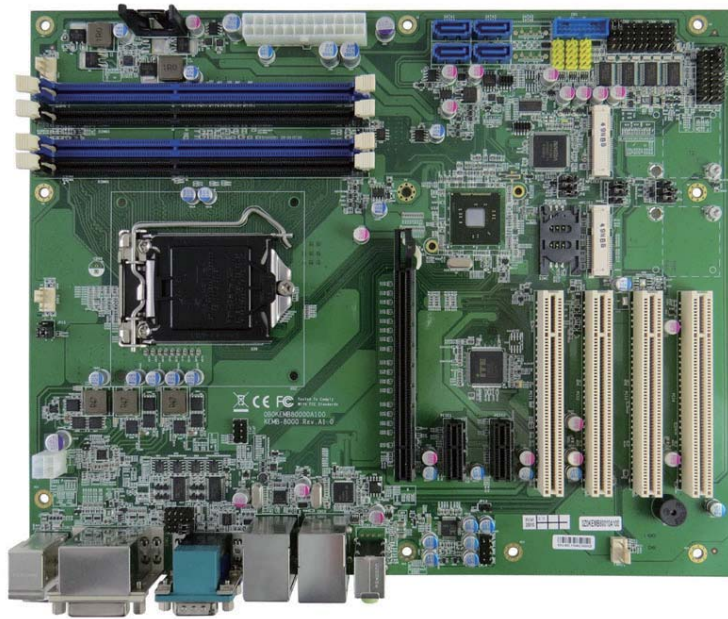


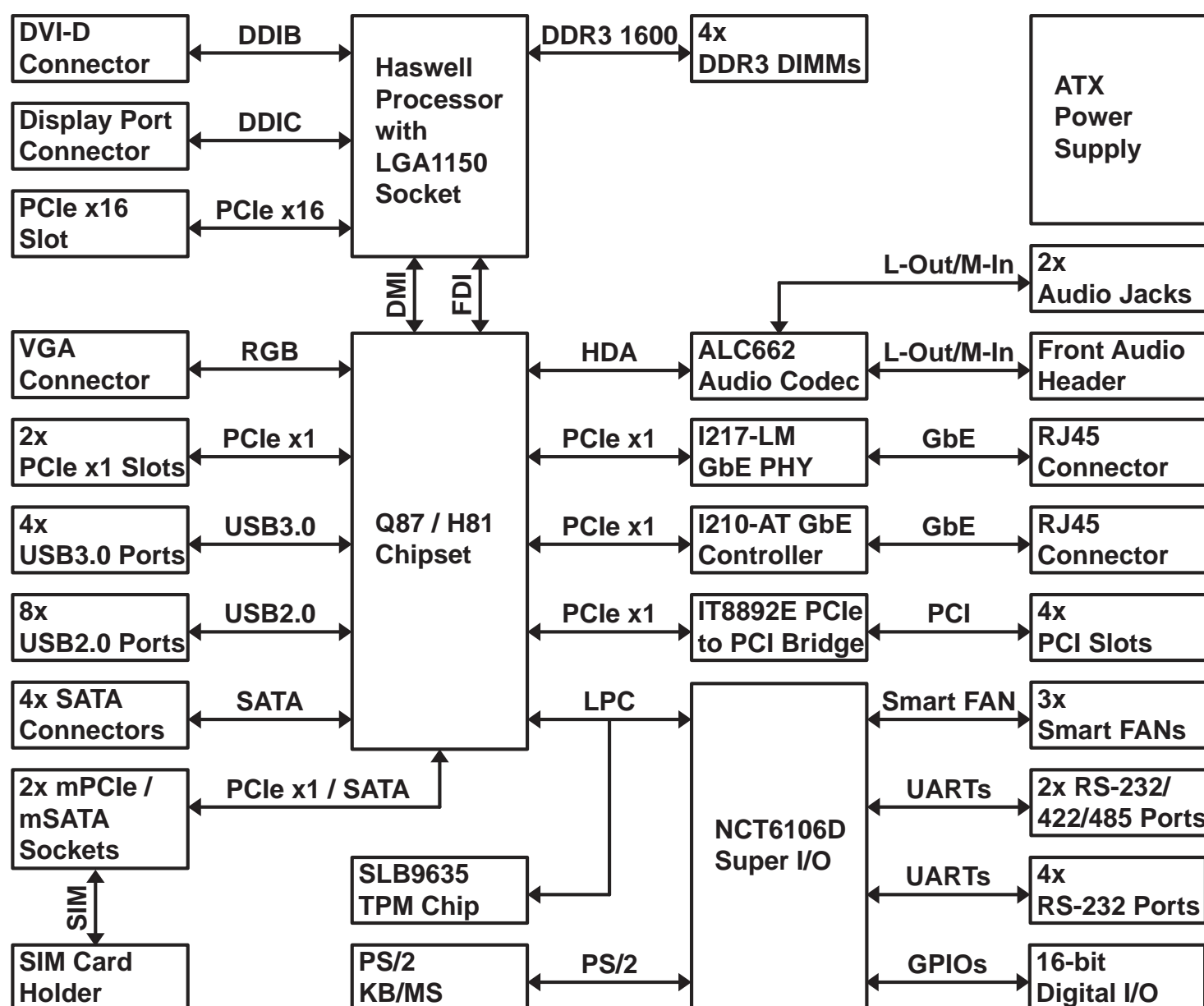
KEMB-8000 Series

Standard / Extended Temperature
Industrial Motherboard in ATX Form Factor
with Intel® Haswell S-Series Processors



- 4th Generation Intel® Core™ Processors (FCLGA1150 Socket)
- Intel® H81 / Q87 Chipset
- 2x/4x DDR3 DIMM memory socket
- 1x DP, 1x DVI-D, 1x VGA for video output
- Triple display support
- 2x GbE LAN for Ethernet
- 2x/4x USB3.0, 6x/8x USB2.0, 2x RS-232/422/485, 4x RS-232, 1x 16-bit DIO
- 4x SATA, up to 2x mSATA for Storage
- RAID support (models with Q87 chipset only)
- up to 2x mPCIe, 4x PCI, 1x PCIe16, 2x PCIe1 for expansion
- Extended temperature model support: -20°C ~ 70°C

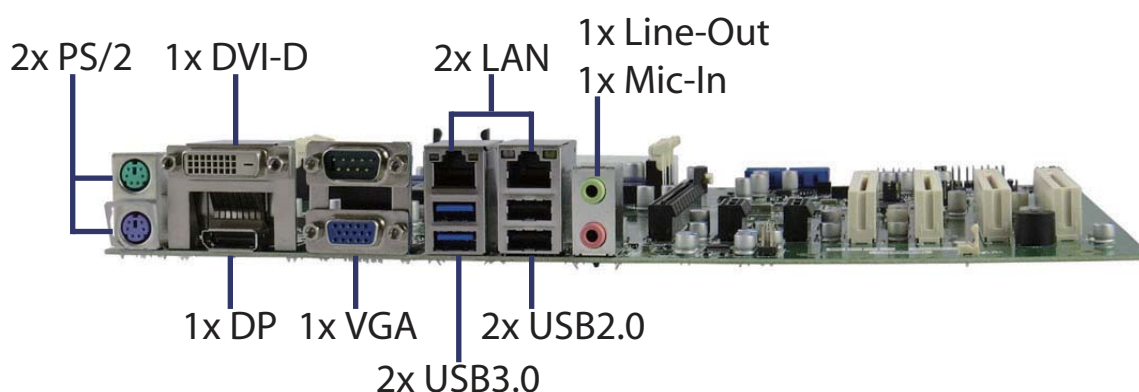
Block Diagram



Technical Information

CPU Support	FCLGA1150 Socket 4th Generation Intel® Core™ i Processor (Dual / Quad Core, 2M ~ 8M Cache, 1.90 ~ 4.00 GHz, 35W ~ 84W TDP)
Chipset	KEMB-8000: Intel® H81 KEMB-8001/T: Intel® Q87
Memory	2x DDR3 1333/1600 DIMM up to 16GB (KEMB-8000) 4x DDR3 1333/1600 DIMM up to 32GB (KEMB-8001/T)
Graphic Controller	Intel® HD Graphics 4600 / 4400
Display Interfaces	1x DVI-D (on rear, 1920 x 1200 @ 60Hz) 1x DP (on rear, 2560 x 1600 @ 60Hz) 1x VGA (on rear, 1920 x 1200 @ 60Hz)
Multiple Display	Triple
Audio Chipset	Realtek ALC662
Audio Interfaces	2x Line-out (1x on rear, 1x by header) 2x Mic-in (1x on rear, 1x by header)
Ethernet	2x GbE LAN (RJ-45 on rear, 1x Intel® I217-LM, 1x Intel® I210-AT)
USB	2x USB3.0 (Type A on rear, KEMB-8000) 4x USB3.0 (2x Type A on rear, 2x by header, KEMB-8001/T) 6x USB2.0 (2x Type A on rear, 4x by header, KEMB-8000) 8x USB2.0 (2x Type A on rear, 6x by header, KEMB-8001/T)
Serial Ports	2x RS-232/422/485 (1x DB9 on rear, 1x by header, w/ power selection) 4x RS-232 (by header, 2x w/ power selection)
Other I/O Ports	1x PS/2 Keyboard (Mini-DIN on rear) 1x PS/2 Mouse (Mini-DIN on rear) 1x 16-bit DIO (by header)
Storage & Expansion	4x SATA (RAID support for KEMB-8001/T) 2x mSATA / mPCIe (full size, KEMB-8001/T) 1x mPCIe (full size, KEMB-8000) 4x PCI (32-bit/33MHz) 1x PCIe16 2x PCIe1 1x SIM Card Cage
Power Supply	2x12-pin ATX connector (DC +5V / -5V / +12V / -12V / +3.3V / 5VSB) 2x2-pin ATX connector (DC 12V)
Firmware	BIOS: AMI uEFI BIOS w/ 128Mb SPI Flash Watchdog: Programmable WDT to generate system reset event H/W Monitor: Input & Core Voltages, CPU & System Temperatures Real Time Clock: Chipset integrated RTC TPM: for KEMB-8001/T (Infineon SLB 9635 TPM 1.2) iAMT: depending on CPU
System Control & Monitoring	1x Header for Reset button, HDD LED & External Speaker 1x Header for Power button, Power LED & SM bus
Cooling	1x Wafer for CPU Smart Fan 1x Wafer for System Smart Fan 1x Wafer for AUX Smart Fan
OS Support	Windows 7, Windows 8, Linux
Dimensions (L x W)	ATX (304.8 x 244 mm / 12" x 9.6")
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

KEMB-8000 Series I/Os



Ordering Information

Article	Part No.	Description
KEMB-8000	BMMB8000-000000T	ATX CPU Board, Intel® Haswell LGA1150 Socket, Intel® H81 Chipset, 2x DDR3 DIMM, 2x GbE, 1x VGA, 1x DVI-D, 1 x DP, 2x USB3.0, 6x USB2.0, 1x mPCIe, without TPM, without RAID support, Operation temp.: 0°C ~ 60°C
KEMB-8001	BMMB8000-010000T	ATX CPU Board, Intel® Haswell LGA1150 Socket, Intel® Q87 Chipset, 4x DDR3 DIMM, 2x GbE, 1x VGA, 1x DVI-D, 1 x DP, 4x USB3.0, 8x USB2.0, 2x mPCIe/mSATA, with TPM, with RAID support, Operation temp.: 0°C ~ 60°C
KEMB-8001T (Extended Temp.)	BMMB800T-010000T	ATX CPU Board, Intel® Haswell LGA1150 Socket, Intel® Q87 Chipset, 4x DDR3 DIMM, 2x GbE, 1x VGA, 1x DVI-D, 1 x DP, 4x USB3.0, 8x USB2.0, 2x mPCIe/mSATA, with TPM, with RAID support, Operation temp.: -20°C ~ 70°C