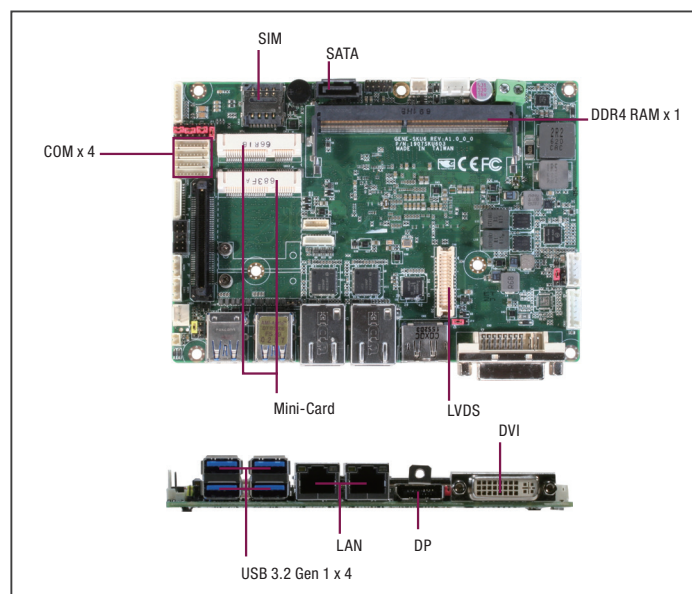


GENE-KBU6

3.5" SubCompact Board with 7th Generation Intel® Core™ i7/i5/i3/Celeron® Processor SoC



Specifications

SYSTEM	
FORM FACTOR	3.5" SubCompact Board
CPU	Intel® 7th Generation Core™ /Celeron Processor: Intel® i7-7600U (2C/4T, 2.80GHz, up to 3.90GHz) Intel® i5-7300U (2C/4T, 2.60GHz, up to 3.50GHz) Intel® i3-7100U (2C/4T, 2.40GHz) Intel® Celeron 3965U (2C/2T, 2.20GHz)
CPU TDP	15W, TDP-up 25W: i7-7600U/i5-7300U 15W: i3-7100U/Celeron 3965U
CHIPSET	Integrated with Intel® SoC
MEMORY TYPE	DDR4 up to 2133MHz, SODIMM x 1, up to 16GB, Non-ECC
BIOS	UEFI
WAKE ON LAN	Yes
WATCHDOG TIMER	255 Levels
SECURITY	TPM 2.0 (Optional)
RTC Battery	Lithium Battery 3V/240mAh
DIMENSION (L X W)	5.75" x 4" (146mm x 101.7mm)
POWER	
POWER REQUIREMENT	Intel® HD Graphics 510/620
POWER SUPPLY TYPE	LVDS Dual Channel 18/24bit x 1
CONNECTOR	Default: DP1.2 x 1 + DVI-D x 1 Optional: DVI-I x 1 (with VGA signal)
POWER CONSUMPTION	Up to 3 Simultaneous Displays
DISPLAY	
CONTROLLER	Intel® HD Graphics for Intel® Celeron® Processor N3000 Series
LVDS/eDP	LVDS1 Dual Channel 18/24bit x 1 LVDS2 Dual Channel 18/24bit x 1 (Optional: HDMI1.4b)
Display Interface	VGA x 1
Multiple Display	Up to 3 Simultaneous Displays
AUDIO	
CODEC	Realtek ALC897/892
AUDIO INTERFACE	Line-in/Line-out/MIC
Speaker	—
EXTERNAL I/O	
ETHERNET	Intel® i210/i211, 10/100/1000Base-TX, RJ-45 x 2
USB	USB 3.2 Gen 1 x 4
SERIAL PORT	—
VIDEO	DP1.2 x 1, DVI-D x 1
INTERNAL I/O	
USB	USB 2.0 x 2
SERIAL PORT	COM1 (RS232), COM2, COM3, COM4 (RS232/422/485, support 5V/12V/RI)
VIDEO	LVDS x 1

Features

- DVI, 18/24-bit Dual-Channel LVDS
- SATA 6.0 Gb/s x 1 & mSATA (Share with Half-size Mini-Card and Selective by BIOS)
- Supports 8-bit Digital I/O, USB 2.0 x 2, USB 3.2 Gen 1 x 4
- Mini-Card Slot x 1 (Full size), TPM, SIM
- Wide DC Support 9~36V, +12V Only (Optional)
- BIO Connector for Daughter Board
- Solder Design for System Assembly and Thermal



SATA	SATA III x 1, +5V SATA Power Connector x 1
AUDIO	Audio Header x 1
DIO/GPIO	8-bit
SMBus/I2C	SMBus x1
Touch	4/5/8-wire Touch Controller x 1 (optional)
FAN	DC Fan x 1 (optional: Smart Fan)
SIM	Micro SIM x 1 (Optional)
Front Panel	HDD LED, PWR LED, Power Button, Buzzer, Reset
Others	—
EXPANSION	
Mini PCI-E/mSATA	Full-size mPCIe x 1 Half size mSATA/mPCIe x 1 (Default mSATA, select by BIOS)
M.2	—
Others	BIO x 1
ENVIRONMENT & CERTIFICATION	
OPERATING TEMP	32°F ~ 140°F (0°C ~ 60°C)
STORAGE TEMP	-40°F ~ 176°F (-40°C ~ 80°C)
OPERATING HUMIDITY	0% ~ 90% relative humidity, non-condensing
MTBF (HOURS)	375,577
EMC	CE/FCC Class A

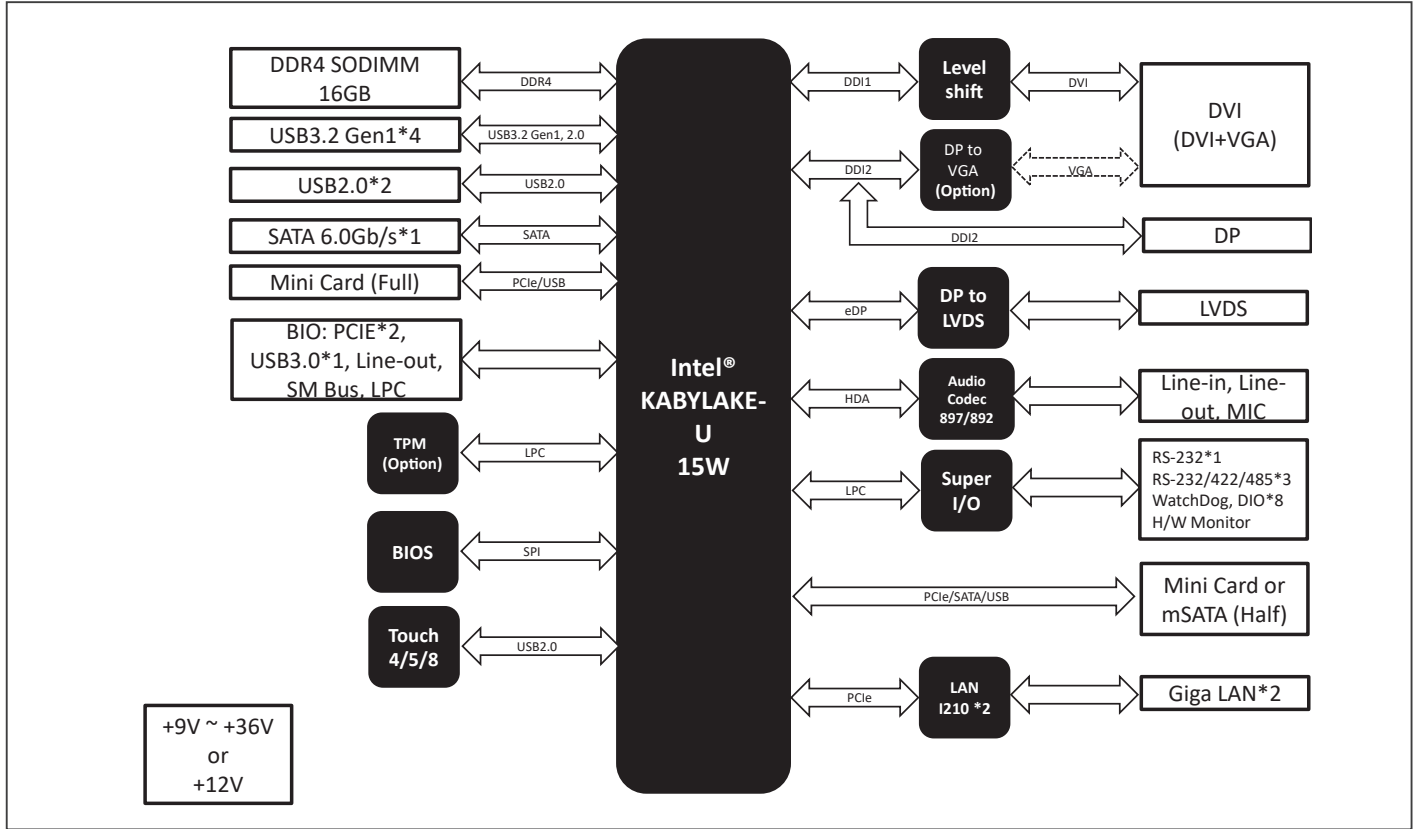
Optional Accessories

Part Number	Description	QTY per Board
1700050207	USB Cable, 20cm	2
1701090150	Com Cable, 15cm	4
1709100254	PHONE JACK Cable, 25cm	1
1702150155	SATA Power Cable, 15cm	1
170220020B	ATX Power Cable, 20cm	1
170204010R	Power Cable, 10cm	1
GENE-KBU6-FAN01	CPU Cooler, 3P, 5000RPM	1
GENE-KBU6-HSK02	Heatsink, 146 x 101.6 x 29mm	1
GENE-KBU6-HSK03	Heatsink for DDR4 SO-DIMM, 72 x 28 x 10mm.	1

Packing List

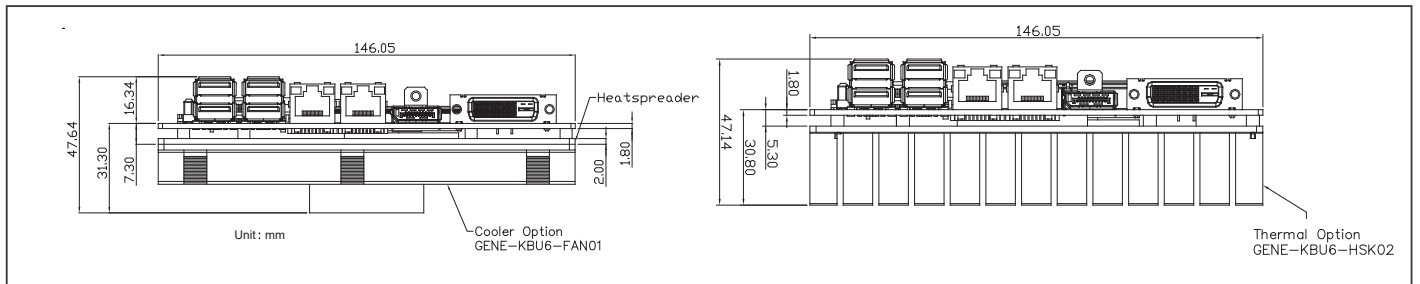
Part Number	Description	QTY
	GENE-KBU6 MB	1
M10SKU6000	Heat Spreader	1

Block Diagram



Dimension

Unit: mm



Ordering Information

Part Number	CPU	Display	LAN	USB	RS-232	RS-232/422/485	Storage	Expansion Slot	TPM	Power	Operating Temp	Others
GENE-KBU6-A11-0001	Intel® Core™ i7-7600U	DP+LVDS+DVI-D	GbE x 2	USB3.0(Gen1) x 4 USB 2.0 x 2	1	3	SATA x 1 mSATA x 1 (half size)	MiniCard x 1 (Full)	2.0	9~36V	0°C ~ 60°C	Touch Controller, SIM, DIO x 8, SMBUS
GENE-KBU6-A11-0002	Intel® Core™ i5-7300U	DP+LVDS+DVI-D	GbE x 2	USB3.0(Gen1) x 4 USB 2.0 x 2	1	3	SATA x 1 mSATA x 1 (half size)	MiniCard x 1 (Full)	2.0	9~36V	0°C ~ 60°C	Touch Controller, SIM, DIO x 8, SMBUS
GENE-KBU6-A11-0003	Intel® Core™ i3-7100U	DP+LVDS+DVI-D	GbE x 2	USB3.0(Gen1) x 4 USB 2.0 x 2	1	3	SATA x 1 mSATA x 1 (half size)	MiniCard x 1 (Full)	2.0	9~36V	0°C ~ 60°C	Touch Controller, SIM, DIO x 8, SMBUS