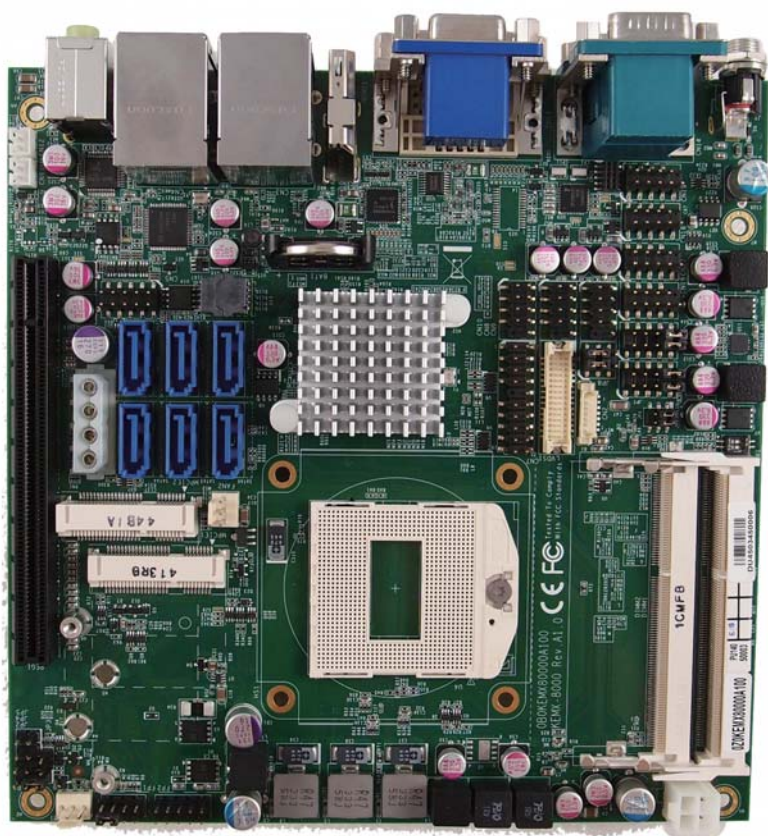


KEMX-8000 Series

Standard / Extended Temperature
Industrial Motherboard in Mini-ITX form factor
with Intel® Haswell M Series Processors



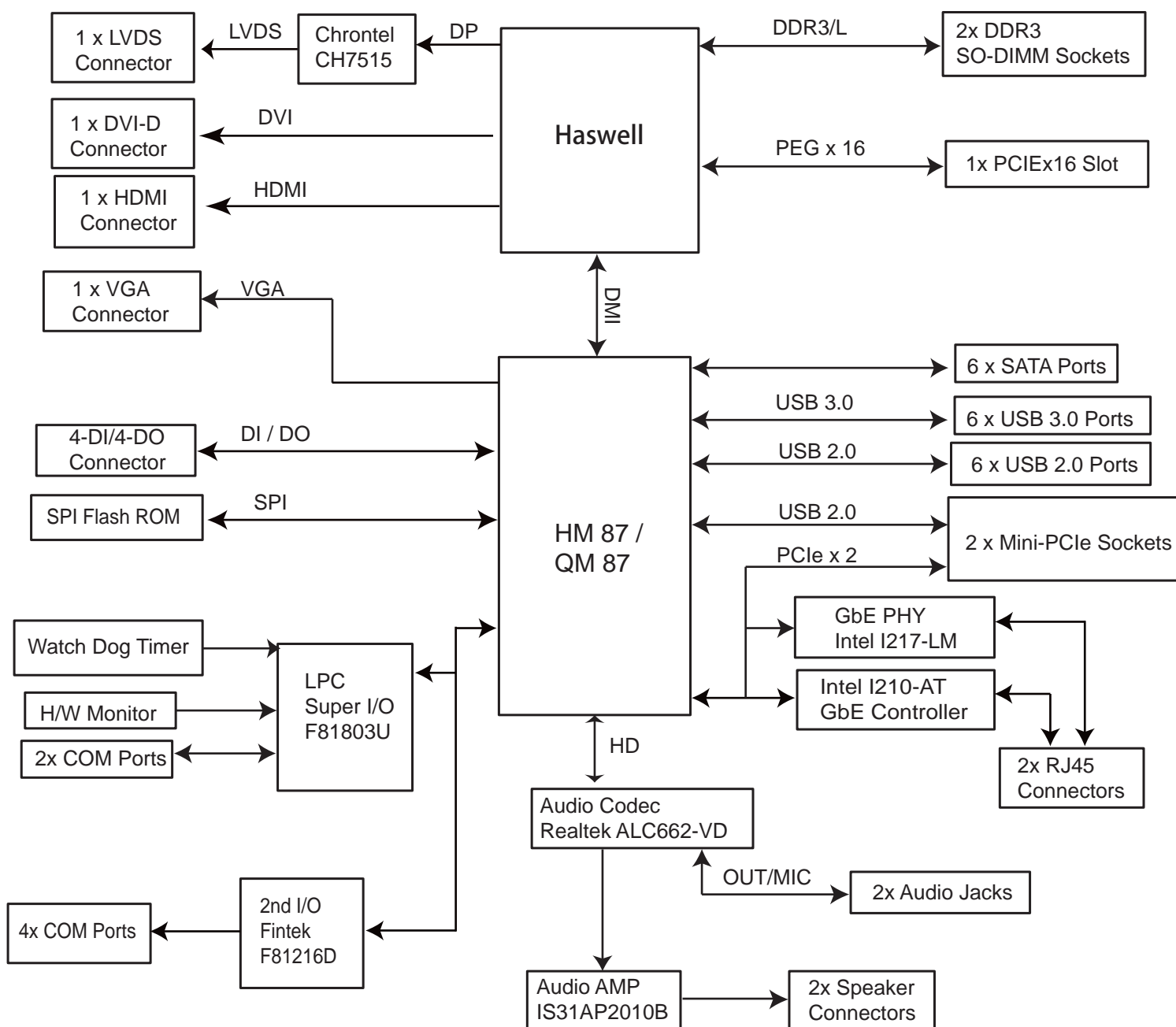
- Intel® Haswell M Series Processor
- Intel® QM87 Express Chipset
- 1x VGA, 1x HDMI, 1x DVI-D and 1x LVDS (18/24/30-bit, 1/2/4-ch)
- 2x DDR3/L SO-DIMM Sockets
- 2x mPCIe Socket (1x shared with mSATA)
- 6x SATA, 6x USB 3.0, 6x USB 2.0 and 6x COM
- 2x GbE, DIO support
- RAID support
- Extended temperature model available: -20°C ~ 70°C

Product Overview

The KEMX-8000 Series is a Mini-ITX form factor industrial motherboard combining Intel® Haswell Processor with the high integration of the Intel® QM87 chipset. Featured are 2x DDR3/L SO-DIMM, LVDS, HDMI, DVI-D, VGA, 2x Gigabit Ethernet, 6x SATA, 6x USB3.0, 2x Mini PCIe Sockets, 1x mSATA socket, 6x COM ports, HD audio and DIO.

The KEMX-8000 Series is a compact, high performance industrial motherboard that is ideal for a variety of applications. Finally, an extended temperature model is offered to allow operation under extreme high, low or radically fluctuating temperatures.

Block Diagram

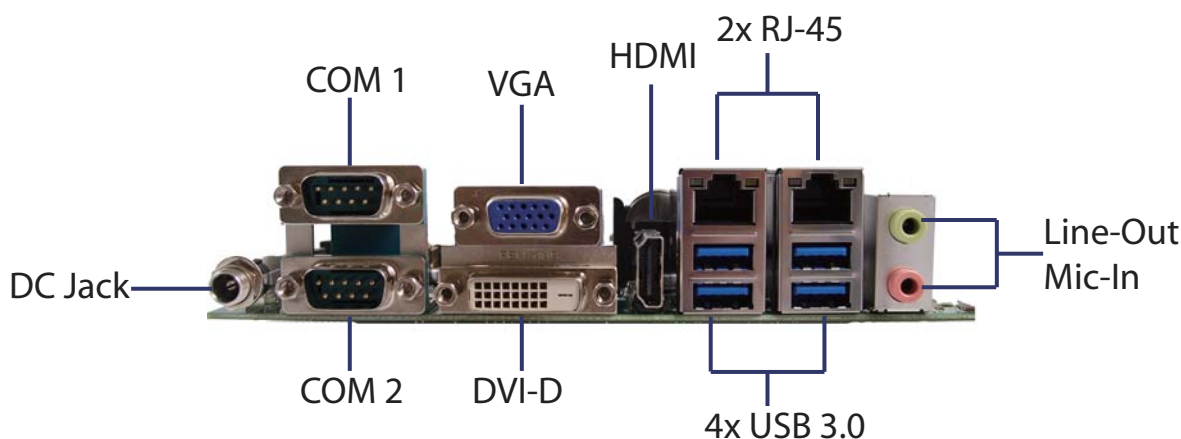


Technical Information

CPU Support
Socket G3 (FCPGA946) 4th Gen. Intel® Core™ i / Celeron® Processor (Dual / Quad Core, 2M ~ 8M Cache, 2.00 ~ 3.90 GHz, 37W ~ 57W TDP)
Chipset
Intel® QM87
Memory
2x DDR3/L 1333/1600 SO-DIMM up to 16GB
Graphic Controller
Intel® HD Graphics 4600 / 4400 (Core™ i) Intel® HD Graphics (Celeron®)
Display Interfaces
1x LVDS (18/24/30-bit, 1/2/4-ch, 1920 x 1200 @ 60Hz) 1x HDMI (on rear, 2560 x 1600 @ 60Hz) 1x DVI-D (on rear, 1920 x 1200 @ 60Hz) 1x VGA (on rear, 1920 x 1200 @ 60Hz)
Multiple Display
Triple
Audio Chipset
Realtek ALC662
Audio Interfaces
2x Speaker-out (3W) 1x Line-out (on rear) 1x Mic-in (on rear)
Ethernet
2x LAN (RJ-45 on rear, 1x Intel® I217-LM, 1x Intel® I210-AT)
USB
6x USB3.0 (4x Type A on rear, 2x by header) 6x USB2.0 (by header)
Serial Ports
2x RS-232/422/485 (DB9 on rear) 4x RS-232 (by header)
Other I/O Ports
1x 8-bit DIO (by header)

Storage & Expansion
6x SATA (RAID support) 1x mSATA / mPCIe (full size) 1x mPCIe (half size) 1x PCIe16 1x SIM Card Cage (by wafer)
Power Supply
Connector: Lockable DC Jack (on rear), 2x2-pin ATX Connector Input Voltage: DC 9V ~ 24V
Firmware
BIOS: AMI uEFI BIOS w/ 128Mb SPI Flash Watchdog: Programmable WDT to generate system reset event H/W Monitor: Voltages, Temperatures Real Time Clock: Chipset integrated RTC iAMT: depending on processor
System Control & Monitoring
1x Header for Reset button, HDD LED & External Speaker 1x Header for Power button, Power LED & SM bus 1x Header for mPCIe activity LED
Cooling
1x Wafer for CPU Smart Fan 1x Wafer for System Smart Fan
OS Support
Windows 7, Windows 8, Linux
Dimensions (L x W)
Mini-ITX (170 x 170 mm / 6.70" x 6.70")
Environmental Characteristics
Operation Temp.: 0°C ~ 60°C / 32°F ~ 140°F (Standard) -20°C ~ 70°C / -4°F ~ 158°F (Extended) Storage Temp.: -20°C ~ 80°C / -4°F ~ 176°F (Standard) -40°C ~ 85°C / -40°F ~ 185°F (Extended) Humidity: 0% ~ 95%
Certification
CE, FCC Class A

KEMX-8000 Series Rear I/O



Ordering Information

Article	Part No.	Description
KEMX-8001	BMMX8000-011000T	Intel® Haswell CPU+QM87, 2x DDR3/L SODIMM, 2 x GbE, 1x VGA, 1x LVDS, 1x DVI-D, 1x HDMI, 6x USB3.0, 6x USB2.0, 6x COM, DIO, w/ RAID support, Op. temp.: 0°C ~ 60°C
KEMX-800A	BMMX800A-011000T	Intel® Haswell CPU+QM87, 2x DDR3/L SODIMM, 2 x GbE, 1x VGA, 1x LVDS, 1x DVI-D, 1x HDMI, 6x USB3.0, 6x USB2.0, 6x COM, DIO, w/ RAID support, Op. temp.: -20°C ~ 70°C