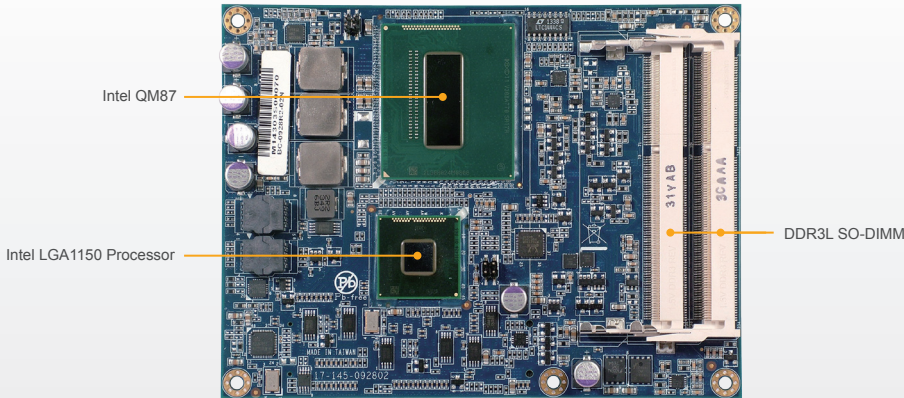


COM Express Intel® 4th Gen. Core™ i7/i5/i3 CPU Module



Features

- COM Express Type 6 Pin out
- Intel® 4th Gen. i7/i5/i3 CPU (LGA 1150) on board
- Equipped with Intel® Mobile QM87 Chipset
- Memory supports DDR3L 1600/1333 MHz SO-DIMM up to 16GB
- Support Giga LAN, SATA 6Gb/s, USB3.0, USB2.0
- One PCIe(16x), Seven PCIe(1x)
- Display: 1 x VGA, 1 x LVDS, 3 x Display Port

Specifications

System

CPU Support	Intel® 4th Gen. Core™ i7/ i5/ i3 Processor
CPU Frequency	I7-4700EQ - 47W(4C), 2.4 GHz (Turbo 3.4GHz) I5-4400E - 37W(2C), 2.7 GHz (Turbo 3.3GHz) I3-4102E - 25W(2C), 1.6 GHz (no Turbo)
Chipset	Intel® QM87
DRAM	2 x 204-Pin SO-DIMM, Support dual channel memory DDR3/3L1600/1333 MHz up to 16GB
BIOS	AMI
Watchdog	1~255 sec Watchdog timer selectable
Power Supply	Support ATX power
Power Consumption	+5V:0.72A ; +12V: 1.63A ; 3.3V:0.32A ; +5VSB:0.18A
Dimension	95 mm x 125 mm (3.74" x 4.92")
Certificate	FCC / CE
OS Support	Windows 8(32/64-bit), Windows 7(32/64-bit)

I/O Ports

Pin out	PICMG COM.0 Type 6
SATA Interface	2 x S-ATA III (6Gb/s) 2 x S-ATA II (3Gb/s)
Serial Port	2 x COM (TX/RX)
Expansion BUS	1 x PCIe (16x) 7 x PCIe (1x) LPC bus, SMBus, I2C(user)
LAN	Single Port, Intel i217LM 10/100/1000 GbE
USB	4 x USB 3.0 8 x USB 2.0
GPIO	4 in / 4 out
Super I/O	Supported on Carrier Board(NCT6102D)
Audio	Supported on Carrier Board(ACL888S)
TPM	Supported on Carrier Board with external Protech TPM Module(BR-4010)

Display

Graphics	Build-in processor, share memory Support 1 x VGA 1 x LVDS(Single/Dual Channel 18/24-bit) 3 x Display port
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*Discrete graphic card is necessary for display if the chosen CPU doesn't have integrated graphics support.

Environment

Operation Temp.	0° ~ 60° C (32° ~ 140° F)
Storage Temp.	- 40° ~ 85° C (- 40° ~ 185° F)
Humidity	Operation humidity 20 ~ 90%, storage humidity 20 ~ 95%

*All information contained in this document is subject to change without prior notice. Please log on www.protech.com.tw to acquire latest information.

Ordering Information

Order No	Description
BC-0928RA-00P	COM Express Type6, QM87+ i7-4700EQ CPU w VGA/ LVDS/ 3 DP/ LAN/ 4 SATA/ 8USB/ 2COM
BC-0928RA-01P	COM Express Type6, QM87+ i5-4400E CPU w VGA/ LVDS/ 3 DP/ LAN/ 4 SATA/ 8USB/ 2COM
BC-0928RA-02P	COM Express Type6, QM87+ i3-4102E CPU w VGA/ LVDS/ 3 DP/ LAN/ 4 SATA/ 8USB/ 2COM
BC-0928RA-03P	COM Express Type6, QM87+i3-4102E CPU w VGA/ LVDS(1024x768)/ 3 DP/ LAN/ 4 SATA/ 8USB/ 2COM

Packing List

Part No	Description
10-611-00200023	Jumper (2.0mm)
81-002-10000001	Heat spreader
50-099-09280000	Quick Guide Driver CD

Ordering Accessories

Part No	Description
BC-0230RA-00P	COM Express Type6 Carrier Board
BB-H002RA-00S	BC-0928 Heatsink
BB-H002RA-01F	BC-0928 Heatsink + FAN
BR-4010RA-00P	TPM Module