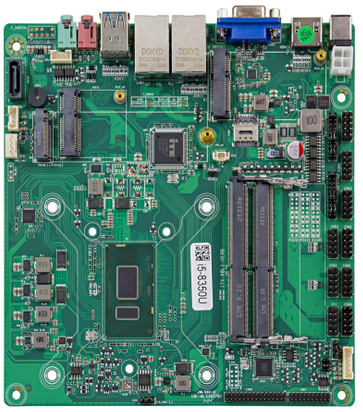
ITX-KBL1

Intel 6~7th Gen 17*17



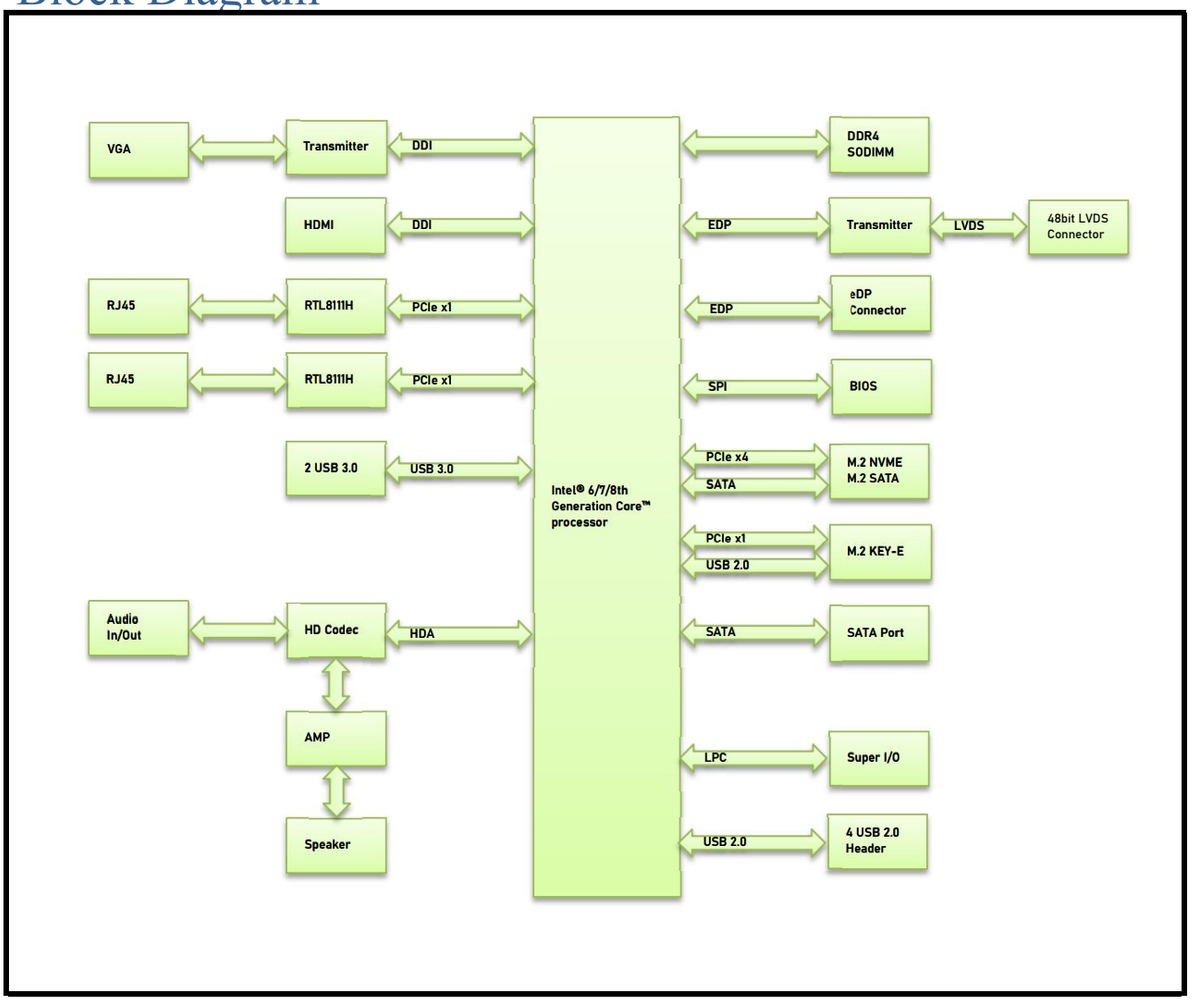
Features

- 6~8th Generation Intel® Core™ processor
- 2 x DDR4 Sodimm
- 1 x M.2 2280 SATA/NVME
- 2 x Gbe
- VGA + HDMI + LVDS/eDP

Specifications

Processor System	CPU	Intel Core™ i3-6157U	Intel Core™ i5-7287U	Intel Core™ i5-8350U	Intel Core™ i7-8650U
	Base Frequency	2.4 Ghz(Dual Core)	3.3 Ghz(Dual Core)	1.7 Ghz(Qaud Core)	1.9 Ghz(Qaud Core)
	Max Turbo Frequency		3.7 Ghz	3.6 Ghz	4.2 Ghz
	Smart Cache	3 MB	4 MB	6 MB	8 MB
	BIOS	AMI UEFI 64 Mbit			
Memory	Technology	DDR4 2133 MHz SODIMM		DDR4 2400 MHz SODIMM	
	Max. Capacity	32GB			
Display	Controller	Intel® UHD Graphics			
	Processor Graphics	Direct 3D 2015, Direct 3D 11.2, OpenGL 4.4, Open CL 2.1 H.265, MPEG2, MVC, VC-1, WMV9, JPEG/MJPEG and VP8 HW Decode			
	VGA	2048x1536 @ 60Hz			
	LVDS	LVDS with 3.3V, 5V and 12V on LCD VDD power, 5V and 12V support on LVDS inverter Dual channel 24-bit LVDS, max resolution up to 1920 x 1200 at 60Hz			
	HDMI	Supports HDMI 1.4, 1920x1080 @ 60 Hz			
	Multi-Display	VGA + HDMI, VGA + LVDS, HDMI + LVDS			
Ethernet	Speed	10/100/1000Mbps			
	Controller	2 Realtek RTL8111H			
	Connector	2 RJ45 on Rear I/O			
Audio	Codec	High Definition Audio (HDA), HP out, Mic-in			
	Amplifier	Dual 3W 4Ohm F-Class Speaker			
WatchDog Timer		Output System reset, Programmable counter from 1 ~ 65535 minutes/ seconds			
Storage	SATA	2, up to 6.0 Gb/s (300 MB/s)			
	NVME	1 x M.2 NVME 2280(M.2 SATA)			
Rear I/O	Ethernet	2			
	HDMI	1			
	VGA	1			
	USB 3.0	2			
	DC Jack	1			
	AUDIO	2			
Internal I/O	SATA	1			
	USB 2.0 HEADER	4			
	M.2 WIFI	1			
	UART	6 x RS-232(Two Support RS422/RS485)			
	LVDS / eDP	1			
Power	Power Type	Single 12~19V DC power input			
	Power Supply Voltage	Supports single 12~19V input, ± 10%			
	Power Management	ACPI			
	Battery	Lithium 3 V / 225 mAH			
Environment	Operating	-20 °C ~ 60 °C (Operating humidity: 40 °C @ 95% RH Non-Condensing)			
	Non-Operating	-40 °C ~ 85 °C and 60 °C @ 95% RH Non-Condensing			
Physical Characteristics	Dimensions (L x W)	170 x 170 mm			
	Weight	0.3kg			
	Height	Top Side: 16 mm; Bottom Side: 2 mm; PCB: 1.6 mm			

Block Diagram



Ordering Information

Part No.	CPU	Memory	VGA	HDMI	LVDS	NVME	SATA	USB3.0	USB2.0	GbE	HDA	Operating Temp.
ITX-KBL1-6157U	I3-6157U	SODIMM	1	1	48 bit	1	1	4	4	1	1	-20 °C ~ 60 °C
ITX-KBL1-7287U	I5-7287U	SODIMM	1	1	48 bit	1	1	4	4	1	1	-20 °C ~ 60 °C
ITX-KBL1-7560U	I7-7560U	SODIMM	1	1	48 bit	1	1	4	4	1	1	-20 °C ~ 60 °C
ITX-KBL1-8350U	I5-8350U	SODIMM	1	1	48 bit	1	1	4	4	1	1	-20 °C ~ 60 °C
ITX-KBL1-8650U	I7-8650U	SODIMM	1	1	48 bit	1	1	4	4	1	1	-20 °C ~ 60 °C

Rear I/O View