**Intel® Atom™ E3800 Series
COM Express® Compact**

**BT968 Series**

**Features**

- **MEMORY**
  - 2 DDR3L SODIMM up to 8GB
    - (-E45/-E27/-E26/-J00/-N30)
  - 1 DDR3L SODIMM up to 4GB
    - (-E25/-E15/-N07)

- **STORAGE**
  - 4GB/8GB/16GB eMMC onboard (optional)

- **EXPANSION**
  - 3 PCIe x1
  - 1 LPC, 1 SMBus, 1 I²C, 2 serial
  - 1 VGA, 1 LVDS, 1 DDI (HDMI/DVI/DP)
  - 1 HDA
  - 9 USB: 1 USB 3.0, 8 USB 2.0
  - 2 SATA 2.0
  - 8-bit DIO
  - 1 LAN

- **DIMENSIONS**
  - COM Express® R2.1 Compact, Type 6
  - 95mm x 95mm (3.74” x 3.74”)

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**Mechanical Drawing**

**Block Diagram**

**Coming Soon**
**Specifications**

**PROCESSOR**
- Intel® Atom™/Intel® Celeron® processors
- BGA 1170 packaging technology
- 22nm process technology

*Please refer to the Ordering Information below*

**SYSTEM MEMORY**
- Two 204-pin DDR3L SODIMM sockets (-E45/-E27/-E26/-J00/-N30)
  - up to 8GB system memory
- Dual channel memory interface
  
<table>
<thead>
<tr>
<th>Model</th>
<th>Frequency</th>
<th>Power Consumption</th>
</tr>
</thead>
<tbody>
<tr>
<td>E45/ E3845</td>
<td>1.91GHz</td>
<td>10W</td>
</tr>
<tr>
<td>E27/ E3827</td>
<td>1.75GHz</td>
<td>8W</td>
</tr>
<tr>
<td>E26/ E3826</td>
<td>1.46GHz</td>
<td>7W</td>
</tr>
<tr>
<td>E15/ E3825</td>
<td>1.33GHz</td>
<td>6W</td>
</tr>
</tbody>
</table>

**TRUSTED PLATFORM MODULE (TPM)** - optional
- Integrated Advanced Host Controller Interface (AHCI) controller
- SATA 2.0 with data transfer rate up to 3Gb/s
- Supports 2 Serial ATA interfaces
- DRAM device technologies: 1GB, 2GB and 4GB DDR3L DRAM technologies are supported for x8 and x16 devices, unbuffered, non-ECC

**STORAGE**
- Supports 4GB, 8GB and 16GB eMMC onboard (optional)

**ONBOARD GRAPHICS FEATURES**
- Intel® HD Graphics
- Supports VGA, LVDS (default/DDI and DDI interfaces
- Supports 2 display interfaces at the same time
- VGA: 24-bit, resolution up to 2560x1600 @ 60Hz
- LVDS: NXP PTPN3460, 24-bit, dual channel, resolution up to 1920x1200 @ 60Hz
- Digital Display Interface: HDMI, DVI and DP
- HDMI, DVI: resolution up to 2560x1600 @ 24Hz
- DP: resolution up to 2560x1600 @ 60Hz
- Supports hardware acceleration for DirectX 11, OCL 1.2, OGL 3.2

**ONBOARD AUDIO FEATURES**
- Supports High Definition Audio interface
- Supports hardware acceleration for DirectX 11, OCL 1.2, OGL 3.2, H.264, MPEG2, MVC, VC-1, WMV9 and VP8
- Supports 8-bit Digital I/O
- Supports 2 serial interfaces (TX/RX)
- Supports LPC interface
- Supports SMBus interface

**SERIAL ATA (SATA) INTERFACE**
- Supports 2 Serial ATA interfaces
- SATA 2.0 with data transfer rate up to 3Gb/s
- Supports Advanced Host Controller Interface (AHCI) controller

**POWER INPUT**
- 12V, 5VSB, VCC_RTC (AT mode)
- 12V, VCC_RTC (ATX mode)
- Supports 8 USB 2.0 ports
- Supports 1 USB 3.0 port
- Supports 4 integrated USB 2.0 ports
- 1 USB HSIC for 4 USB 2.0 Ports

**WATCHDOG TIMER**
- Watchdog timeout programmable via software from 1 to 255 seconds

**SYSTEM MANAGEMENT**
- Supports 8 USB 2.0 ports
- Supports 4 integrated USB 2.0 ports
- 1 USB HSIC for 4 USB 2.0 Ports
- [MCP7/8] PCIe x1 (default); or 1 PCIe x4 (PCIe port 3 share with on board LAN at default)
- Supports LPC interface
- Supports 1°C temperature
- Supports SMBus interface
- Supports 2 serial interfaces (TX/RX)
- Supports 8-bit Digital I/O

**BIOS**
- TBD

**OS SUPPORT**
- Windows 8 Enterprise x64 (64-bit)
- Windows 8 Enterprise x86 (32-bit)
- Windows 7 Ultimate x64 & SP1 (64-bit)
- Windows 7 Ultimate x86 & SP1 (32-bit)

**HUMIDITY**
- 5% to 90%

**POWER CONSUMPTION**
- TBD

**CPU**
- E45: Intel® Atom™ E3845, Quad Core, 2M Cache, 1.91GHz, 10W
- E27: Intel® Atom™ E3827, Dual Core, 1M Cache, 1.75GHz, 8W
- E26: Intel® Atom™ E3826, Dual Core, 1M Cache, 1.46GHz, 7W
- E15: Intel® Atom™ E3825, Dual Core, 1M Cache, 1.33GHz, 6W

**COM Express® Compact**
- E15: Intel® Atom™ E3825, Single Core, 0.5M Cache, 1.46GHz, 5W
- J00: Intel® Celeron® J1900, Quad Core, 2M Cache, up to 2.42GHz, 10W
- N30: Intel® Celeron® N2930, Quad Core, 2M Cache, up to 2.16GHz, 7.5W
- N07: Intel® Celeron® N2807, Dual Core, 1M Cache, up to 2.16GHz, 4.3W

**Packaging**

- BT968 board
- 1 QR (Quick Reference)
- 1 DVD

**Ordering Information**

<table>
<thead>
<tr>
<th>Model Name</th>
<th>Temperature</th>
<th>Memory</th>
<th>eMMC</th>
<th>Processors</th>
</tr>
</thead>
<tbody>
<tr>
<td>BT968</td>
<td>B</td>
<td>S</td>
<td>0</td>
<td>E45</td>
</tr>
<tr>
<td></td>
<td>0°C to 60°C</td>
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<td>0: None</td>
<td>Intel® Atom™ E3845, Quad Core, 2M Cache, 1.91GHz, 10W</td>
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<tr>
<td></td>
<td>-20°C to 70°C</td>
<td></td>
<td>4: 4GB</td>
<td>Intel® Atom™ E3827, Dual Core, 1M Cache, 1.75GHz, 8W</td>
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<tr>
<td></td>
<td>-40°C to 85°C</td>
<td></td>
<td>8: 8GB</td>
<td>Intel® Atom™ E3826, Dual Core, 1M Cache, 1.46GHz, 7W</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>1: 16GB</td>
<td>Intel® Atom™ E3825, Dual Core, 1M Cache, 1.33GHz, 6W</td>
</tr>
</tbody>
</table>

**Optional Items**

- COM331-B carrier board kit
- COM101-BAT carrier board kit
- Heat spreader with heat sink and fan: 761-BT9681-000G

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