABB002400AO	I/O shield
VK00000700A9	SATA cable
VK00002600A9	SATA power cable
NAAA000200BI	Cooler w/ FAN for LGA115x

## 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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