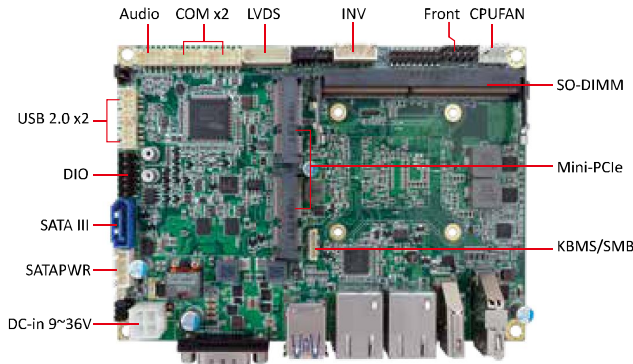


# AECX-KBL2

Intel® Kaby Lake -U Series based 3.5" Embedded Board supports Intel® 7th Gen Core™ i7/i5/i3/ Celeron® Processors with DP/HDMI/LVDS, SATA III, 3 COM, 6 USB, Dual Intel® GbE LAN.



## Product Specification

| System Processor/Chipset |                                                                                                                                                                                                                          |
|--------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Processor                | Intel® 7th KabyLake-U series processor onboard<br>Core™ i7-7600U (2.8GHz/3.9GHz, 2C/4T, 25W)<br>Core™ i5-7300U (2.6GHz/3.5GHz, 2C/4T, 25W)<br>Core™ i3-7100U (2.4GHz, 2C/4T, 15W)<br>Celeron® 3965U (2.2GHz, 2C/2T, 15W) |
| Chipset                  | Intel® KabyLake-U Processor integrated                                                                                                                                                                                   |
| BIOS                     | AMI UEFI Flash ROM                                                                                                                                                                                                       |
| Memory                   |                                                                                                                                                                                                                          |
| Technology               | DDR4 SDRAM up to 2133 MHz                                                                                                                                                                                                |
| Max. capacity            | Up to 16GB                                                                                                                                                                                                               |
| Socket                   | 1 x 260-pin SO-DIMM                                                                                                                                                                                                      |
| Display                  |                                                                                                                                                                                                                          |
| Graphics                 | Intel® HD Gen9-LP Graphics integrated                                                                                                                                                                                    |
| Display interface        | 1 x HDMI v1.4, 1 x DP v1.2<br>1 x LVDS(eDP) 2ch 18/24-bit (co-layout eDP)<br>1 x eDP v1.3 (optional)                                                                                                                     |
| Multi-display            | Up to three independent displays<br>(Celeron® processor only support Dual-display)                                                                                                                                       |
| Resolution               | DP: 3840 x 2160 @ 60Hz (max)<br>HDMI: 4096 x 2160 @ 24Hz (max)<br>LVDS: 1920 x 1200 @ 60Hz (max)<br>eDP: 1920 x 1080 @ 60Hz (max)                                                                                        |
| Ethernet                 |                                                                                                                                                                                                                          |
| Interface                | 10/100/1000 Mbps                                                                                                                                                                                                         |
| Controller               | LAN1: Intel® I210 GbE PHY w/ AMT v11.0<br>(only Core™ i7/i5 processor supports)<br>LAN2: Intel® I219LM GbE                                                                                                               |
| Connector                | 2 x RJ45 (rear I/O)                                                                                                                                                                                                      |
| Audio                    |                                                                                                                                                                                                                          |
| Interface                | Line-out, Mic-in, Line-in                                                                                                                                                                                                |
| CODEC                    | Realtek ALC662 HD Audio Codec                                                                                                                                                                                            |
| Expansion Slot           |                                                                                                                                                                                                                          |
| Mini-PCle                | 2 x Full size (1 w/ Micro-SIM, 1 combo mSATA)                                                                                                                                                                            |
| SATA                     |                                                                                                                                                                                                                          |
| Max. data transfer rate  | 6.0 Gb/s                                                                                                                                                                                                                 |
| Port                     | 1 x SATA III                                                                                                                                                                                                             |
| I/O                      |                                                                                                                                                                                                                          |
| Audio                    | Line-out, Mic-in, Line-in (box-header)                                                                                                                                                                                   |
| USB                      | 2 x USB 3.0 (rear I/O)<br>4 x USB 2.0 (box-header)                                                                                                                                                                       |
| COM                      | 2 x RS-232 (box-header)<br>1 x RS-232/422/485 (rear I/O)<br>All ports with 5V selection                                                                                                                                  |
| HDMI/VGA/DVI/DP/LVDS     | 1 x HDMI (rear I/O), 1 x DP (rear I/O)<br>1 x LVDS (box-header, co-layout eDP, optional)                                                                                                                                 |
| DIO                      | 4-in / 4-out (box-header)                                                                                                                                                                                                |
| SMBus                    | 1 x SMBus (box-header)                                                                                                                                                                                                   |



## Key Features

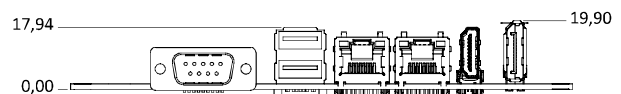
- Intel® 7th Gen Core™ i7/i5/i3 / Celeron® series processor onboard
- One 260-pin SO-DIMM up to 16GB DDR4 2133MHz SDRAM
- Multi-Display: HDMI/DP/LVDS(eDP)
- Two Intel® Gigabit Ethernet ports
- 2 Mini-PCle (1 w/ mSATA; 1 w/ Micro SIM) expansion slots
- 1 SATA III, 3 COM, 2 USB 3.0 and 4 USB 2.0
- Supports 4K/2K Resolution Display
- DC-in 9V ~ 36V
- EuP/ErP 2013 Ready
- Support Intel® AMT v11.0 (w/ Core™ i7/i5 processors)

| Power Requirement     |                                                                                                                     |
|-----------------------|---------------------------------------------------------------------------------------------------------------------|
| Power connector       | 1 x ATX (2x2-pin) or Wafer 1x2P (optional)<br>1 x DC-Jack screw type (optional)                                     |
| Power type            | DC-in 9V ~ 36V                                                                                                      |
| Power mode            | AT / ATX (by jumper selection)                                                                                      |
| Watchdog Timer        |                                                                                                                     |
| Interval              | Programmable 1 ~ 255 sec/min                                                                                        |
| Output                | System reset                                                                                                        |
| Environment           |                                                                                                                     |
| Operating temperature | 0°C ~ 60°C (32°F ~ 140°F) standard<br>-20°C ~ 70°C (-4°F ~ 158°F) optional<br>-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)    | 3.5" Embedded Board<br>146mm x 102mm (5.75" x 4.01")                                                                |

## Rear I/O



## Dimensions



## Ordering Information

| Part Number          | Description                                                                        |
|----------------------|------------------------------------------------------------------------------------|
| AECX-KBL2-7600 (MOQ) | 3.5", Intel Core i7-7600U 25W, HDMI/DP/LVDS, SATA/3COM/6USB/2LAN, DC(9V~36V)/ATX4P |
| AECX-KBL2-7300 (MOQ) | 3.5", Intel Core i5-7300U 25W, HDMI/DP/LVDS, SATA/3COM/6USB/2LAN, DC(9V~36V)/ATX4P |
| AECX-KBL2-7100 (MOQ) | 3.5", Intel Core i3-7100U 15W, HDMI/DP/LVDS, SATA/3COM/6USB/2LAN, DC(9V~36V)/ATX4P |
| AECX-KBL2-3965       | 3.5", Intel Celeron 3965U 15W, HDMI/DP/LVDS, SATA/3COM/6USB/2LAN, DC(9V~36V)/ATX4P |

## Optional Accessories

| Part Number  | Description      |
|--------------|------------------|
| VK00000700A9 | SATA cable       |
| VK00002600A9 | SATA power cable |
| NAAA000700LQ | Heatsink         |
| 113310506601 | Heat Spreader    |

## 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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