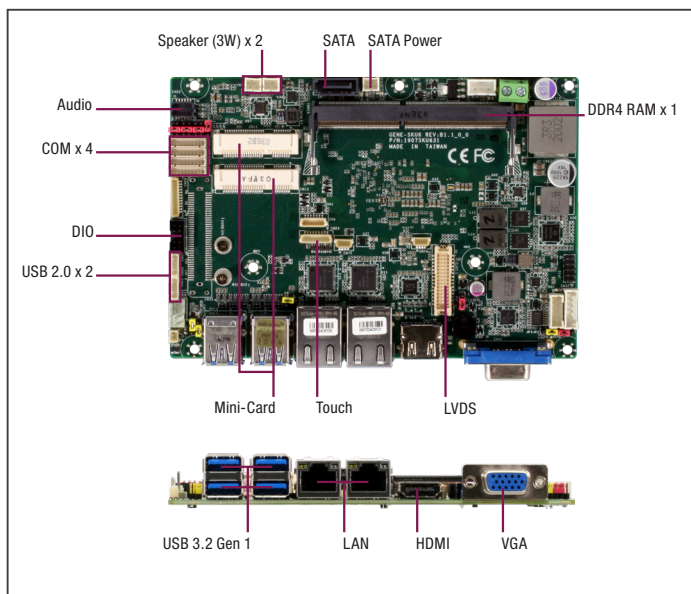


# GENE-SKU6 Rev. B

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



## Features

- Intel® Core™ i7/i5/i3/Celeron® Processor SoC
- DDR4 1866/2133, SODIMM x 1
- VGA, HDMI, 18/24-bit Dual Channel LVDS
- 2 CH Audio, 3W Speaker
- SATA 6.0 Gb/s x 1 & mSATA (Shared with Half-size Mini-Card and Selected by BIOS)
- Supports 8-bit Digital I/O, USB 2.0 x 2, USB 3.2 Gen 1 x 4
- COM x 4 (RS-232 x 1, RS-232/422/485 x 3)
- Mini-Card Slot x 1 (Shared with full-size mATA and Selected by BIOS), TPM
- Wide DC Support 9~36V, +12V Only (Optional)
- 4/5/8-wire Resistive Touch Screen Controller
- BIO Connector for Daughter Board (Optional)
- Solder Design for System Assembly and Thermal



## Specifications

SYSTEM	
FORM FACTOR	3.5" SubCompact Board
CPU	Intel® 6th Generation Core™ /Celeron Processor: Intel® i7-6600U (2C/4T, 2.6GHz, up to 3.4GHz, TDP-up 25W) Intel® i5-6300U (2C/4T, 2.4GHz, up to 3.0GHz, TDP-up 25W) Intel® i3-6100U (2C/4T, 2.3GHz, TDP-up 25W) Intel® Celeron 3955U (2C/2T, 2.20GHz, TDP-up 15W)
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	5.75" x 4" (146mm x 101.7mm)
OS SUPPORT	Windows 7/10 (64bit) Linux Ubuntu 21.04.0/Kernel 5.10
POWER	
POWER REQUIREMENT	+9-36V (Optional: +12V)
POWER SUPPLY TYPE	AT/ATX
CONNECTOR	Phoenix 2-pin Connector
POWER CONSUMPTION	Intel® i7-6600U, 6600U, DDR4 2400MHz 16GB, 0.73A at +36V
DISPLAY	
CONTROLLER	Intel® HD Graphics 510/520
LVDS/eDP	LVDS Dual Channel 18/24bit x 1, up to 1920 x 1080
DISPLAY INTERFACE	VGA x1, Up to 1920 x 1200 HDMI 1.4 x1, up to 4096 x 2304
MULTIPLE DISPLAY	Up to 3 Simultaneous Displays
AUDIO	
CODEC	Realtek ALC892/897
AUDIO INTERFACE	Line-in/Line-out/MIC
SPEAKER	3W Amplifier (Optional)
EXTERNAL I/O	
ETHERNET	Intel® i210, 10/100/1000Base-TX, RJ-45 x 2
USB	USB 3.2 Gen 1 x 4
SERIAL PORT	—
VIDEO	HDMI 1.4 x 1 VGA 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

SATA	SATA III x 1 +5V SATA Power Connector x 1
AUDIO	Audio Header x 1
DIO/GPIO	8-bit
SMBus/I2C	I2C/SMBus x 1 (Default: SMBus)
TOUCH	4/5/8-wire Touch Controller x 1 (optional)
FAN	DC Fan x 1 (optional: Smart Fan)
SIM	—
FRONT PANEL	HDD LED, PWR LED, Power Button, Buzzer, Reset
OTHERS	—
EXPANSION	
Mini PCI-E/mSATA	Full-size mSATA/mPCIe x 1 (Default mPCIe, select by BIOS) Half size mSATA/mPCIe x 1 (Default mSATA, select by BIOS)
M.2	—
OTHERS	BIO x 1 (optional)
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)	371,039
EMC	CE/FCC Class A

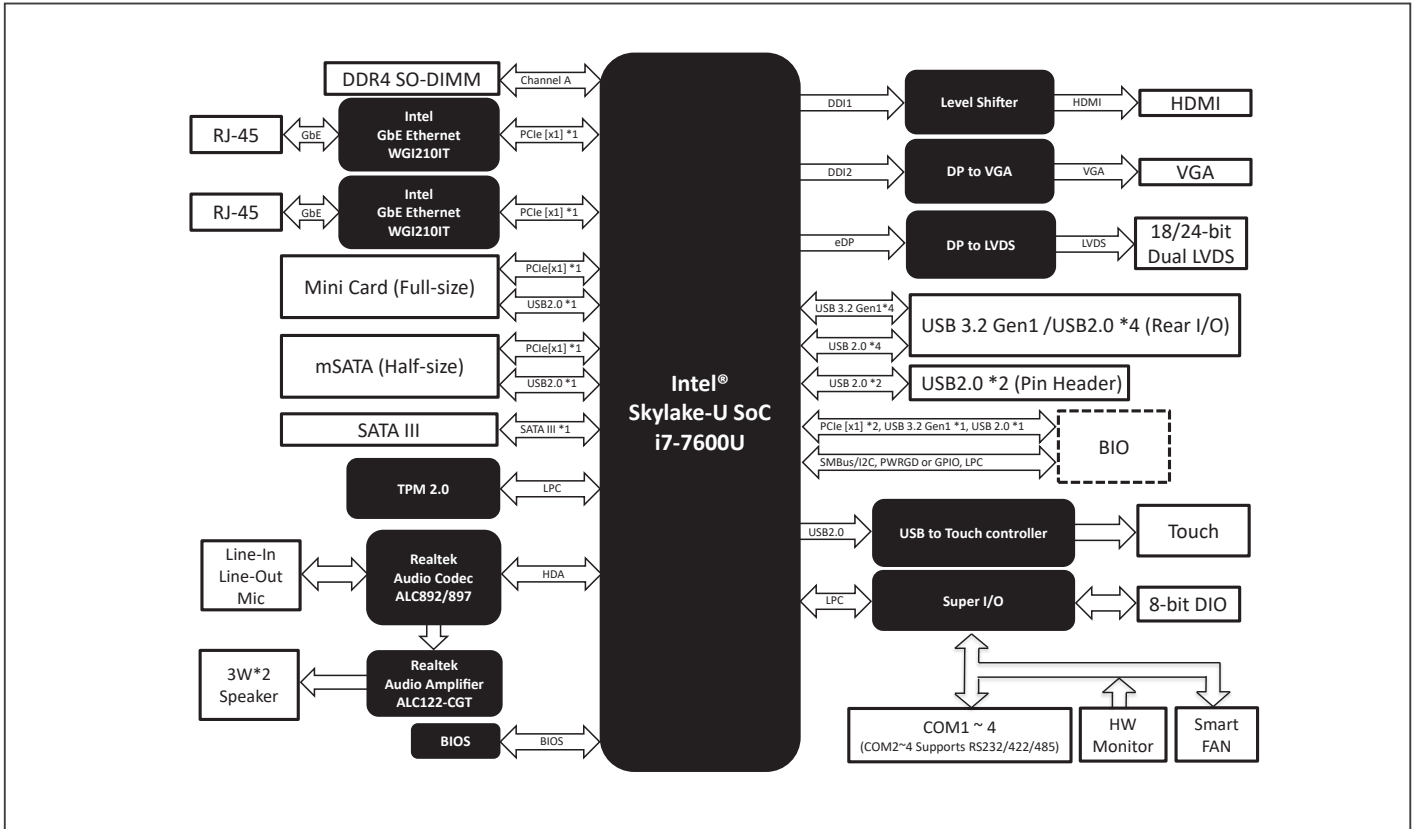
## Packing List

- GENE-SKU6 with Heatspreader

## Optional Accessories

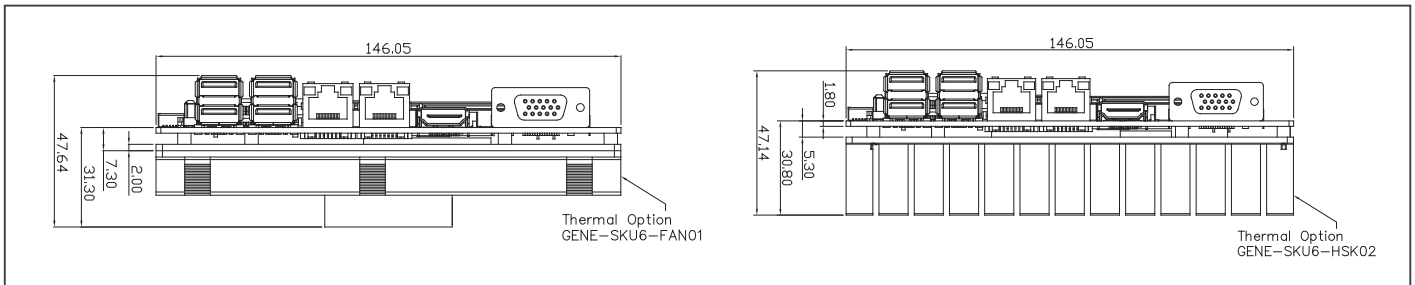
Part Number	Description	QTY
1700050207	(TF)USB CABLE.1*5P Pitch=1.25mm Housinh.20cm.for PFM-945C	2
1701090150	(TF)Flat Cable.D-Sub 9(M).9P Housing.9P 1.25mm pitch Housing.15cm	4
170X000156	(TF)Cable.12P.Pitch=1.0mm.250mm.FLYINGWAY.FWAA-1345.Audio cable	1
1702150155	(TF)Power Cable.15P SATA(F).2P 2.0mm Housing(PH).15cm	1
170220020B	(TF)Power Cable.20P ATX(M).4P 5.08mm Housing(F).+3P 2.5mm Housing(XH).20cm	1
1702002010	(TF)Power CABLE.1*2P Pitch=5.0mm Housing.10cm.for PFM-945C.(12V only)	1
GENE-SKU6-FAN01	CPU Cooler, 3P, 5000RPM, A1.0, REV. A1.0	1
GENE-SKU6-HSK02	Heatsink, 146 x 101.6 x 29mm, Silver, for GENE-SKU6	1
GENE-SKU6-HSK03	Heat Sink.72*28*10mm.GENE-SKU6.SODIMM DDR4	1

## Block Diagram



## Dimension

Unit: mm



## Ordering Information

Part number	CPU	Fan/Fanless	Display	LVDS	Storage	LAN	USB	RS-232	RS-232/422/285	Expansion slot	Power	Operating Temp	Others
GENE-SKU6-B12-0001	Intel® i7-6600U	Fanless	VGA+HDMI+LVDS	18/24-bit, 2CH	SATA x 1 mSATA x 1	GbE x 2	USB 3.2 Gen 1 x 4 USB 2.0 x 2	1	3	miniCard x 1 (Full-size)	9~36V	0°C ~ 60°C	DIO x 8, Touch Controller, TPM
GENE-SKU6-B12-0002	Intel® i5-6300U	Fanless	VGA+HDMI+LVDS	18/24-bit, 2CH	SATA x 1 mSATA x 1	GbE x 2	USB 3.2 Gen 1 x 4 USB 2.0 x 2	1	3	miniCard x 1 (Full-size)	9~36V	0°C ~ 60°C	DIO x 8, Touch Controller, TPM
GENE-SKU6-B12-0003	Intel® i3-6100U	Fanless	VGA+HDMI+LVDS	18/24-bit, 2CH	SATA x 1 mSATA x 1	GbE x 2	USB 3.2 Gen 1 x 4 USB 2.0 x 2	1	3	miniCard x 1 (Full-size)	9~36V	0°C ~ 60°C	DIO x 8, Touch Controller, TPM