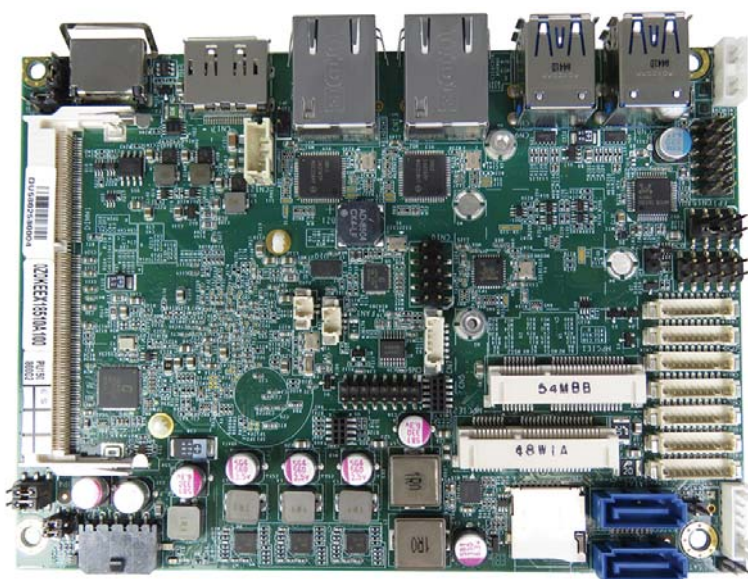


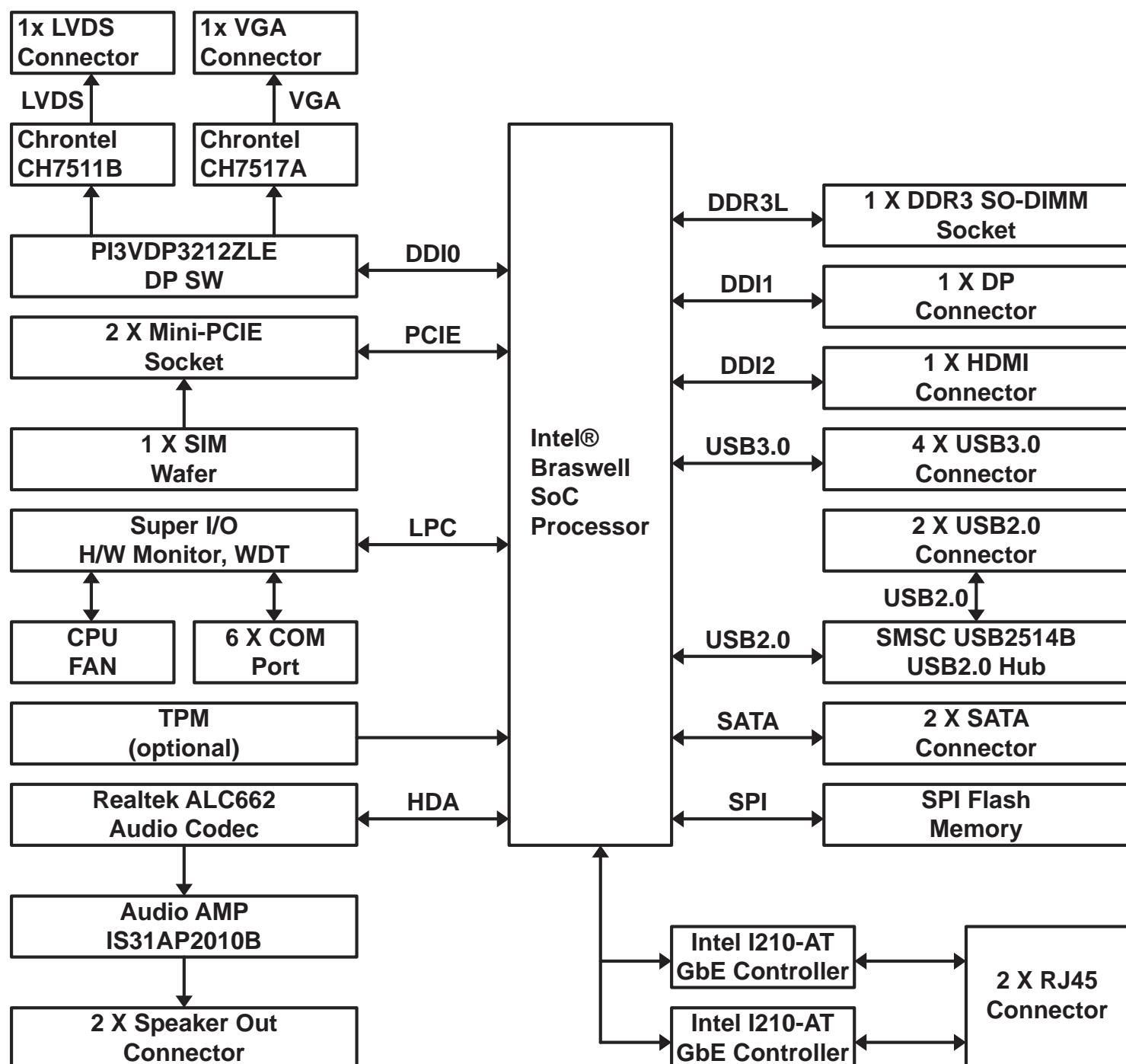
KEEX-1850 Series

Standard / Extended Temperature Single Board Computer
in Intel® Embedded Compact Extended Form Factor
with Intel® Braswell SoC Processor



- Intel® Braswell SoC Processor
- 1x DDR3L SO-DIMM Socket
- 4K2K video output supported
- 1x DP, 1x HDMI, 1x 24-bit 2-ch LVDS / 1x VGA
- 1x/2x SATA, 1x/0x mSATA, 1x uSD card cage
- 2x GbE, 4x USB3.0, 2x USB2.0, 6x COM, 1x 8-bit DIO
- 1x/2x mPCIe (SIM card support)
- Watchdog Timer, Hardware Monitor, TPM (optional)
- Extended Temperature model available: -20°C ~ 70°C

Block Diagram

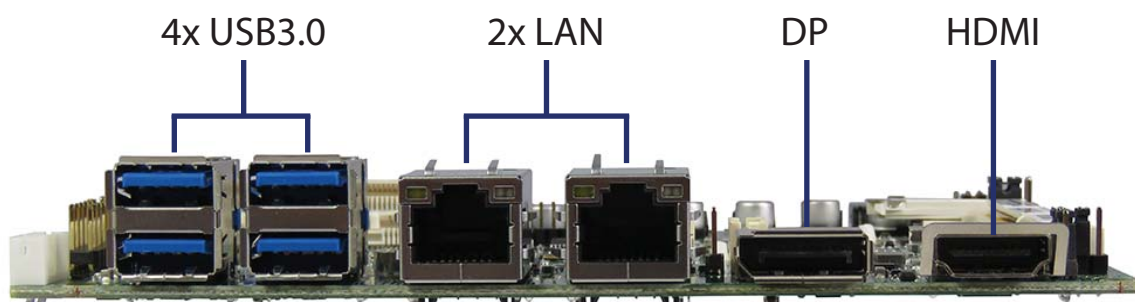


Technical Information

CPU Support	Intel® Celeron® N3160 SoC Processor (KEEX-1854/1856/1854T) Quad Core, Mobile, 2M Cache, up to 2.24 GHz Intel® Celeron® N3060 SoC Processor (KEEX-1855/1855T) Dual Core, Mobile, 2M Cache, up to 2.48 GHz
Memory	1x DDR3L SO-DIMM Socket up to 8GB
Display	1x DP (on rear) 1x HDMI (on rear) 1x 24-bit, 2-ch LVDS / 1x VGA (onboard)
Peripheral Support	2x SATA (KEEX-1854/1855/1854T/1855T) 1x SATA (KEEX-1856) 1x mSATA (mixed w/ mPCIe, KEEX-1856) 1x uSD card cage 4x USB3.0 Type A (on rear) 2x USB2.0 6x COM (COM1 & COM2 w/ RS-232/422/485) 1x 8-bit DIO
LAN	2x GbE LAN (Intel I210-AT)
Audio	1x header for Line-In, Line-Out & Mic-In 2x Wafers for Stereo Speaker output
Expansion	2x mPCIe (1x full, 1x half, KEEX-1854/1855/1854T/1855T) 1x mPCIe (full, KEEX-1856) 1x wafer for SIM card support

TPM	Optional TPM support
MSIC Support	1x Header for Reset button, HDD LED and External Speaker 1x Header for Power button, Power LED and SM bus 1x Header for mPCIe activity LED
Cooling	+5VDC Smart FAN support
BIOS	AMI uEFI BIOS
Hardware Monitor	Voltage & System temperature monitoring
Watchdog Timer	Programmable WDT to generate System reset event
RTC	SoC intergrated RTC
Power Connector	One 1x4-pin, pitch 3.0mm lockable Wafer for +12VDC input ATX/AT Mode Support
OS Support	Windows 7 / Windows 8 / Windows 10 / Linux
Dimensions	Intel® ECX Form Factor (146 x 105 mm / 5.75" x 4.13")
Environmental Factors	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

• KEEEX-1850 Series Rear I/Os



Ordering Information

Article	Part No.	Description
KEEX-1854	B3EX1850-041000T	Intel® Celeron® Quad Core N3160 Mobile Processor, 1x DDR3L SO-DIMM, 1x HDMI, 1x DP, 1x LVDS / 1x VGA, 4x USB3.0, 2x USB2.0, 6x COM, 1x DIO, 2x LAN, 2x SATA , 2x mPCIe (1x full, 1x half) , Op. Temp.: 0°C ~ 60°C
KEEX-1855	B3EX1850-051000T	Intel® Celeron® Dual Core N3060 Mobile Processor, 1x DDR3L SO-DIMM, 1x HDMI, 1x DP, 1x LVDS / 1x VGA, 4x USB3.0, 2x USB2.0, 6x COM, 1x DIO, 2x LAN, 2x SATA , 2x mPCIe (1x full, 1x half) , Op. Temp.: 0°C ~ 60°C
KEEX-1856	B3EX1850-161000T	Intel® Celeron® Quad Core N3160 Mobile Processor, 1x DDR3L SO-DIMM, 1x HDMI, 1x DP, 1x LVDS / 1x VGA, 4x USB3.0, 2x USB2.0, 6x COM, 1x DIO, 2x LAN, 1x SATA , 1x mPCIe (full) , 1x mSATA (full) , Op. Temp.: 0°C ~ 60°C
KEEX-1854T	B3EX185T-041000T	Intel® Celeron® Quad Core N3160 Mobile Processor, 1x DDR3L SO-DIMM, 1x HDMI, 1x DP, 1x LVDS / 1x VGA, 4x USB3.0, 2x USB2.0, 6x COM, 1x DIO, 2x LAN, 2x SATA , 2x mPCIe (1x full, 1x half) , Op. Temp.: -20°C ~ 70°C
KEEX-1855T	B3EX185T-051000T	Intel® Celeron® Dual Core N3060 Mobile Processor, 1x DDR3L SO-DIMM, 1x HDMI, 1x DP, 1x LVDS / 1x VGA, 4x USB3.0, 2x USB2.0, 6x COM, 1x DIO, 2x LAN, 2x SATA , 2x mPCIe (1x full, 1x half) , Op. Temp.: -20°C ~ 70°C

