

## Embedded Single Board

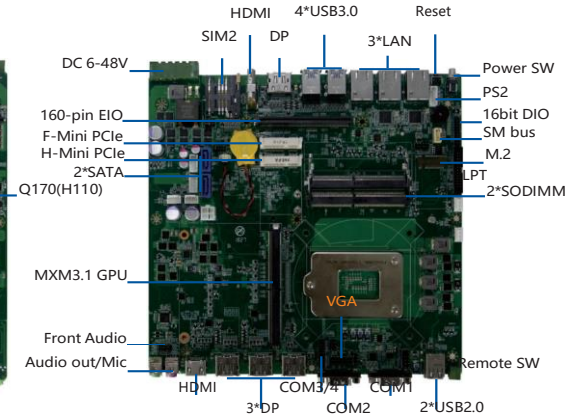
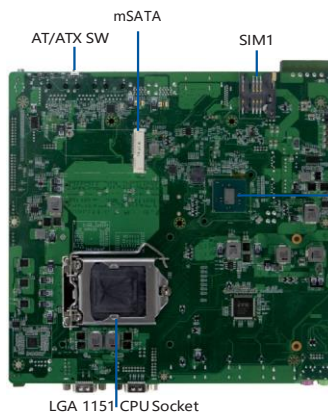
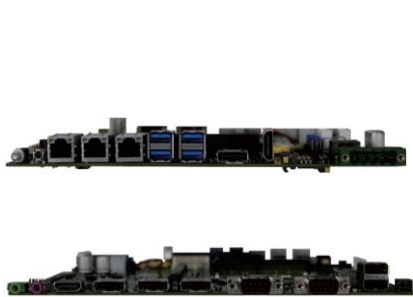
# IVTK-ESB-1950

Intel® Skylake-S/Kabylake-S Core I3/I5/I7 CPU, 3\*LAN, 4\*USB3.0, 6\*4K display, iVpro technology, TPM 2.0, DC 6~48V, Easy to structured product design.



### Key Features

- Intel® Kabylake-S/Skylake-S Core I3/I5/I7 CPU
- Intel® Q170, Optional Intel® H110
- 2\*DDR4 2133/2400MHz SODIMM, Up to 32GB
- 1\*MXM 3.1 socket, support NVIDIA/AMD GPU
- CPU:1\*DP+1\*HDMI+1\*VGA, GPU:3\*DP+1\*HDMI
- 3\*LAN, 4\*USB3.0, 4\*USB2.0, 4\*COM
- 2\*Mini PCIe,1\*M.2 2242 B-Key,1\*EIO Express Bus
- 1\*mSATA, 2\*2.5" SATA, support Raid0,1
- Support Intel® iVpro and TPM2.0
- DC 6~48V Wide Power Input, Opt. support ITPS

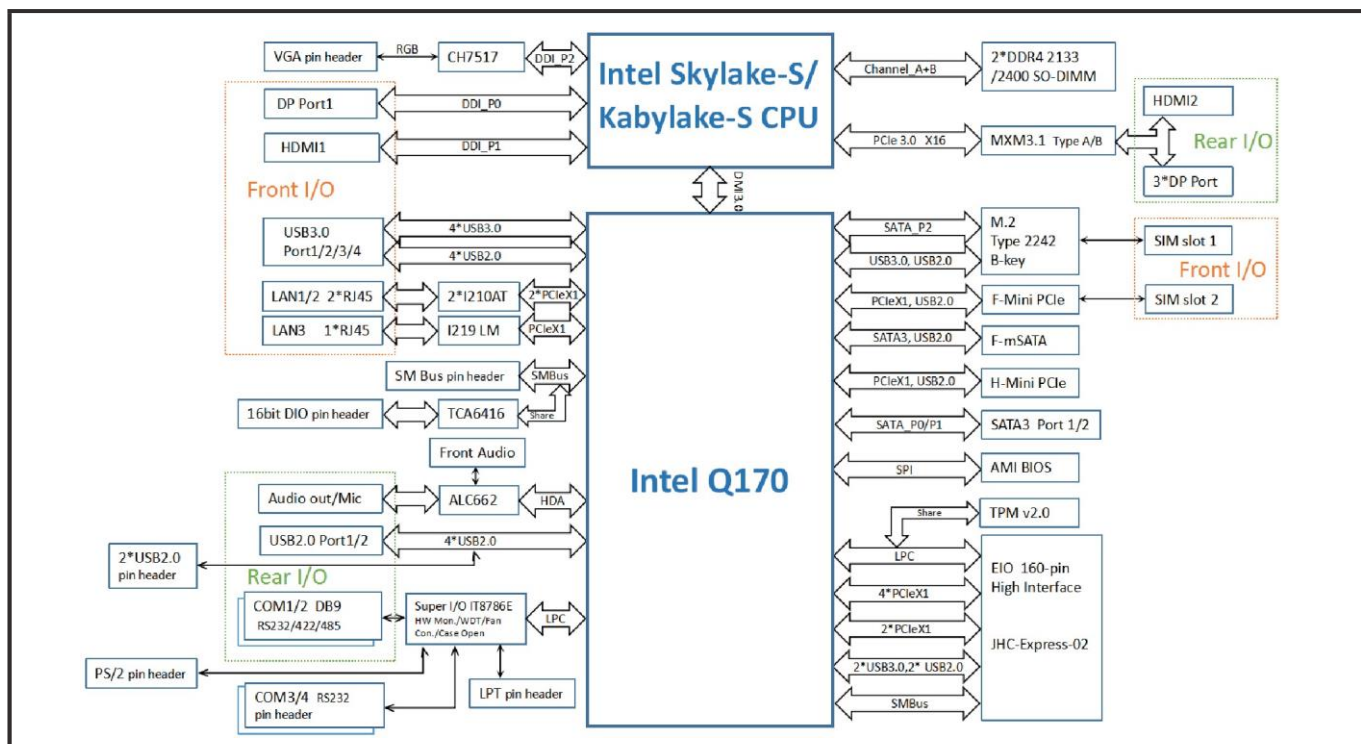


### SPEC.

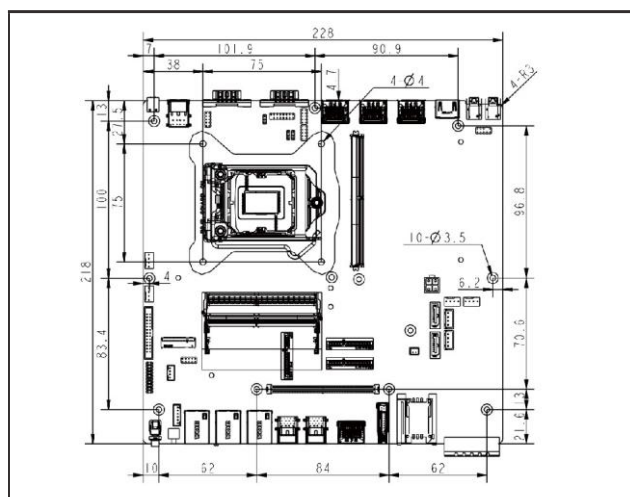
System	CPU	Gen. 6th Intel® Skylake-S/gen.7th Intel® Kabylake-S Celeron/Pentium/Core I3/I5/I7 CPU, LGA 1151 socket , all degree of consumption: TDP 35W/54W/65W/91W
	Chipset	Intel® Q170, Optional Intel® H110
	System Memory	2*260-Pin SODIMM, dual channel DDR4 2133/2400MHz, up to 32GB
	Expansion	1*Full size Mini PCIe(PCle+USB)w/ SIM slot,1*M.2 2242 B-key(SATA3+USB) w/ SIM slot, 1*Half size Mini PCIe(PCle+USB),1*Full size mSATA(SATA3+USB),1*JHC-Express-02 EIO interface
	Graphics	Gen. 9th Intel® HD Graphics, HEVC/H265 HW HD en/decoder, DP1.2 max. res. 4096*2304@60Hz, HDMI1.4b max. res. 3840*2160@30Hz, VGA max. res. 2650*1600@60Hz, 3 independent display MXM3.1 NVIDIA GTX/AMD RX series GPU module, support 3*DP1.2/1.3 and 1*HDMI1.4b/2.0 4K/5K display
	Audio	Realtek ALC662VD controller, Audio out and MIC
	LAN	2*Intel I210AT PCIe Gig. Ethernet; 1*Intel I219LM PCIe Gig. Ethernet support iVpro
	Keyboard & Mouse	Ps2 or USB Keyboard and mouse,
	Storage	2*SATA3, 6.0Gbps HDD/SSD support Raid 0/1; 1*Full size mSATA, 1*M.2 2242 B-key
	DIO&LPT	16 bit TTL signal, programmable input and output, 1*LPT Support SPP/EPP/ECP
	Internal I/O	1*VGA, 2*RS232 w/Power, 1*PS2, 1*LPT, 16bit DIO, 2*USB2.0, 1*SM bus, Front Audio
	Rear I/O	3*RJ45 Gig-LAN (Front) 4*USB3.0 Type A (Front); 2*USB2.0 Type A (Rear) 2*RS232/422/485 DB9 (Rear) 1*Audio-out and 1*MIC, 3.5mm phone jack (Rear) 1*HDMI +1*DP+1*VGA (Front); 3*DP+1*HDMI (Rear)
	LED	1*Power LED, 1*HDD LED, 3*CPU term. LED (Red is warning, Yellow is high, Green is normal)
	Control SW	1*Power button, 1*Reset button (Front); 1*2pin ter. power-on signal (Rear), 1*AT/ATX Select dip (Front)
Power Supply	DC 6~48V w/ACC, 5pin ter. (Front), Consumption: TDP 19/2.0A (I5-7500 CPU, 4GB Ram, 128GB SSD)	
Watchdog Timer	Watchdog timeout programmable via software 1 to 255 second	
OS Support	Windows 7, Windows 10, Linux Fedora Ubuntu	

<b>Mechanical &amp; Environmental</b>	Dimension	(W*H): 228*218mm
	Height	Top Side: 16.5mm; Bottom Side: 9.0mm; 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-1950/S001	Embedded Single Board, Intel® Q170+SKL/KAL-S LGA1151 CPU, MXM3.1, 3*LAN, 4*USB3.0, 4*USB2.0, 4*COM, 1*M.2, 16bit DIO, 2*Mini PCIe, 2*HDMI, 4*DP, 1*VGA, Audio, EIO, Ps2, LPT, SM bus, TPM 2.0, 2*SATA3, 1*mSATA, ITPS DC 6~48V
IVTK-ESB-1950/T001	Embedded Single Board, Intel® H110+SKL/KAL-S LGA1151 CPU, 2*LAN, 4*USB3.0, 4*USB2.0, 4*COM, 1*M.2, 16bit DIO, 1*Mini PCIe, 1*HDMI, 1*DP, Audio, Ps2, LPT, SM bus, 2*SATA3, 1*mSATA, DC 6~48V