**Features**

**MEMORY**
2GB/4GB/8GB DDR3L onboard

**EXPANSION**
1 PCIe x4, 1 PCIe x2, 1 PCIe x1
1 LPC, 1 SMBus, 1 I²C, 2 serial
1 VGA, 1 LVDS, 1 DDI (HDMI/DVI/DP)
10 USB: 2 USB 3.0, 8 USB 2.0
3 SATA 3.0
SSD (optional)
4-bit input and 4-bit output GPIO

**LAN**
1 LAN

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

**Block Diagram**

**Mechanical Drawing**

**Coming Soon**
Specifications

PROCESSOR
- 4th generation Intel® Core™ processors
- BGA 1168 packaging technology
- 22nm process technology

SYSTEM MEMORY
- 2GB/4GB/8GB DDR3L onboard
- Supports DDR3L 1600MHz
- Supports dual channel memory interface

ONBOARD GRAPHICS FEATURES
- Intel® HD Graphics GT Series
- Supports VGA, LVDS and DDI interfaces
- VGA: Chrontel CH7517, resolution up to 1920x1200 @ 60Hz
- LVDS: NXP PNT3460, 24-bit, dual channel, resolution up to 1920x1200 @ 60Hz
- Digital Display Interface: HDMI, DVI and DP
- HDMI, DVI: resolution up to 4096x2304 @ 24Hz
- DP: resolution up to 3200x2000 @ 60Hz
- Intel® Clear Video Technology
- Intel® Advanced Vector Extensions 2.0 (Intel® AVX 2.0) Instructions
- Supports DirectX 11.1, OpenGL 4.0, OpenCL 1.2

ONBOARD AUDIO FEATURES
- Supports High Definition Audio interface

ONBOARD LAN FEATURES
- Intel® I218LM with iAMT9.5 Gigabit Ethernet Phy
- Integrated 10/100/1000 transceiver
- Fully compliant with IEEE 802.3, IEEE 802.3u, IEEE 802.3ab

SERIAL ATA (SATA) INTERFACE
- Supports 3 SATA 3.0 with data transfer rate up to 6Gb/s
  - One channel with PCIe Lane 7
- Integrated Advanced Host Controller Interface (AHCI) controller
- Supports RAID 0/1/5
- Supports Intel® Smart Response Technology

SSD (optional)
- 2GB/4GB/8GB/16GB/32GB/64GB
- Write: 30MB/sec (max), Read: 70MB/sec (max)
- SATA to SSD onboard

INTEL ACTIVE MANAGEMENT TECHNOLOGY (AMT)
- Supports iAMT9.5
- Out-of-band system access
- Remote troubleshooting and recovery
- Hardware-based agent presence checking
- Proactive alerting
- Remote hardware and software asset tracking

TRUSTED PLATFORM MODULE (TPM) - optional
- Provides a Trusted PC for secure transactions
- Provides software license protection, enforcement and password protection

Ordering Information

<table>
<thead>
<tr>
<th>Model Name</th>
<th>Temperature</th>
<th>Memory</th>
<th>SSD</th>
<th>Processors</th>
</tr>
</thead>
<tbody>
<tr>
<td>HU968</td>
<td>B</td>
<td>2</td>
<td>0</td>
<td>4650U</td>
</tr>
<tr>
<td></td>
<td>B: 0°C to 60°C</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>2: 2GB 4: 4GB 8: 8GB</td>
<td>None</td>
<td></td>
<td>4650U: Intel® Core™ i7-4650U, 4M Cache, up to 3.3 GHz, 15W</td>
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<tr>
<td></td>
<td>2: 2GB 4: 4GB 8: 8GB</td>
<td>None</td>
<td></td>
<td>4300U: Intel® Core™ i5-4300U, 3M Cache, up to 2.9 GHz, 15W</td>
</tr>
<tr>
<td></td>
<td>2: 2GB 4: 4GB 8: 8GB</td>
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<td></td>
<td>4010U: Intel® Core™ i3-4010U, 3M Cache, 1.7 GHz, 15W</td>
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<tr>
<td></td>
<td>2: 2GB 4: 4GB 8: 8GB</td>
<td>None</td>
<td></td>
<td>2980U: Intel® Celeron® 2980U, 2M Cache, 1.6 GHz, 15W</td>
</tr>
</tbody>
</table>

Expansion Interfaces
- Supports 2 USB 3.0 interfaces
- Supports 8 USB 2.0 interfaces
- Supports 1 PCIe x4; or 2 PCIe x2; or 4 PCIe x1 interfaces
- Supports 1 PCIe x2; or 1 PCIe x1 interface
- Supports 1 PCIe x1 interface (PCIe Lane 7 shares with 1 SATA 3.0 port)
- Supports LPC interface
- Supports SMBus interface
- Supports I²C interface
- Supports 2 serial interfaces (TX/RX)
- Supports 4-bit input and 4-bit output GPIO

Damage Free Intelligence
- Monitors CPU temperature and overheat alarm
- Monitors CPU fan speed and failure alarm
- Monitors Vcore/1.05V/DDR voltages and failure alarm
- Watchdog timer function

BIOS
- AMI BIOS
  - 64Mbit SPI BIOS

Watchdog Timer
- Software programmable from 1 to 255 seconds

Power
- Input: 12V, VCC_RTC, 5VSB (option)

Power Consumption
- TBD

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

Temperature
- Operating: 0°C to 60°C
- Storage: -20°C to 85°C

Humidity
- 5% to 90%

PCB
- Dimensions
  - COM Express® Compact
  - 95mm (3.74") x 95mm (3.74")
- Compliance
  - PICMG COM Express® R2.1, Type 6

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<td>4650U</td>
</tr>
</tbody>
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Packing List

- 1 HU968 board
- 1 QR (Quick Reference)
- 1 DVD

Optional Items

- COM331-B carrier board kit
- COM101-BAT carrier board kit
- Heat spreader with heat sink and fan: 761-HU9681-000G

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DFI reserves the right to change the specifications at any time prior to the product’s release. Changes thereafter will be based on the product’s revision. Please contact your sales representative for the exact revision offered in your area. Refer to the website (www.dfi.com) for the most updated information. All product names mentioned are trademarks of their respective companies. COM Express® is a registered trademark of the PCI Industrial Computer Manufacturers Group © April 22, 2014 DFI Inc.