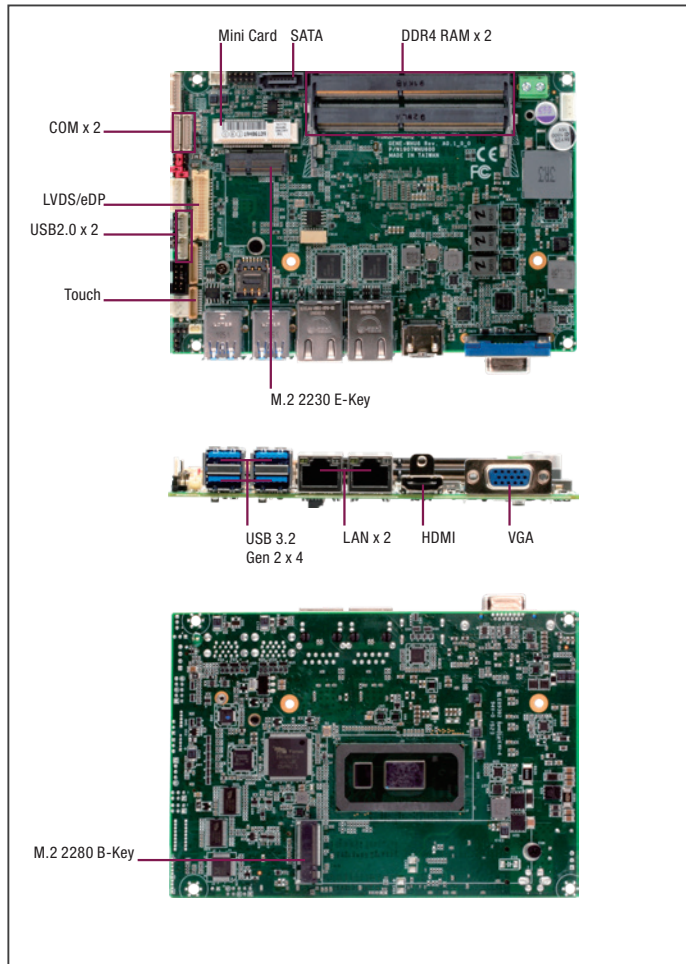


3.5" SubCompact Board with 8th Generation Intel® Core™ i7/i5/i3/Celeron® Processor SoC



## Specifications

System	
Form Factor	3.5" SubCompact Board
CPU	Intel® 8th Generation Core™ i7/i5/i3/Celeron SoC i7-8665UE (4C, 1.7GHz, up to 4.4GHz) i5-8365UE (4C, 1.6GHz, up to 4.1GHz) i3-8145UE (2C, 2.2GHz, up to 3.9GHz) 4305UE (2C, 2GHz)
CPU Frequency	Up to 4.4GHz
Chipset	8th Generation Intel® Processor SoC
Memory Type	2400 MHz Dual Channel DDR4 (Non-ECC) SODIMM x 2
Max. Memory Capacity	Up to 64GB
BIOS	UEFI
Wake on LAN	Yes
Watchdog Timer	255 Levels
Power Requirement	+9-36V (Optional: +12V)
Power Supply Type	AT/ATX
Power Consumption (Typical)	Intel® i7-8665UE, DDR4 2400 MHz 16GB, 2.8A@ +12V
Dimension (L x W)	5.75" x 4" (146mm x 101.7mm)
Operating Temperature	32°F ~ 140°F (0°C ~ 60°C)
Storage Temperature	-40°F ~ 176°F (-40°C ~ 81°C)
Operating Humidity	0% ~ 90% relative humidity, non-condensing
MTBF (Hours)	354,194
Certification	CE/FCC

## Features

- Intel® Core™ i7/i5/i3/Celeron Processor SoC
- Non-ECC DDR4 SODIMM Slot x 2, up to 64GB
- LVDS/eDP x 1 (Default: LVDS), VGA x 1, HDMI 2.0 x 1
- GbE x 2, SATA III x 1, DIO x 8bit
- USB 3.2 Gen 2 x 4 (Up to Gen 2), RS-232/422/485 x 2
- Full size mSATA/mPCIe Slot x 1 (With Nano-SIM)
- M.2 2280 B key x 1, M.2 2230 E key x 1
- Wide DC Input 9-36V (Optional: 12V Only)



Display	
VGA/LCD Controller	Intel® 8th Generation Core™ i7/i5/i3/Celeron SoC
Video Output	LVDS/eDP x 1 (Default: LVDS), VGA x 1, HDMI 2.0 x 1
Backlight inverter supply	Yes
I/O	
Ethernet	Intel® i210/i211 & i219, 10/100/1000Base, RJ 45 x2
Audio	High Definition Audio Interface
USB Port	USB 3.2 Gen 2 x 4/2.0 x 2 (Up to Gen2)
Serial Port	RS-232/422/485 x 2
Parallel Port	—
HDD Interface	SATA 3.0 x 1 +5V SATA power connector x 1
FDD Interface	—
SSD	Full size mSATA/mPCIe x 1 with NANO-SIM (mSATA as default, select by BIOS) M.2 2280 B key (PCI-e as default, SATA select by BIOS)
Expansion Slot	M.2 2230 E key x 1 (For WIFI/BT, PCIe/USB signal only) SMBUS/I2C/LPC/eSPI x 1
DIO	8 Bit
SIM	x 1 (NANO-SIM)
TPM	—
Touch	x 1

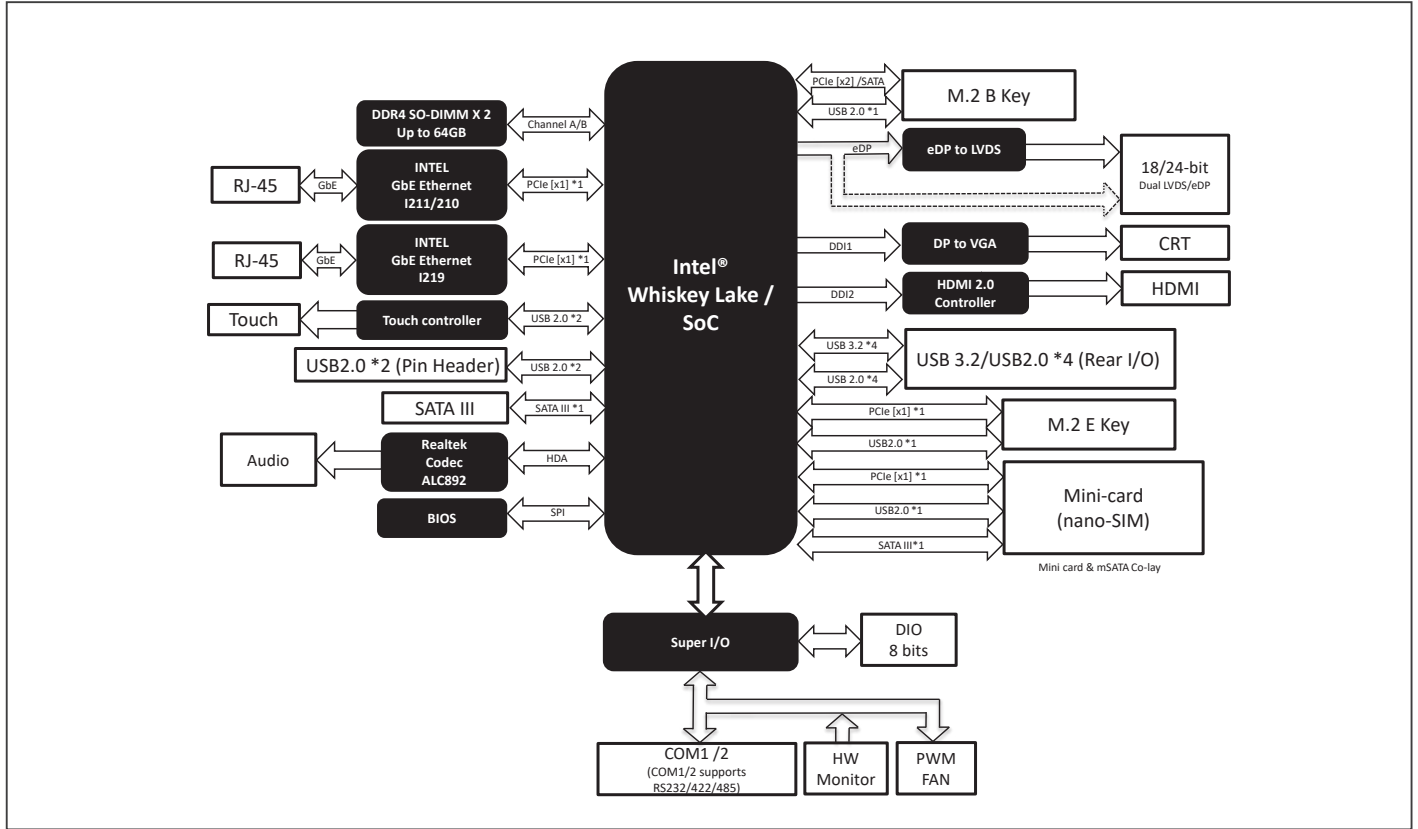
## Packing List

- GENE-WHU6 with Heatspreader

## Optional Accessories

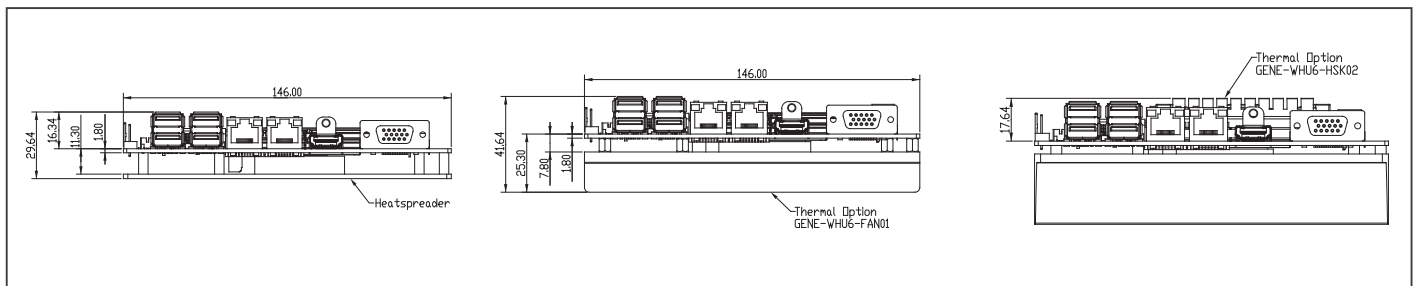
Part Number	Description	QTY
1702150155	(TF)Power Cable.15P SATA(F).2P 2.0mm Housing(PH).15cm	1
1709070500	(TF)SATA CABLE.7P Pitch 1.27mm.50cm	1
1702002010	(TF)Power CABLE.1*2P Pitch=5.0mm Housing.10cm.for PFM-945C.(12V only)	1
1709100254	(TF)PHONE JACK Cable.3P AUDIO JACK.1*10P 1.25mm HOUSING(F).25cm	1
170220020B	(TF)Power Cable.20P ATX(M).4P 5.08mm Housing(F).+3P 2.5mm Housing (XH).20cm	1
1701090150	(TF)Flat Cable.D-Sub 9(M).9P Housing.9P 1.25mm pitch Housing.15cm	2
1700050207	(TF)USB CABLE.1*5P Pitch=1.25mm Housinh.20cm.for PFM-945C	2
GENE-WHU6-FAN01	CPU Cooler.146x78.6x23.5mm.3P.3600RPM.for GENE-WHU6	1
GENE-WHU6-HSK01	Heatsink.146*101.6*32.5mm.Silver. for GENE-WHU6(for i3 & Celeron)	1
GENE-WHU6-HSK02	Heat Sink.72*28*10mm.GENE-WHU6.SODIMM DDR4	1

### Block Diagram



### Dimension

Unit: mm



### Ordering Information

Part Number	CPU	Fan/Fanless	Display	LVDS	Storage	LAN	USB	RS-232	RS-232/422/485	Expansion Slot	Power	Power Temp	Others
GENE-WHU6-A10-0001	i3-8145UE	HSP	VGA+HDMI+LVDS	18/24-bit, 2CH	SATA x 1 mSATA (Full size)x 1	GbE x 2	USB 3.2 Gen 2 x 4	—	2	M.2 2280 B Key x1 M.2 2230 E Key x1	9 ~ 36V	0°C ~ 60°C	DIO x 8, nano SIM, Touch Controller
GENE-WHU6-A10-0002	i5-8365UE	HSP	VGA+HDMI+LVDS	18/24-bit, 2CH	SATA x 1 mSATA (Full size)x 1	GbE x 2	USB 3.2 Gen 2 x 4	—	2	M.2 2280 B Key x1 M.2 2230 E Key x1	9 ~ 36V	0°C ~ 60°C	DIO x 8, nano SIM, Touch Controller
GENE-WHU6-A10-0003	i7-8665UE	HSP	VGA+HDMI+LVDS	18/24-bit, 2CH	SATA x 1 mSATA (Full size)x 1	GbE x 2	USB 3.2 Gen 2 x 4	—	2	M.2 2280 B Key x1 M.2 2230 E Key x1	9 ~ 36V	0°C ~ 60°C	DIO x 8, nano SIM, Touch Controller