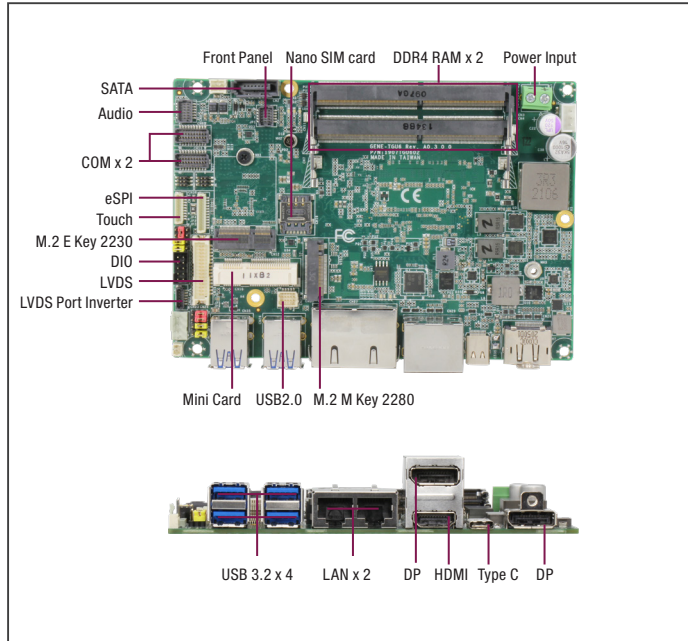


# GENE-TGU6

3.5" SubCompact Board with 11th Generation Intel® Core™ i7/i5/i3/Celeron CPU



## Features

- DDR4 SODIMM Slot x 2, up to 64GB, support IBCEC
- LVDS/eDP x 1, DP 1.4a x 2, HDMI 2.0b x 1, Type C DP x 1
- 2.5GbE x 1, GbE x 1, SATA III x 1, DIO x 8bit
- USB 3.2 Gen2 x 4, USB2.0 x 2, USB Type C x 1
- M.2 2280 M key x 1, M.2 2230 E key x 1
- Wide DC Input 9-36V (Optional: 12V Only)



INTERNAL I/O	
USB	USB2.0 x 2
SERIAL PORT	COM1, COM3, COM4 (RS232/422/485) COM2 (RS232/422/485, supports 5V/12V/RI)
VIDEO	LVDS/eDP x 1 (Default: LVDS) eDP: up to 1080P@60Hz
SATA	SATA III x 1 +5V SATA Power Connector x 1
AUDIO	Audio Header x 1
DIO/GPIO	8-Bit
SMBus/I2C	SMBus/I2C x1 (Default: SMBus)
Touch	4/5/8-wire Touch Controller x 1 (optional)
FAN	Smart Fan x1
SIM	Nano SIM x 1
Front Panel	HDD LED, PWR LED, Power Button, Buzzer, Reset
Others	—
EXPANSION	
Mini PCI-E/mSATA	Full-Sized mSATA/mPCIe x 1 (default: mSATA, select with BIOS)
M.2	M-Key 2280 x 1 (PCIe4) E-Key 2230 x 1 (PCIe, USB2.0)
Others	—
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)	329,884
EMC	CE/FCC Class A

## Specifications

SYSTEM	
FORM FACTOR	3.5" SubCompact Board
CPU	Intel® 11th Generation Core™/Celeron CPU i7-1185G7E (4C/8T, 1.80GHz, up to 4.40GHz) i5-1145G7E (4C/8T, 1.50GHz, up to 4.10GHz) i3-1115G4E (2C/4T, 2.20GHz, up to 3.90GHz) Celeron® 6305E (2C/2T, 1.80GHz)
CPU TDP	15W, TDP-up 28W: i7-1185G7E/i5-1145G7E/i3-1115G4E 15W only: Celeron® 6305E
CHIPSET	Integrated with Intel® SoC
MEMORY TYPE	DDR4 3200MHz, Dual Channel SODIMM x 2, up to 64GB, Support IBCEC (select SKUs)
BIOS	UEFI
WAKE ON LAN	Yes
WATCHDOG TIMER	255 Levels
SECURITY	TPM2.0
RTC Battery	Lithium Battery 3V/240mAh
DIMENSION (L X W)	5.75" x 4" (146mm x 101.7mm)
POWER	
POWER REQUIREMENT	+9-36V (Optional: +12V)
POWER SUPPLY TYPE	AT/ATX
CONNECTOR	Phoenix 2-pin Connector
POWER CONSUMPTION	Intel® i7-1185G7E, DDR4 3200MHz 32GB x2, 4.96A@ +12V(TYPICAL) Intel® i7-1185G7E, DDR4 3200MHz 32GB x2, 7.32A@ +12V(MAX)
DISPLAY	
CONTROLLER	Intel® Iris® Xe Graphics Intel® UHD Graphics
LVDS/eDP	LVDS Dual Channel 18/24bit x 1 (Option: eDP1.4b)
Display Interface	HDMI 2.0b x 1, DP1.4a x 2, Type C DP1.4 x 1
Multiple Display	Up to 4 Simultaneous Displays
AUDIO	
CODEC	Realtek ALC897/892
AUDIO INTERFACE	Line-in/Line-out/MIC
Speaker	—
EXTERNAL I/O	
ETHERNET	Intel® i219LM, 10/100/1000Base, RJ-45 x1 Intel® i225LM, 10/100/2500Base, RJ-45 x1
USB	USB3.2 Gen 2 x 4 USB3.2 Gen 2 Type C x 1 (PD 5V/3A)
SERIAL PORT	—
VIDEO	HDMI 2.0b x 1, DP1.4a x 2, Type C DP1.4 x 1

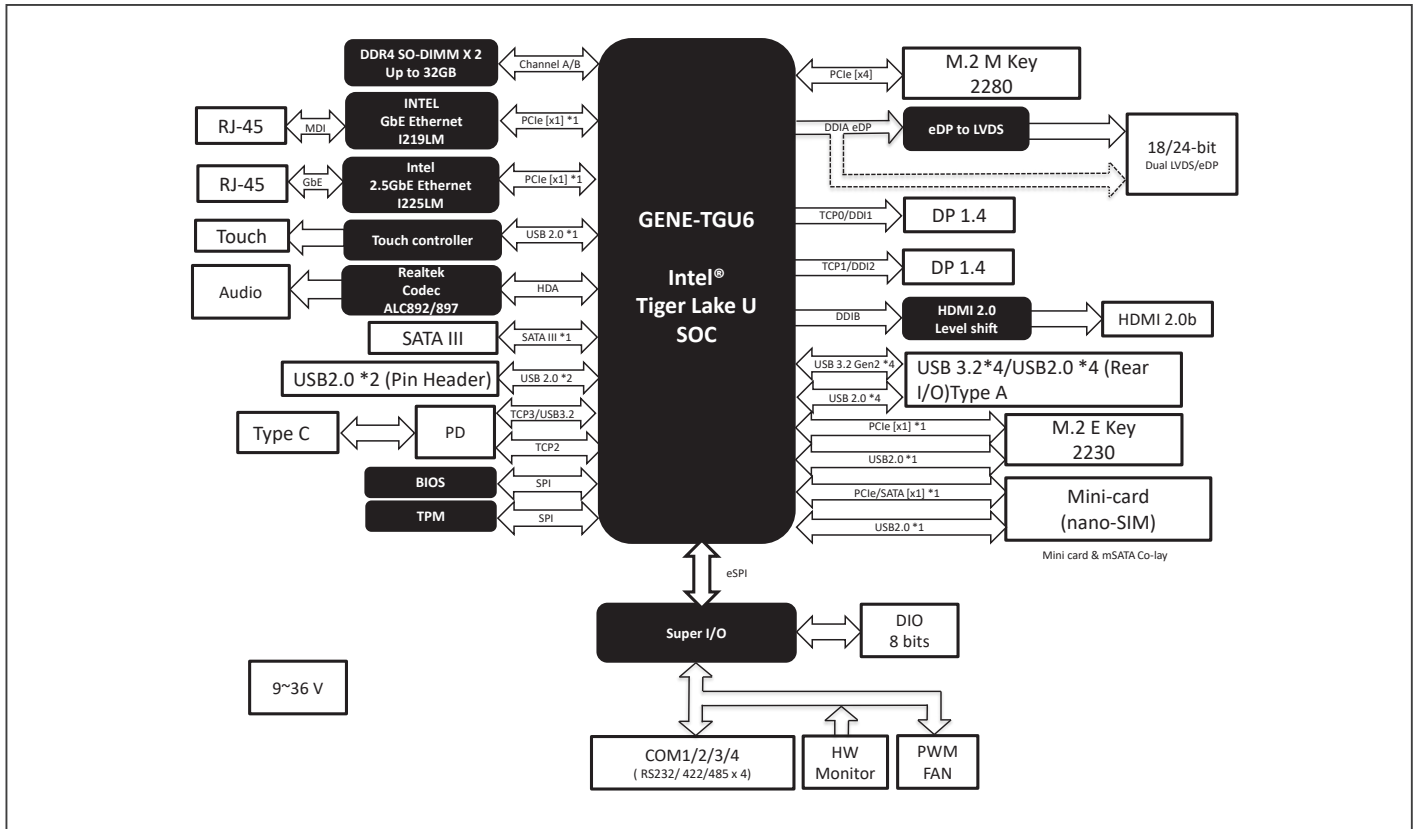
## Optional Accessories

Part Number	Description	QTY per Board
1702150155	SATA HDD Power, Cable 15cm	1
170204010R	Power Cable, 10cm	1
170X000156	Audio Cable, 25cm	1
170X000231	COM Port Cable, 30cm	2
170010010D	USB 2.0 Cable, 10cm	1
GENE-TGU6-FAN01	CPU Cooler.3600RPM.Smart FAN	1
GENE-TGU6-HSK01	Heatsink	1
GENE-TGU6-HSP01	HeatSpreader	1

## Packing List

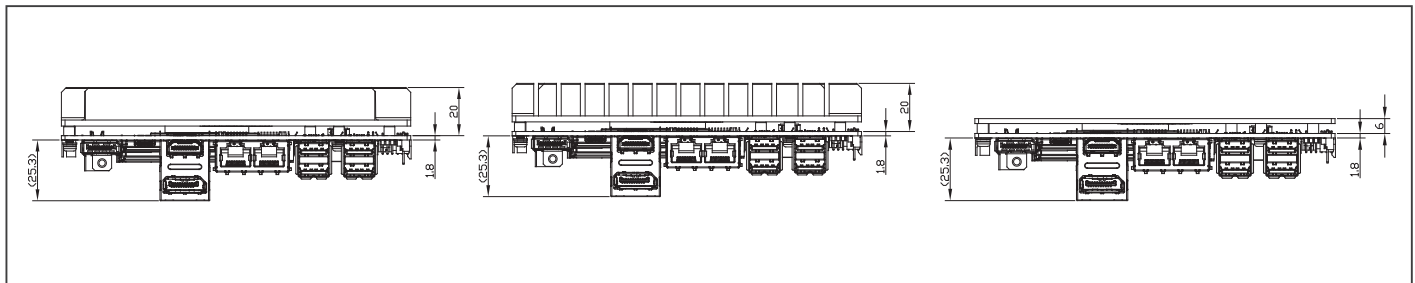
Part Number	Description	QTY
GENE-TGU6	GENE-TGU6 MB	1

## Block Diagram



## Dimension

Unit: mm



## Ordering Information

Part Number	CPU	Display	LAN	USB	RS-232/422/485	Storage	Expansion Slot	TPM	Power	Operating Temp	Others
GENE-TGU6-A10-0001	i7-1185G7E	DP x2 TypeC DP x1 DHMI x1 LVDS x1	GbE x 1 2.5GbE x1	USB 3.2 Gen2 2 x 4 USB 3.2 Gen2 TypeC x1 USB 2.0 x 2	4	SATA x 1 mSATA (Full size)x 1	M.2 M Key 2280 PCIeX4 x1 M.2 E Key 2230 x1	2.0	9~36V	0°C ~ 60°C	DIO x 8, nano SIM, Touch Controller
GENE-TGU6-A10-0002	i7-1185G7E	DP x2 TypeC DP x1 DHMI x1 LVDS x1	GbE x 1 2.5GbE x1	USB 3.2 Gen2 2 x 4 USB 3.2 Gen2 TypeC x1 USB 2.0 x 2	4	SATA x 1 mSATA (Full size)x 1	M.2 M Key 2280 PCIeX4 x1 M.2 E Key 2230 x1	—	12V	0°C ~ 60°C	DIO x 8, nano SIM
GENE-TGU6-A10-0003	i5-1145G7E	DP x2 TypeC DP x1 DHMI x1 LVDS x1	GbE x 1 2.5GbE x1	USB 3.2 Gen2 2 x 4 USB 3.2 Gen2 TypeC x1 USB 2.0 x 2	4	SATA x 1 mSATA (Full size)x 1	M.2 M Key 2280 PCIeX4 x1 M.2 E Key 2230 x1	2.0	9~36V	0°C ~ 60°C	DIO x 8, nano SIM, Touch Controller
GENE-TGU6-A10-0004	i5-1145G7E	DP x2 TypeC DP x1 DHMI x1 LVDS x1	GbE x 1 2.5GbE x1	USB 3.2 Gen2 2 x 4 USB 3.2 Gen2 TypeC x1 USB 2.0 x 2	4	SATA x 1 mSATA (Full size)x 1	M.2 M Key 2280 PCIeX4 x1 M.2 E Key 2230 x1	—	12V	0°C ~ 60°C	DIO x 8, nano SIM
GENE-TGU6-A10-0005	i3-1115G4E	DP x2 TypeC DP x1 DHMI x1 LVDS x1	GbE x 1 2.5GbE x1	USB 3.2 Gen2 2 x 4 USB 3.2 Gen2 TypeC x1 USB 2.0 x 2	4	SATA x 1 mSATA (Full size)x 1	M.2 M Key 2280 PCIeX4 x1 M.2 E Key 2230 x1	2.0	9~36V	0°C ~ 60°C	DIO x 8, nano SIM, Touch Controller
GENE-TGU6-A10-0006	i3-1115G4E	DP x2 TypeC DP x1 DHMI x1 LVDS x1	GbE x 1 2.5GbE x1	USB 3.2 Gen2 2 x 4 USB 3.2 Gen2 TypeC x1 USB 2.0 x 2	4	SATA x 1 mSATA (Full size)x 1	M.2 M Key 2280 PCIeX4 x1 M.2 E Key 2230 x1	—	12V	0°C ~ 60°C	DIO x 8, nano SIM