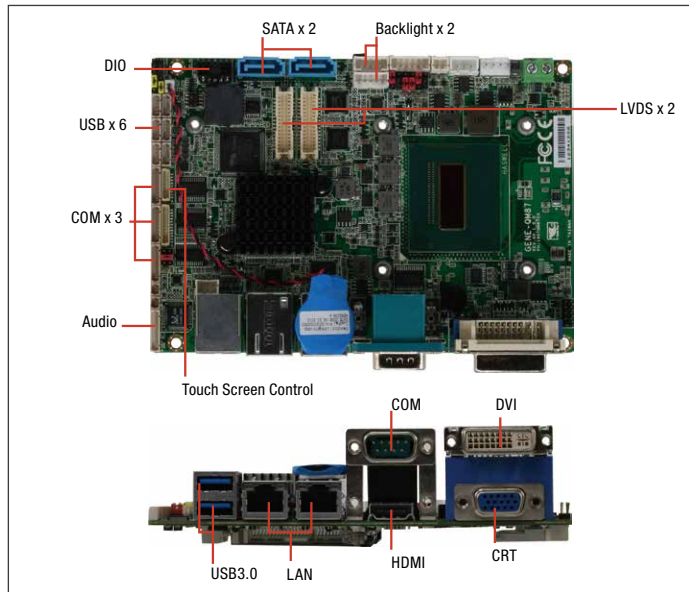


3.5" SubCompact Board with Onboard Intel® 4th Generation Core™ i5-4402E Mobile Processor



Features

- Onboard Intel® 4th Generation Core™ i5-4402E Processor
- Intel® QM87
- DDR3L 1333/1600 MHz SODIMM x 1, Up to 8 GB
- Gigabit Ethernet, RJ-45 x 2
- CRT, DVI, 18/24-bit Dual-Channel LVDS LCD x 2, HDMI
- 2CH HD Audio
- SATA 6.0 Gb/s x 2 (RAID by BIOS), CFAST™ x 1
- USB3.0 x 2, USB2.0 x 6, COM x 4, 8-bit Digital I/O
- Mini-Card x 1
- +12V Only Operation
- Supports iAMT with Intel® QM87
- Onboard 4/5/8-wire Resistive Touch Screen Controller
- mSATA x 1 (Optional, Would Replace Mini-PCIe with Jumper Setting)
- IEEE 1588 Compatible

Specifications

System	
Form Factor	3.5" SubCompact Board
CPU	Onboard Intel® 4th Generation Core™ i5-4402E Processor
CPU Frequency	Up to 2.7GHz
Chipset	Intel® PCH QM87
Memory Type	DDR3L 1333/1600, SODIMM x 1
Max. Memory Capacity	8 GB
BIOS	SPI type
Wake on LAN	Yes
Watchdog Timer	255 Levels
Power Requirement	+12V
Power Supply Type	AT/ ATX
Power Consumption (Typical)	Intel® Core™ i5-4402E 1.6 GHz, DDR3L 1600 8GB 2.73A@+12V
Dimension (L x W)	5.75" x 4" (146mm x 101.7mm)
Operating Temperature	32°F ~ 140°F (0°C ~ 61°C)
Storage Temperature	-40°F ~ 176°F (-40°C ~ 81°C)
Operating Humidity	0% ~ 91% relative humidity, non-condensing
MTBF (Hours)	105,000
Certification	CE/FCC
Display	
VGA/LCD Controller	Intel® Haswell BGA integrated
Video Output	CRT+LVDS, CRT+HDMI, LVDS+DVI, LVDS+HDMI, DVI+HDMI, LVDS+LVDS (Real I/O as GENE-QM77 Rev.B)
Backlight inverter supply	Up to 24-bit dual-channel LVDS x 2
I/O	
Ethernet	Intel® I211AT, I217LM, Intel® I210 10/100/1000Base-TX x2
Audio	High Definition Audio Interface
USB Port	USB2.0 x 6, USB3.0 x 2
Serial Port	RS-232 x 3, RS-232/422/485 x 1
Parallel Port	—
HDD Interface	SATA 3.0 (6Gbps) x 2
FDD Interface	—
SSD	CFAST™ mSATA (share with Mini-Card by jumper)
Expansion Slot	Mini-Card x 1
DIO	8 bit
TPM	x 1
Touch	x 1



Packing List

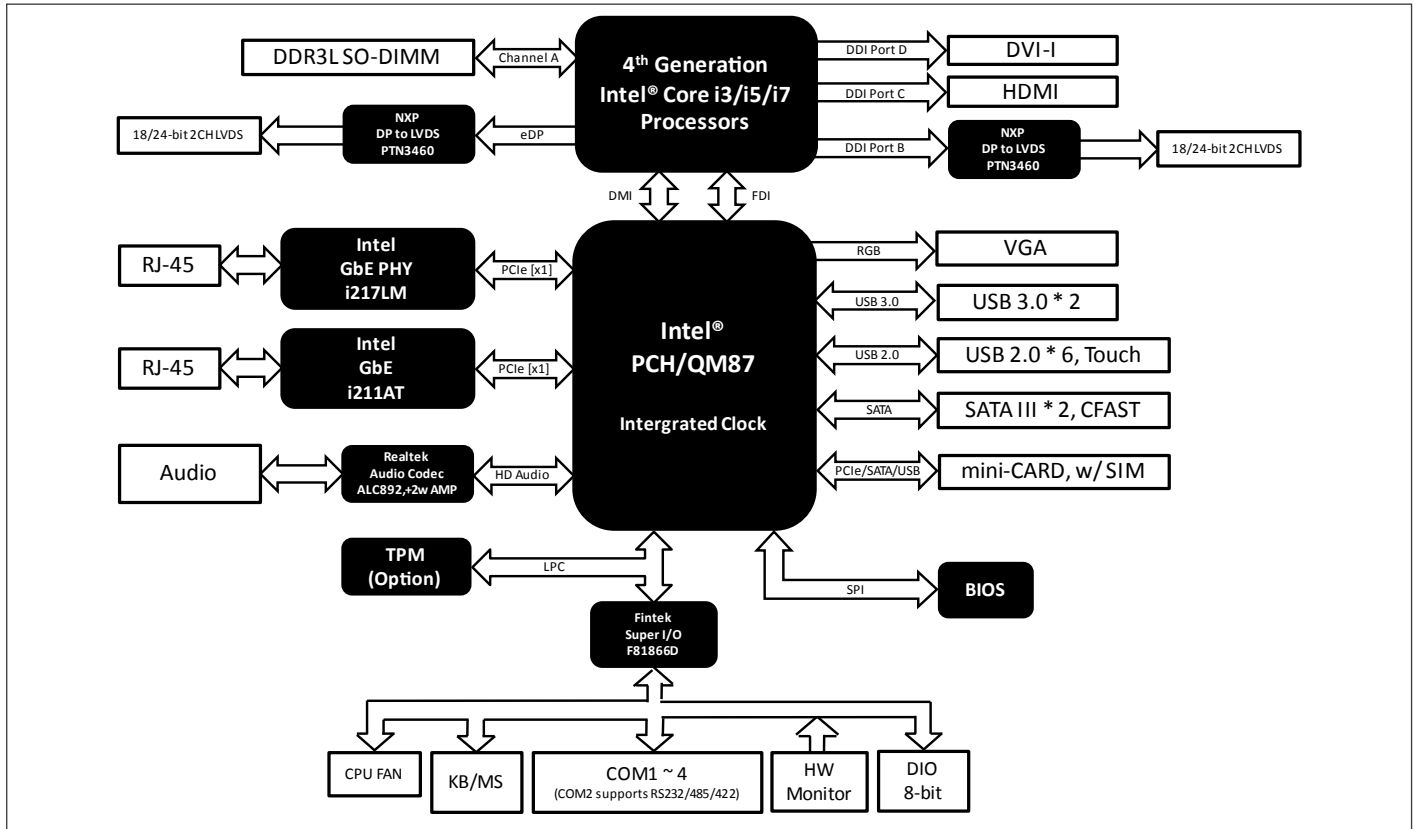
- 170204010R
Power Cable
- Product DVD
- GENE-QM87 with Active Cooler

Optional Accessories

- 1700050207
USB Cable, Length 20cm
- 1701090150
COM Port Cable, Length 15cm
- 1709100254
Audio Cable, Length 25cm
- 1702150155
Power Cable for 2.5" SATA Hard Disk, Length 15cm
- 1709070500
SATA Cable, Length 50cm
- 1700060157
Keyboard/Mouse Cable
- 17592QM774
CPU Cooler 47W FAN + Heatsink, 60 x 60 x 25 mm (1U)

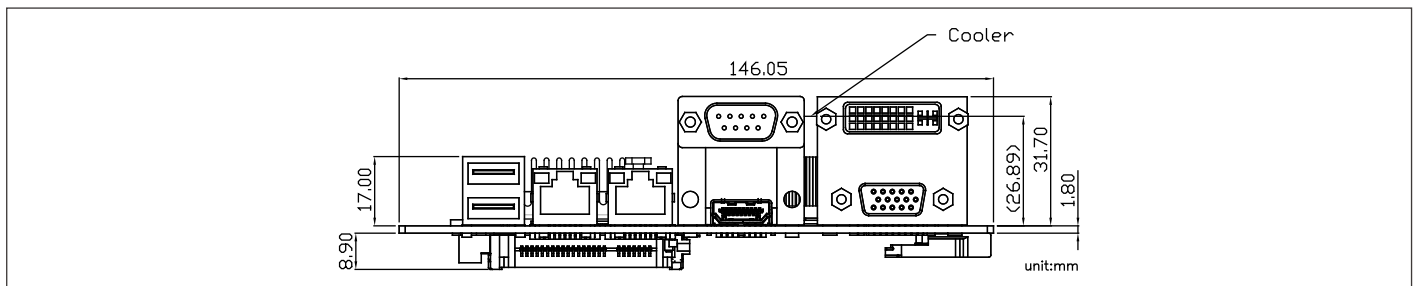
GENE-QM87

Block Diagram



Dimension

Unit: mm



Ordering Information

Part Number	CPU	Chipset	Fan/Fanless	Display	LVDS	Storage	LAN	USB	RS-232	RS-232/422/485	Expansion Slot	Power	Power Temp	Others
GENE-QM87-A10	Intel®i5-4402E	Intel® QM87	Fan	CRT + LVDS CRT + DVI CRT + HDMI DVI + LVDS DVI + HDMI LVDS + HDMI LVDS + LVDS	1st 18/24b, 2CH 2nd 18/24b, 2CH	SATA x 2 CFast™ x 1	GbE x 2	USB3.0 x 2 USB2.0 x 6	3	1	Mini-Card x 1	+12V, AT/ATX	0°C ~ 60°C	TPM, SIM, Touch Controller, DIO x 8
GENE-QM87-A10-01	Intel®i5-4402E	Intel® QM87	Fan	CRT + LVDS LVDS + HDMI LVDS + HDMI	1st 18/24b, 2CH	SATA x 2	GbE x 2	USB3.0 x 2 USB2.0 x 6	3	1	Mini-Card x 1	+12V, AT/ATX	0°C ~ 60°C	SIM, DIO x 8