

## Embedded Single Board

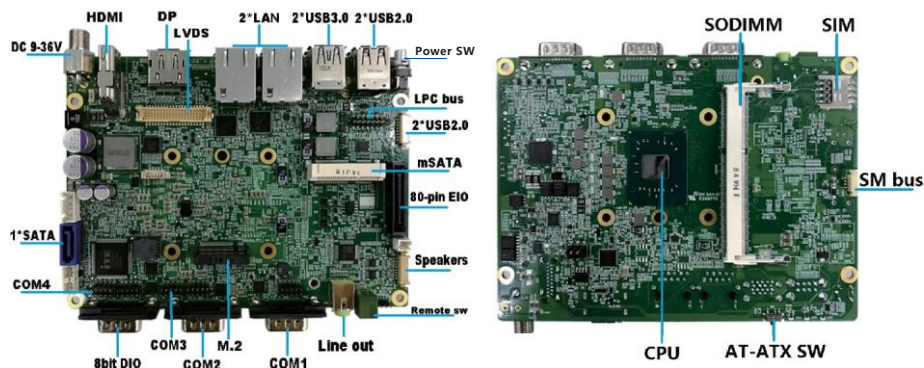
# IVTK-ESB-1713

Intel® Apollolake Soc CPU, 2\*LAN, 6\*USB, 4\*COM, 3\*Displays, M.2 and EIO, TPM 2.0, DC-IN 9~36V, CPU Temp. show in LED. Easy to structured product design.



### Key Features

- Intel® Apollolake Pentium/Celeron Soc CPU 1\*DDR3L
- 1866MHz SODIMM, up to 8GB
- 2\*Intel® I211-AT PCIe Gig LAN
- 1\*HDMI, 1\*DP and 1\*48 bit LVDS/eDP
- 2\*USB3.0, 4\*USB2.0, 4\*COM, 8bit DIO
- Realtek ALC662VD High Definition Audio, 2\*3W speakers
- 1\*M.2 2242 B-key, EIO Express bus
- 1\*SATA3 6.0Gbps, 1\*mSATA
- DC 9~36V wide power input



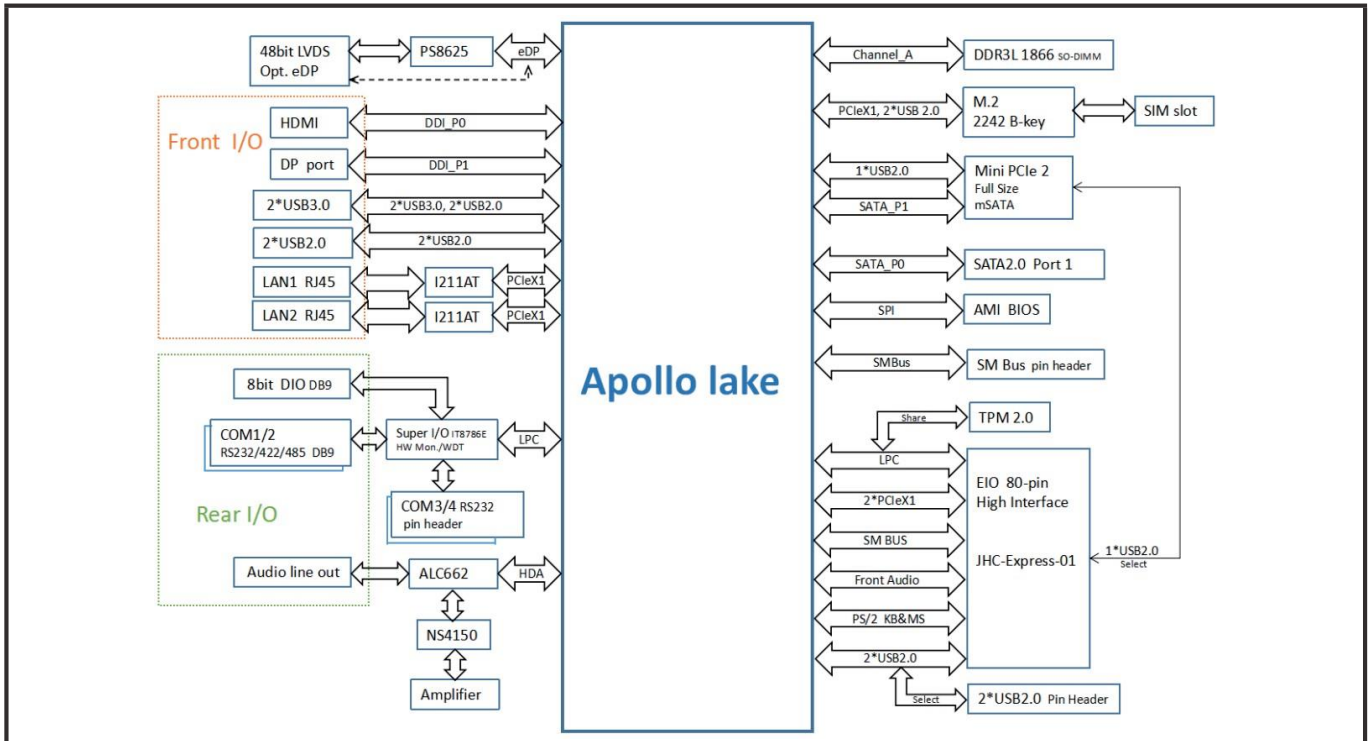
### SPEC.

System	CPU	Intel® Pentium N4200 1.1~2.5GHz, 4 cores, 4 threads, 2M cache, 14nm, TDP 6W Intel® Celeron N3350 1.1~2.4GHz, 2 cores, 2 threads, 2M cache, 14nm, TDP 6W
	System Memory	1*DDR3L 1866MHz SODIMM, up to 8GB
	Expansion	1*M.2 2242 B-key w/ PCIeX1 and USB+SIM slot, support 4G LTE/Wifi/BT ect. ; 1*Full size mSATA w/ USB2.0; 1*JHC-Express-01 EIO(PCIe,MIPI,USB2.0,LPC,SMBus,PS2)
	Graphics	Gen.9th Intel® HD Graphics. The Max resolution, DP: 4096*2160@60Hz; HDMI: 3840*2160@30Hz; 48bit LVDS: 1920*1200@60Hz. Support OpenGL4.3, DirectX11, OpenCL2.0, MPGE2,H.265
	Audio	Realtek ALC662VD High Definition Audio, support 5.1 channel
	LAN	2*Intel® I211-AT, PCIe Gigabit Ethernet, Integrated 10/100/1000M
	Keyboard & Mouse	USB Keyboard and mouse, optional PS2 (In EIO )
	Storage	1*SATA3, support 6.0Gbps HDD/SSD; 1*Full size mSATA, support AHCI
	DIO	8 bit TTL signal, programmable input and output
	Internal I/O	48 bit LVDS opt. eDP signal; 2*USB2.0 pin header; 2*RS232 pin header; 1*SM bus; 1*SATA3 w/power; 1*LPC bus; 2*Channel speakers; 1*80-pin EIO Express-01
	Rear I/O	2*RJ45 LAN with LED(Front) 2*USB3.0 Type A and 2*USB2.0 Type A(Front) 1*8 bit DIO (Rear DB9,share in 2*5pin connector) 2*RS232/422/485 COM (Rear DB9, share in 2*5pin connector) 1*HDMI and 1*DP(Front); 1*Line-out 3.5mm phone jack (Rear)
	LED	1*Power LED, 1*HDD LED, 3*CPU temperature LED(Red is warning; Yellow is high; Green is normal)
	Control SW	1*Power button(Front), 1*2pin terminal w/ power switch signal(Rear), 1*AT/ATX Select dip(Front)
	Power Supply	DC 9~36V, D-Jack w/ M8 connector(Front), short circuit, overvoltage and overcurrent pro. Con. TDP: TBD
Watchdog Timer	Watchdog timeout programmable via software from 1 to 255 seconds	
OS Support	Windows 7, Windows 8.1, Windows 10, Linux Fedora Ubuntu.	

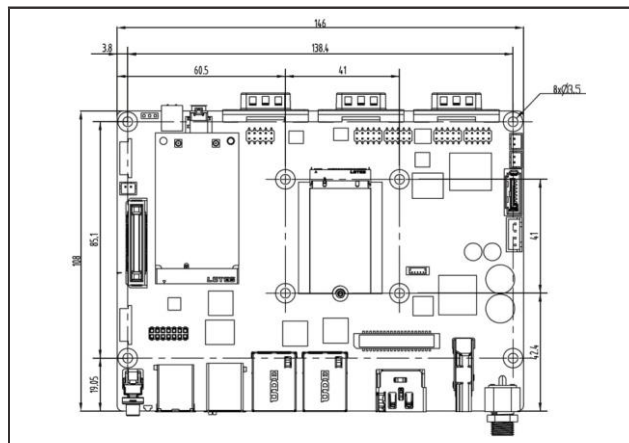
\* All specifications and photos are subject to change without notice.

<b>Mechanical &amp; Environmental</b>	Dimension	(W*H):146*108mm
	Height	Top Side: 16.5mm; Bottom Side: 5.2mm; 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-I713/S001	Embedded Single Board, Intel® N3350 CPU, 2*LAN, 2*USB3.0, 4*USB2.0, 4*COM, 8-bit DIO, 1*HDMI, 1*DP, 1*LVDS, Audio, 1*SMBus, 1*LPC, 1*M.2, 1*EIO, 1*mSATA, 1*SATA3, TPM 2.0, DC 9~36V
IVTK-ESB -I713/S002	Embedded Single Board, Intel® E3940 CPU, 2*LAN, 2*USB3.0, 4*USB2.0, 4*COM, 8-bit DIO, 1*HDMI, 1*DP, 1*LVDS, Audio, 1*SMBus, 1*LPC, 1*M.2, 1*EIO, 1*mSATA, 1*SATA3, TPM 2.0, DC 9~36V
IVTK-ESB -I713/S003	Embedded Single Board, Intel® N4200 CPU, 2*LAN, 2*USB3.0, 4*USB2.0, 4*COM, 8-bit DIO, 1*HDMI, 1*DP, 1*LVDS, Audio, 1*SMBus, 1*LPC, 1*M.2, 1*EIO, 1*mSATA, 1*SATA3, TPM 2.0, DC 9~36V
IVTK-ESB -I713/S004	Embedded Single Board, Intel® E3940 CPU, 2*LAN, 2*USB3.0, 4*USB2.0, 4*COM, 8-bit DIO, 1*HDMI, 1*DP, 1*LVDS, Audio, 1*SMBus, 1*LPC, 1*M.2, 1*EIO, 1*mSATA, 1*SATA3, TPM 2.0, DC 9~36V
IVTK-ESB -I713/T001~4	Embedded Single Board, Intel® Apollolake Soc CPU, 2*LAN, 2*USB3.0, 4*USB2.0, 4*COM, 8-bit DIO, 1*HDMI, 1*DP, Audio, 1*SMBus, 1*M.2, 1*mSATA, 1*SATA3, DC 9~36V

