LOW POWER, IOT READY EMBEDDED mITX MOTHERBOARD WITH 5TH GENERATION Intel® 14NM CORE I7, I5 & I3 PROCESSORS

- embedded mITX motherboard with up to 7 years availability
- thin profile, low power platform with 15W CPUs in 23mm envelope
- supporting 3 independent displays pipes via 2x DisplayPort and LVDS
- operating temperature range from 0°C to +60°C
- powered by 19V notebook-style power adapter or internal 12V connector
### TECHNICAL INFORMATION

#### FEATURES
- 5th Generation Intel® Core i7, i5 & i3 Motherboards
- mITX – low profile: 170 mm x 170 mm x 23 mm (6.7” x 6.7” x 0.9”)
- Intel® Core i7/i5/i3 2C CPU clock up to 3.2 GHz
- Integrated into CPU with GT2 or GT3 depending on CPU type
- 2x Display Port revision 1.2 in Rear IO and LVDS 18bpp/24bpp internally
- Up to 16 GB DDR3L (2x 8GB SO-DIMM modules), 1333 & 1600 MT/s support
- Intel® Broadwell PCH-LP on multi-chip package BGA with CPU
- 3x SATA 6 Gb/s (one on M.2) w. RAID 0 & 1
- 4x USB 3.0 in Rear I/O, 2x USB 2.0 on front panel & 1x on mPCIe socket
- HD Audio codec supporting 5.1 channel surround sound
- 2x Intel Gigabit-LAN
- 1x Mini-PCIe with SIM card holder, 1x M.2 (2280), 2x COM (RS232)
- 19V DC input, 2x Display port, 4x USB 3.0, 2x RJ45, Audio jack for line-in & headset.
- Intel® AES security, Kontron embedded feature connector with ADC, DAC up to 160 GPIO
- Win7, Win8.1 & Linux

#### FORM FACTOR
- mITX – low profile: 170 mm x 170 mm x 23 mm (6.7” x 6.7” x 0.9”)

#### CPU
- Intel® Core i7/i5/i3 2C CPU clock up to 3.2 GHz

#### GRAPHICS
- Integrated into CPU with GT2 or GT3 depending on CPU type
- 2x Display Port revision 1.2 in Rear IO and LVDS 18bpp/24bpp internally
- Up to 16 GB DDR3L (2x 8GB SO-DIMM modules), 1333 & 1600 MT/s support

#### GRAPHIC INTERFACE
- 2x Display Port revision 1.2 in Rear IO and LVDS 18bpp/24bpp internally
- Up to 16 GB DDR3L (2x 8GB SO-DIMM modules), 1333 & 1600 MT/s support

#### MEMORY
- 3x SATA 6 Gb/s (one on M.2) w. RAID 0 & 1

#### CHIPSET
- 4x USB 3.0 in Rear I/O, 2x USB 2.0 on front panel & 1x on mPCIe socket
- HD Audio codec supporting 5.1 channel surround sound

#### SATA
- 2x Intel Gigabit-LAN

#### USB
- 1x Mini-PCIe with SIM card holder, 1x M.2 (2280), 2x COM (RS232)

#### AUDIO
- 19V DC input, 2x Display port, 4x USB 3.0, 2x RJ45, Audio jack for line-in & headset.
- Intel® AES security, Kontron embedded feature connector with ADC, DAC up to 160 GPIO

#### ETHERNET
- Win7, Win8.1 & Linux

#### AVAILABLE I/OS
- Operating 0°C to 60°C (32°F - 140°F)

#### REAR I/O
- Up to 7 years availability

#### SPECIAL FEATURE
- Intel® AES security, Kontron embedded feature connector with ADC, DAC up to 160 GPIO

#### OS SUPPORT
- Operating 0°C to 60°C (32°F - 140°F)

#### TEMPERATURE
- Up to 7 years availability

#### ADDITIONAL
- Operating 0°C to 60°C (32°F - 140°F)

### mITX-BDW-U

- **Digital Signage**: Low profile, low power & multi display support
- **Gaming/POS/POI**: High graphics and high CPU performance-to-power ratio
- **Industrial Automation**: Wide range of I/Os & longevity
- **Future-oriented Devices**: IoT support through eg. WWAN support. SATA and x2 PCIe SSD support in M.2 socket.

### ORDERING INFORMATION

<table>
<thead>
<tr>
<th>ARTICLE</th>
<th>Part No.</th>
<th>Article</th>
<th>Part No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>mITX-BDW-U i7 GT3</td>
<td>810610-4500</td>
<td>i7-5650U, 4M, up to 3.2 GHz</td>
<td></td>
</tr>
<tr>
<td>mITX-BDW-U i5 GT3</td>
<td>810611-4500</td>
<td>i5-5350U, 3M, up to 2.9 GHz</td>
<td></td>
</tr>
<tr>
<td>mITX-BDW-U i3 GT2</td>
<td>810612-4500</td>
<td>i3-5010U, 3M, up to 2.1 GHz</td>
<td></td>
</tr>
</tbody>
</table>

**RECOMMENDED MEMORY MODULES**

<table>
<thead>
<tr>
<th>DDR3L SO-DIMM 2GB</th>
<th>1055-9939</th>
<th>DDR3L, 2GB, 204P, 1600MHz, PC3-12800, SO-DIMM G/W</th>
</tr>
</thead>
<tbody>
<tr>
<td>DDR3L SO-DIMM 4GB</td>
<td>1055-9941</td>
<td>DDR3L, 4GB, 204P, 1600MHz, PC3-12800, SO-DIMM G/W</td>
</tr>
<tr>
<td>DDR3L SO-DIMM 8GB</td>
<td>1055-9942</td>
<td>DDR3L, 8GB, 204P, 1600MHz, PC3-12800, SO-DIMM G/W</td>
</tr>
</tbody>
</table>

**Note**: Motherboards come pre-assembled with heatsink. Fan included in packaging.

### CORPORATE OFFICES

#### EUROPE, MIDDLE EAST & AFRICA
- Lise-Meitner-Str. 3-5
- 86156 Augsburg
- Germany
- Tel.: +49 821 4086 0
- Fax: +49 821 4086 111
- sales@kontron.com

#### NORTH AMERICA
- 14118 Stowe Drive
- Poway, CA 92064-7147
- USA
- Tel.: +1 888 294 4558
- Fax: +1 858 677 0898
- info@us.kontron.com

#### ASIA PACIFIC
- 17 Building, Block #1, ABP
- 188 Southern West 4th Ring Road
- Beijing 100070, P.R.China
- Tel.: +86 10 63751188
- Fax: +86 10 83682438
- info@kontron.cn

// 2

www.kontron.com