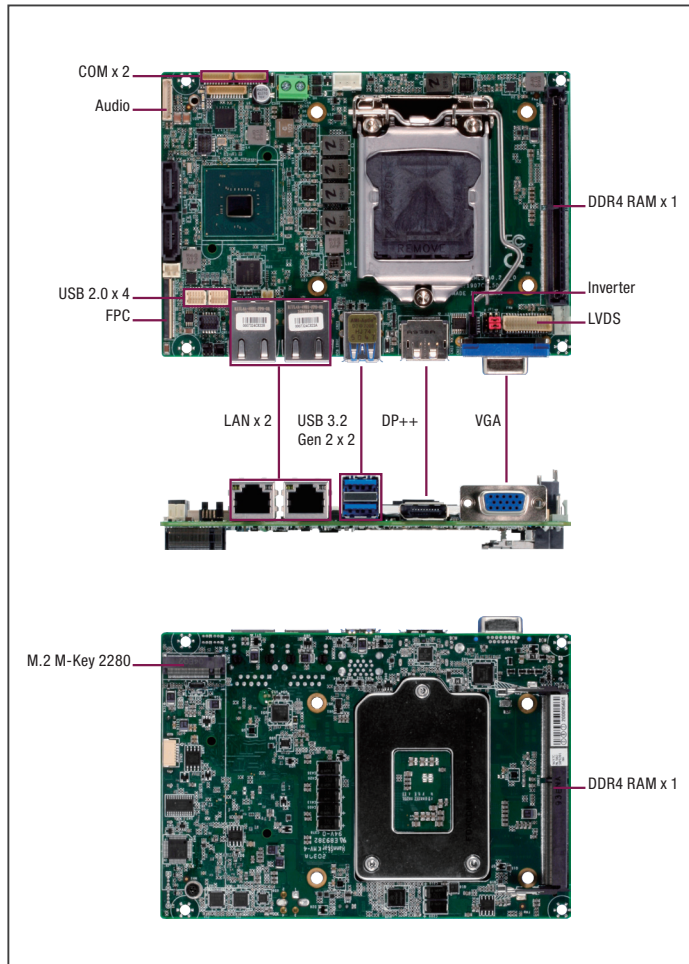


3.5" SubCompact Board with 10th Generation Intel® Core™ i7/i5/i3/Pentium®/Celeron® Processor SoC



Features

- Intel® Core™ i7/i5/i3/Pentium®/Celeron® Processor SoC
- Non-ECC DDR4 SODIMM Slot x 2, up to 64GB
- DP++ x 1, VGA x 1, LVDS x 1
- GbE x 2, SATA III x 2, DIO x 8bit
- USB 3.2 Gen 2 x 2 (Rear I/O), USB 2.0 x 4 (Pin header)
- RS-232/422/485 x 2
- M.2 M Key 2280 PCIe[x4]/SATA[x1] x 1
- PCIe[x4] x 1 (through Flexible Printed Circuit interface, Q470/Q470E only)



Backlight Inverter supply	Max 12V, 2A
I/O	
Ethernet	Intel® i210/i211,10/100/1000Base, RJ45 x1 Intel® i219,10/100/1000Base, RJ45 x1 (Support Vpro only with i5/i7 + Q470/Q470E variant)
Audio	High Definition Audio Interface,Line-in/Line-out/MIC
USB Port	USB3.2 Gen 2 x 2 (Rear I/O, Gen 2 for Q470/Q470E only) USB2.0 x 4 (Pin header)
Serial Port	RS-232/422/485 x 2
Parallel Port	—
HDD Interface	—
FDD Interface	—
SSD	SATA 3.0 x 2 SATA power connector x 1 (+5V)
Expansion Slot	M.2 M Key 2280 PCIe[x4]/SATA[x1] x 1 PCIe[x4] x 1 (through Flexible Printed Circuit interface, Q470/Q470E only) I2C, SMBUS (Default as I2C, SMBUS selected by board)
DIO	8bit
SIM	—
TPM	TPM 2.0
Touch	—
Others	—

Specifications

System	
Form Factor	3.5" SubCompact Board
CPU	Intel® 10th Generation Core™ i7/i5/i3/Pentium/Celeron SoC i7-10700TE (8C, 2.0 GHz, up to 4.4 GHz) i5-10500TE (6C, 2.3 GHz, up to 3.7 GHz) i3-10100TE (4C, 2.3 GHz, up to 3.6 GHz) G6400TE (2C, 3.2 GHz) G5900TE (2C, 3.0 GHz)
CPU Frequency	Up to 4.4GHz
Chipset	Intel® Q470E / H420E / Q470
Memory Type	DDR4 2933/2666/2400 MHz SODIMM x 2 (Dual Channel ,Non-ECC)
Max. Memory Capacity	Up to 64GB
BIOS	AMI UEFI
Wake on LAN	Yes
Watchdog Timer	255 Levels
Power Requirement	+12V
Power Supply Type	AT/ATX (Default: AT)
Power Consumption (Typical)	Intel® i7-10700TE, DDR4 3200Mhz 32GB, 4.47A at +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% @ 40°C, non-condensing
MTBF (Hours)	380,571
Certification	CE/FCC Class A
Display	
VGA/LCD Controller	Chrontel CH7517A
Video Output	DP++ x 1 VGA x 1 LVDS x 1

Packing List

- CPU Cooler (TH1CML5010) x 1
- CPU Cooler Backplate (TH6CML5010) x 1
- Screw Kit (9767ECD001) x 1
- GENE-CML5 x 1

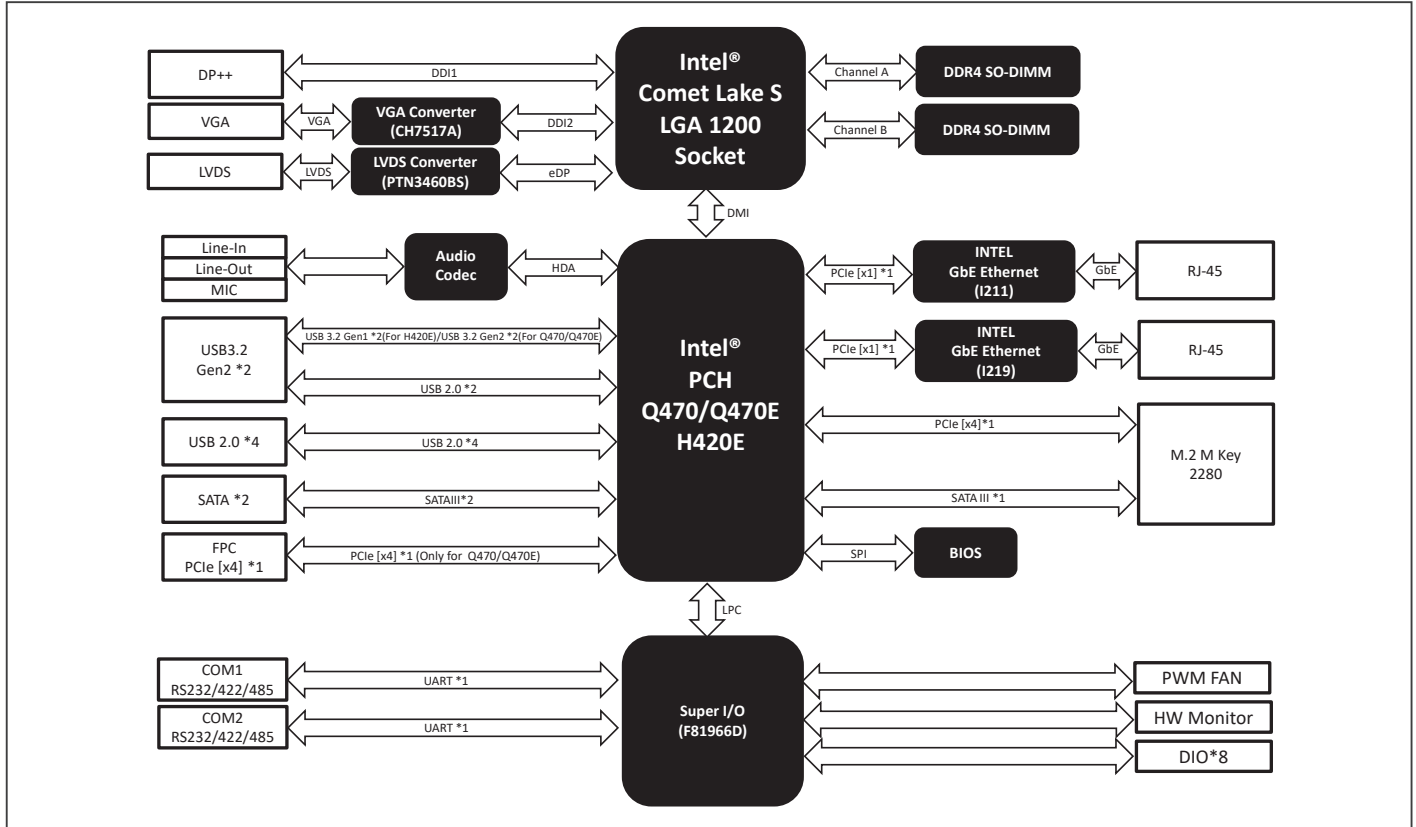
Optional Accessories

Part Number	Description	QTY
1709070460	(TF)SATA CABLE.7P Pitch 1.27mm.46cm.W/LOCK	2
1702150155	(TF)Power Cable.15P SATA(F).2P 2.0mm Housing(PH).15cm	1
170010010D	(TF)USB Cable.2*5P.Pitch=1.0mm Housing.Dual USB A type.10cm.	2
1701090122	(TF)Flat Cable.D-Sub 9P(M).9P 1.0mm Housing.12cm	2

CPU Support Chart

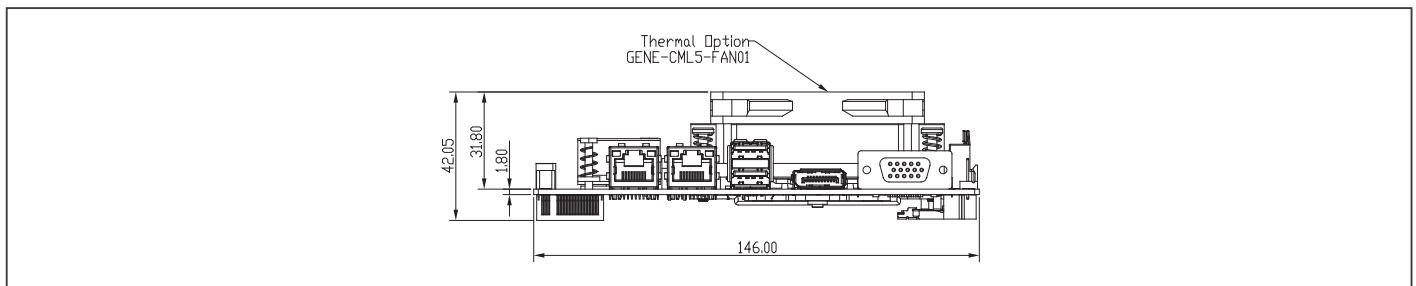
CPU	Base Frequency/ Turbo Boost GHz	Core/ Thread	Last Level Cache	TDP	Graphic
i7-10700TE	2.0/4.4	8/16	16M	35W	UHD Graphics 630
i5-10500TE	2.3/3.7	6/12	15M	35W	UHD Graphics 630
i3-10100TE	2.3/3.6	4/8	6M	35W	UHD Graphics 630
G6400TE	3.2	2/4	4M	35W	UHD Graphics 610
G5900TE	3.0	2/2	2M	35W	UHD Graphics 610

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-CML5-A10-0001 (Q470E)	FCLGA1200 (Socket Type)	Cooler	DP++ x 1, VGA x 1, LVDS x 1	18/24-bit, 2CH	SATA x 2	GbE x 2	USB 3.2 Gen 2 x 2 USB 2.0 x 4	—	2	M.2 2280 M Key x 1	12V	0°C ~ 60°C	DIO x 8, TPM 2.0
GENE-CML5-A10-0002 (H420E)	FCLGA1200 (Socket Type)	Cooler	DP++ x 1, VGA x 1, LVDS x 1	18/24-bit, 2CH	SATA x 2	GbE x 2	USB 3.2 Gen 1 x 2 USB 2.0 x 4	—	2	M.2 2280 M Key x 1	12V	0°C ~ 60°C	DIO x 8, TPM 2.0