

## Embedded Single Board

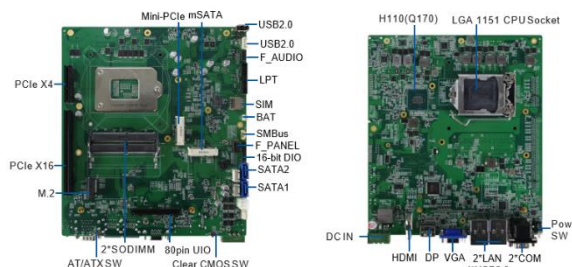
# IVTK-ESB-1951

Intel® Skylake-S/Kabylake-S Core/Pentium CPU, 2\*LAN, 4\*USB3.0, 4K display, PCIe x16+PCIe x4 expansion, TPM 2.0, DC 12~24V, Easy to structured product design.



### Key Features

- Intel® Kabylake-S/Skylake-S Core/Pentium CPU
- Intel® H110, Optional Intel® Q170
- 2\*DDR4 2133/2400MHz SODIMM, Up to 32GB
- 1\*O-PCIe x16 slot, 1\*O-PCIe x4 slot expansion
- 1\*DP,1\*HDMI,1\*VGA, support 3 displays(Q170)
- 2\*LAN, 4\*USB3.0, 2\*USB2.0, 2\*COM
- 1\*Mini PCIe,1\*M.2 B-Key,1\*UIO Express Bus
- 1\*mSATA, 2\*SATA, support Raid0,1(Intel Q170)
- TPM2.0, Support Intel® iVpro(Intel Q170)
- DC 12~24V Wide Power Input

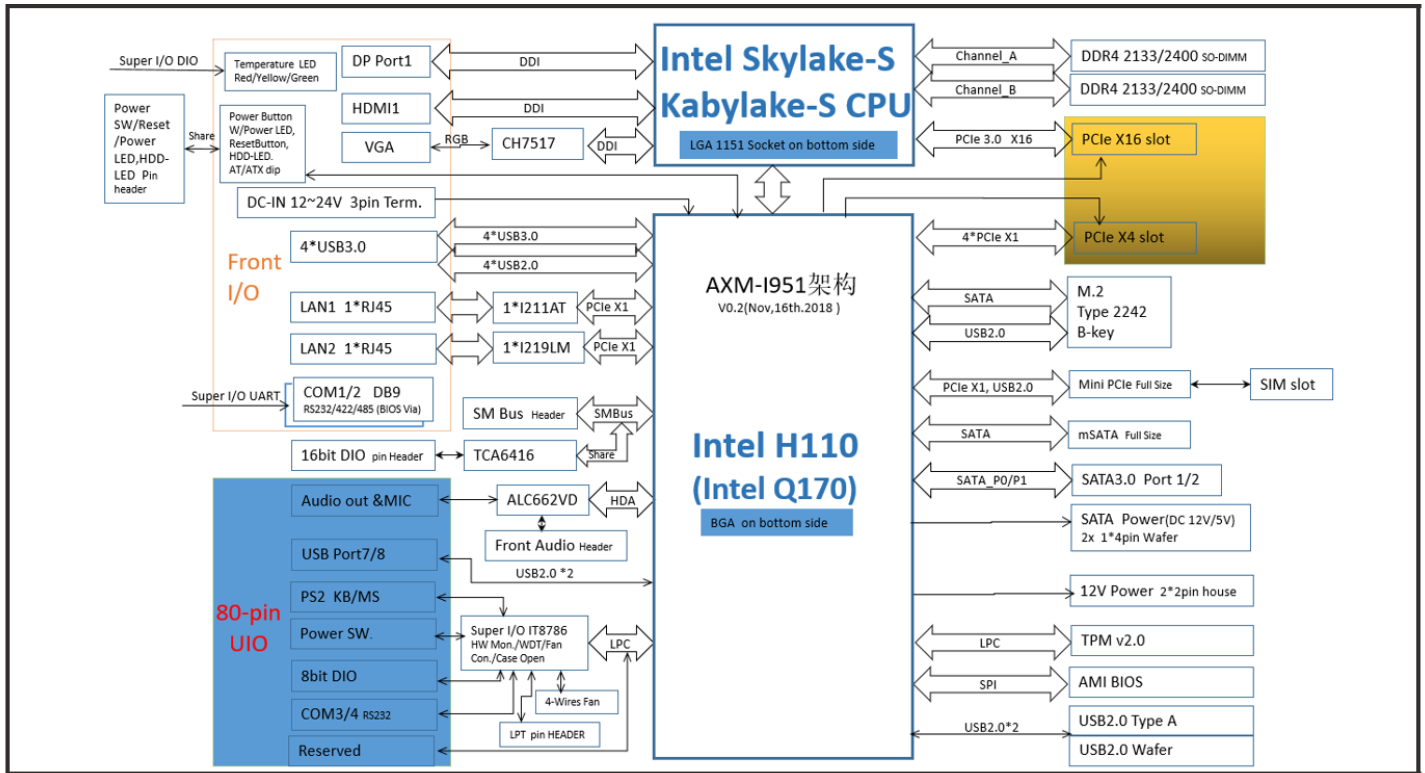


### SPEC.

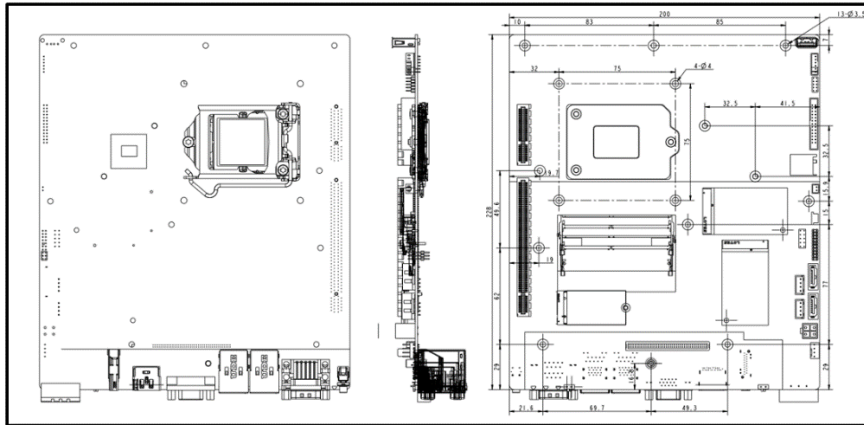
<b>System</b>	<b>CPU</b>	Gen.6th Intel® Skylake-S/gen.7th Intel® Kabylake-S Celeron/Pentium/Core I3/I5/I7 CPU, LGA 1151 socket, TDP: 35W
	<b>Chipset</b>	Intel® 110, Optional Intel® Q170
	<b>System Memory</b>	2*260-Pin SODIMM, dual channel DDR4 2133/2400MHz, up to 32GB
	<b>Expansion</b>	1*Full size Mini PCIe(PCIe x1+USB) with SIM slot 1*M.2 2242 B-key(SATA3+USB), 1*Full size mSATA(SATA3+USB) 1*JHC-Universal-01 UIO interface(Audio, USB, LPC, Power SW, 8-bit DIO, COM) 1*PCIe X16 slot(Non-standard), 1*PCIe X4(Non-standard)
	<b>Graphics</b>	Gen. 9th Intel® HD Graphics, HEVC/H265 HW HD en/decoder, DP max. res.4096*2304@60Hz, HDMI max. res. 3840*2160@30Hz, VGA max. res. 1920*1200@60Hz, support 3 independent display(Q170)
	<b>Audio</b>	Realtek ALC662VD controller, Support 5.1 channel
	<b>LAN</b>	1*Intel I211AT PCIe Gig. Ethernet; 1*Intel I219LM PCIe Gig. Ethernet, support iVpro(Q170)
	<b>Keyboard &amp; Mouse</b>	USB Keyboard and mouse,
	<b>Storage</b>	2*SATA3, 6.0Gbps HDD/SSD support Raid 0/1(Q170); 1*Full size mSATA, 1*M.2 2242 B-key
	<b>DIO&amp;LPT</b>	16 bit TTL signal, programmable input and output, 1*LPT Support SPP/EPP/ECP
	<b>Internal I/O</b>	1*F_PANEL, 1*LPT, 16-bit DIO, 1*USB2.0 wafer, 1*SM bus, 1*F_Audio
	<b>Rear I/O</b>	2*RJ45 Gig-LAN 4*USB3.0 Type A; 1*USB2.0 Type A 2*RS232/422/485 DB9 1*HDMI +1*DP+1*VGA
	<b>LED</b>	1*Power LED, 1*HDD LED, 3*CPU term. LED (Red is warning, Yellow is high, Green is normal)
	<b>Control SW</b>	1*Power button, 1*AT/ATX Select sw, 1*Clear CMOS sw
<b>Power Supply</b>	DC 12~24V, 3pin ter., Consumption: 19/3.6A(I7-7700T CPU,2GB DDR4, 64G SSD)	
<b>Watchdog Timer</b>	Watchdog timeout programmable via software 1 to 255 second	
<b>OS Support</b>	Windows 7, Windows 10, Linux Ubuntu Note: 7th Gen CPU SKU only support Windows 10 64-bit & Ubuntu	

<b>Mechanical &amp; Environmental</b>	Dimension	(W*H): 228*200mm
	Height	Top Side: 14.4mm; Bottom Side: 31.5mm; PCB: 1.6mm
	Operating Temperature	0°C~60°C
	Storage Temperature	-40°C~85°C
	Storage Humidity	10~90%@40°C, Non-condensing
	Certification/EMC	CE/FCC Class A

## Block Diagram



## Dimension



Unit:mm

## Ordering Info.

Model No.	Introduction
IVTK-ESB-I951/S001	Embedded Single Board, Intel® H110+SKL/KAL-S LGA1151 CPU, 2*LAN, 4*USB3.0, 2*USB2.0, 2*COM, 1*M.2 2242 B-Key,16-bit DIO, 1*O-PCIe X16, 1*O-PCIe X4, 1*Mini PCIe, 1*HDMI, 1*DP, 1*VGA, 1*80-pin UIO, 1*LPT, SM bus, TPM 2.0, 2*SATA3, 1*mSATA, DC 12~24V
IVTK-ESB-I951/S002	Embedded Single Board, Intel® Q170+SKL/KAL-S LGA1151 CPU, 2*LAN, 4*USB3.0, 2*USB2.0, 2*COM, 1*M.2 2242 B-Key,16-bit DIO, 1*O-PCIe X16, 1*O-PCIe X4, 1*Mini PCIe, 1*HDMI, 1*DP, 1*VGA, 1*80-pin UIO, 1*LPT, SM bus, TPM 2.0, 2*SATA3, 1*mSATA, DC 12~24V

