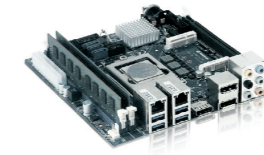


# MINI-ITX

## Tech Specs At-a-Glance



| MINI-ITX                          | mITX-BDW-U  | mITX-E38  | KTQM87/mITX  | KTQ87/mITX  | KTH81/mITX  |
|-----------------------------------|---|---|--|---|---|
| <b>FORM FACTOR</b>                | Mini-ITX  | thin Mini-ITX   | Mini-ITX   | Mini-ITX  | Mini-ITX  |
| <b>DIMENSIONS (H X W X D)</b>     | 6.7" x 6.7" (17,0 x 17,0 cm)  | 6.7" x 6.7" (17,0 x 17,0 cm)  | 6.7" x 6.7" (17,0 x 17,0 cm)   | 6.7" x 6.7" (17,0 x 17,0 cm)  | 6.7" x 6.7" (17,0 x 17,0 cm)  |
| <b>CPU</b>                        | Intel® Core i7/i5/i3 2C CPU clock up to 3.2 GHz                                       | Intel® Atom™ E3845, E3826, E3815  | Intel® Core™ i7-4700EQ, i5-4400E, i3-4100E<br>Intel® Celeron® 2000E                  | Intel® Core™ i5-4570S, i7-4770S GT2, i3-4330 GT2;<br>Intel® Pentium-3420 GT1; Intel® Celeron® G1820TE GT1 | Intel® Core™ i7-4770S GT2, i5-4570S GT2, i3-4330 GT2;<br>Intel® Pentium-3420 GT1, Intel® Celeron® G1820TE GT1 |
| <b>CHIPSET</b>                    | Intel® Broadwell PCH-LP on multi-chip package BGA with CPU                            | -   | Intel® QM87  | Intel® Q87  | Intel® H81  |
| <b>MAIN MEMORY</b>                | Up to 16 GB DDR3L (2x 8GB SO-DIMM modules), 1333 & 1600 MT/s support                  | Up to 8 GB SO-DIMM Socket DDR3L-1333/1066 (max. 1x 8GB)   | Up to 16 GB DDR3 (max. 2x 8 GB)  | Up to 16 GB DDR3 (max. 2x 8 GB)   | Up to 16 GB DDR3 (max. 2x 8 GB)   |
| <b>FRONT SIDE BUS</b>             | -   | -   | Up to 20 GT/s point-to-point DMI 2.0 interface to PCH, Four lanes in each direction  | Up to 20 GB/s point-to-point DMI 2.0 interface to PCH, Four lanes in each direction                       | Up to 20 GB/s point-to-point DMI 2.0 interface to PCH, Four lanes in each direction                           |
| <b>GRAPHICS CONTROLLER</b>        | Integrated into CPU with GT2 or GT3 depending on CPU type                             | Intel® Gen7 Graphics OpenGL 3.0, OpenCL 1.2   | Intel® HD Graphics 4600 internal   | Intel® HD Graphics 4600 integrated, GT1 or GT2 depending on CPU type                                      | Intel® HD Graphics 4600 integrated, GT1 or GT2 depending on CPU type  |
| <b>GRAPHICS</b>                   | 2x Display Port revision 1.2 in Rear IO and LVDS 18bpp/24bpp internally               | 2x independent graphic outputs, E3815/E3826: 1x DP 1.1a, up to 2560x1600, E3845: 1x DP 1.1a, up to 2560x1600, 1x LVDS dual channel 24bit, up to 1920x1200 | 3x DisplayPort (1x PCIe x16 Gen3)  | 3x DisplayPort (1x PCIe x16 Gen3)   | 2x DisplayPort (1x PCIe x16 Gen2)   |
| <b>ETHERNET CONTROLLER</b>        | 1x Intel® Clarkville i218LM (with AMT 9.0support), 1x Intel® Pearsonville i218AT      | Intel® Pearsonville i211AT  | 1x Intel® Clarkville WGI218LM (supporting AMT 9.0)<br>1x Intel® Pearsonville I211AT  | 1x Intel® Clarkville i218LM (with AMT 9.0support), 1x Intel® Pearsonville i218AT                          | 1x Intel® Clarkville i218V, 1x Intel® Pearsonville i218AT   |
| <b>ETHERNET</b>                   | 2x Intel Gigabit-LAN  | 2x Intel® GB LAN  | 2x Intel® GB LAN (1x AMT 9.0 support)  | 2x Intel® GB LAN (1x AMT 9.0 support)   | 2x Intel® GB LAN  |
| <b>HARD DISK</b>                  | tbd. 3x SATA 6 Gb/s (one on M.2) w. RAID 0 & 1  | 2x SATA (SATA 150/300) (1x mSATA shared with mPCIe)   | 4 x SATA (SATA 150/300/600) w. RAID 0,1,5,10 support, 2x mSATA                       | 5x SATA (SATA 150/300/600) w. RAID 0,1,5,10support, 1x mSATA (w. USB, LPC)                                | 3x SATA (2x SATA 150/300, 1x SATA 600), 1x mSATA (w. USB, LPC)  |
| <b>FLASH ONBOARD</b>              |   | eMMC 16GB TLC Nand. E3845 only  | -  | -   | -   |
| <b>PCI EXPRESS® / PCI SUPPORT</b> |   | 1x PCIe x1  | 1x PCIe x16 Gen3   | 1x PCIe x16 Gen3  | 1x PCIe x16 Gen2  |
| <b>MINI-PCI</b>                   | 1x Mini-PCIe with SIM card holder   | 1x mini-PCI Express® x1   | 2x mini-PCI Express®   | 1x mini-PCI Express® (w. USB)   | 1x mini-PCI Express® (w. USB)   |
| <b>USB</b>                        | tbd. 4x USB 3.0 in Rear I/O, 2x USB 2.0 on front panel & 1x on mPCIe socket           | E3815/E3826: 3x USB 2.0, 1x USB2.0/3.0; E3845: 6x USB 2.0, 1x USB2.0/3.0  | 4x USB 3.0/2.0, 8x USB 2.0 (2x Internal Header, 2x PCIe sockets)                     | 4x USB 3.0/2.0, 6x USB 2.0  | 2x USB 3.0/2.0, 8x USB 2.0  |
| <b>SERIAL</b>                     | 2x RS232  | E3815: 2x RS232 UART 16550<br>E3826/E3845: 6x RS232 UART 16550  | 2x RS232   | 2x RS232  | 2x RS232  |
| <b>REAR I/O</b>                   | 19V DC input, 2x Display port, 4x USB 3.0, 2x RJ45, Audio jack for line-in & headset. | Ext. 12V, 2x DP, 2x USB 2.0, 1x USB 3.0, 2x LAN, 1x Audio Jack  | 4x USB3.0/USB2.0, 4x USB2.0., 3x DisplayPort, 2x RJ45 LAN, 1x3 mini Audio Jack tower | 4x USB 3.0/2.0, 3x DisplayPort, 2x RJ45 LAN, 2x3 mini Audio Jack tower                                    | 2x USB 3.0/2.0, 2x USB 2.0, 2x DisplayPort, 2x RJ45 LAN, 2x3 mini Audio Jack tower                            |
| <b>AUDIO CONTROLLER</b>           | HD Audio codec supporting 5.1 channel surround sound                                  | VIA VT1708S, HD Analog, 2x Audio Jack, SPDIF Out, Line-Out  | VT1708S, HD Audio 7.1 channel surround sound   | VT1708S, HD Audio 7.1 channel surround sound  | VT1708S, HD Audio 7.1 channel surround sound  |
| <b>KEYBOARD</b>                   | n/a   | 6-pin PS/2 Keyboard/Mouse   | KBD/MSE pinrow connector   | n/a   | n/a   |
| <b>SPECIAL FEATURES</b>           | Intel® AES security, Kontron embedded feature connector with ADC, DAC up to 160 GPIO  | DAC up to 160 GPIO, TPM (E3845 only), KT embedded feature port with ADC; E3826 and E3845 only: 1x Micro SD Card Slot, SD Card 3.0 interface               | DAC up to 160 GPIO, TPM, KT embedded feature port with ADC, Intel® AES security      | DAC up to 160 GPIO, TPM, KT embedded feature port with ADC, Intel® AES security, ATX power supply only!   | DAC up to 160 GPIO, TPM, KT embedded feature port with ADC, Intel® AES security, ATX Power supply only        |
| <b>BIOS</b>                       | Phoenix   | Phoenix   | Phoenix  | Phoenix   | Phoenix   |
| <b>POWER MANAGEMENT</b>           | ACPI 3.0  | -   | ACPI 3.0   | ACPI 3.0  | ACPI 3.0  |
| <b>OPERATION TEMPERATURE</b>      | Operating 0°C to 60°C (32°F - 140°F)  | 0°C to 60°C (32°F to 140°F)   | 0°C to 60°C (32°F to 140°F)  | 0°C to 60°C (32°F to 140°F)   | 0°C to 60°C (32°F to 140°F)   |
| <b>OPERATING SYSTEM</b>           | Win7, Win8.1 & Linux  | Win7, WES7, WES8, Win8 (32 and 64bit), Linux, WxWorks   | Win7, WES7, WES8, Win8 (32 and 64bit), Linux, WxWorks                                | Win7, WES7, WES8, Win8 (32 and 64bit), Linux, WxWorks   | Win7, WES7, WES8, Win8 (32 and 64bit), Linux, WxWorks   |

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