

# CEM880

COM Express Type 6 Basic Module with 5th Gen Intel® Core™ i7, 4th Gen Intel® Core™ i7/i5/i3, and Celeron® Processor and Intel® QM87

## Features

- 5th gen Intel® Core™ i7 (Broadwell) & 4th gen Intel® Core™ i7/i5/i3 & Celeron® processor (Haswell/Haswell Refresh)
- Intel® QM87 chipset
- Onboard 4GB DDR3L (optional) and 1 DDR3L SO-DIMM up to 8GB
- Max. up to 24 lanes of PCIe
- 4 SATA-600 with RAID 0/1/5/10
- 4 USB 3.0
- TPM 1.2 supported

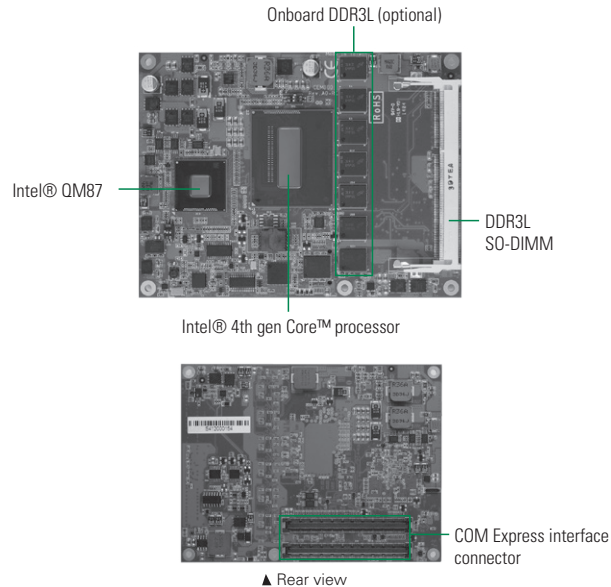


### Core System

CPU	Intel® Core™ processor (Broadwell): i7-5700EQ (47W), i7-5850EQ (47W) & Intel® Core™ processor (Haswell/Haswell Refresh): i7-4700EQ (47W), i5-4422E (25W), i3-4110E (37W), Celeron® 2000E (37W)
System Memory	1st bank as on-board extended temperature DDR3L chips up to 4GB (optional) 1 x 204-pin SO-DIMM supports DDR3L, up to 8GB
Chipset	Intel® QM87
BIOS	AMI uEFI (Legacy free)
Watchdog Timer	255 levels, 1 ~ 255 sec. or min.
Expansion Interface	1 x PCIe x16 Gen 3.0 8 x PCIe lanes (7 x lanes while internal LAN is connected)
Battery Lithium	N/A
Power Input	ATX: +12V, +5VSB AT: +12V
Size	125 x 95 mm
Board Thickness	2.0 mm
Temperature	-40°C ~ +85°C (-40°F ~ +185°F), operation
Operation Humidity	10% ~ 95% relative humidity, non-condensing

### I/O

MIO	1 x LPC interface 1 x SPI interface
SATA	4 x SATA-600, support Intel® Rapid Start Technology Intel® Smart Response Technology
Hardware Monitoring	Yes
Ethernet	1 port as 10/100/1000 Mbps supports Wake-on-LAN, PXE Boot ROM with Intel® i218LM
Audio	HD link interface to baseboard for Codec
USB	8 x USB 2.0 and 4 x USB 3.0
TPM	TPM 1.2
SMBus	Yes
Digital I/O	4 channels IN & 4 channels OUT



### Display

Chipset	Intel® Iris Pro Graphic 6200 (i7-5850EQ) Intel® HD Graphic 5600 (i7-5700EQ) Intel® HD Graphic 4600 (i7-4700EQ) Intel® InTru™ 3D, Intel® Quick Sync Video 2.0, Intel® Clear Video HD Technology Gfx APIs - DX11.2, OCL1.1, OGL 4.3 3 independent displays
Memory Size	DVMT Gfx physical memory up to 256 MB DVMT Gfx pre-allocated memory up to 1024 MB
Display Interface	1 x VGA 1 x LVDS; 18/24-bit single/dual channel 3 x DDI (DP, HDMI, DVI)

### Packing List

Quick installation guide, user's manual/utility CD

### Ordering Information

Standard	
CEM880PVG-i7-4700EQ (P/N: E38D880100)	COM Express Type 6 basic module with Intel® Core™ i7-4700EQ 2.4 GHz, VGA/LVDS/DDI, GbE LAN, USB 3.0 and TPM
CEM880PVG-i5-4422E (P/N: E38D880103)	COM Express Type 6 basic module with Intel® Core™ i5-4422E 1.8 GHz, VGA/LVDS/DDI, GbE LAN, USB 3.0 and TPM
CEM880PVG-i3-4110E (P/N: E38D880104)	COM Express Type 6 basic module with Intel® Core™ i3-4110E 2.6 GHz, VGA/LVDS/DDI, GbE LAN, USB 3.0 and TPM
CEM880PVG-CEL-2000E (P/N: E38D880105)	COM Express Type 6 basic module with Intel® Celeron® 2000E 2.2 GHz, VGA/LVDS/DDI, GbE LAN, USB 3.0 and TPM
CEM880PVG-i7-5850EQ (P/N: E38D880107)	COM Express Type 6 basic module with Intel® Core™ i7-5850EQ 2.7 GHz, VGA/LVDS/DDI, GbE LAN, USB 3.0 and TPM
CEM880PVG-i7-5700EQ (P/N: E38D880108)	COM Express Type 6 basic module with Intel® Core™ i7-5700EQ 2.6 GHz, VGA/LVDS/DDI, GbE LAN, USB 3.0 and TPM
Optional	
CEM94011 (P/N: E394011100)	ATX form factor Type 6 evaluation board
TS001-CEM880 (P/N: E39J001100)	High profile heat sink with fan (L=95 mm, W=125 mm, H=27 mm)
TS002-CEM880 (P/N: E39J002100)	Low profile heat sink with fan (L=95 mm, W=125 mm, H=20 mm)
TS003-CEM880 (P/N: E39J003100)	High profile heat sink without fan (L=95 mm, W=125 mm, H=27 mm)
TS004-CEM880 (P/N: E39J004100)	Heat spreader for CEM880

**Block Diagram**

