

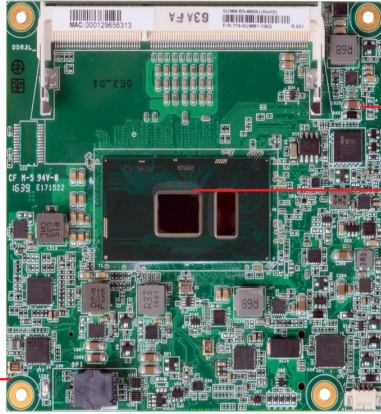


**6th Gen Intel® Core™ Processor  
COM Express® Compact**



# SU968

**ULT**



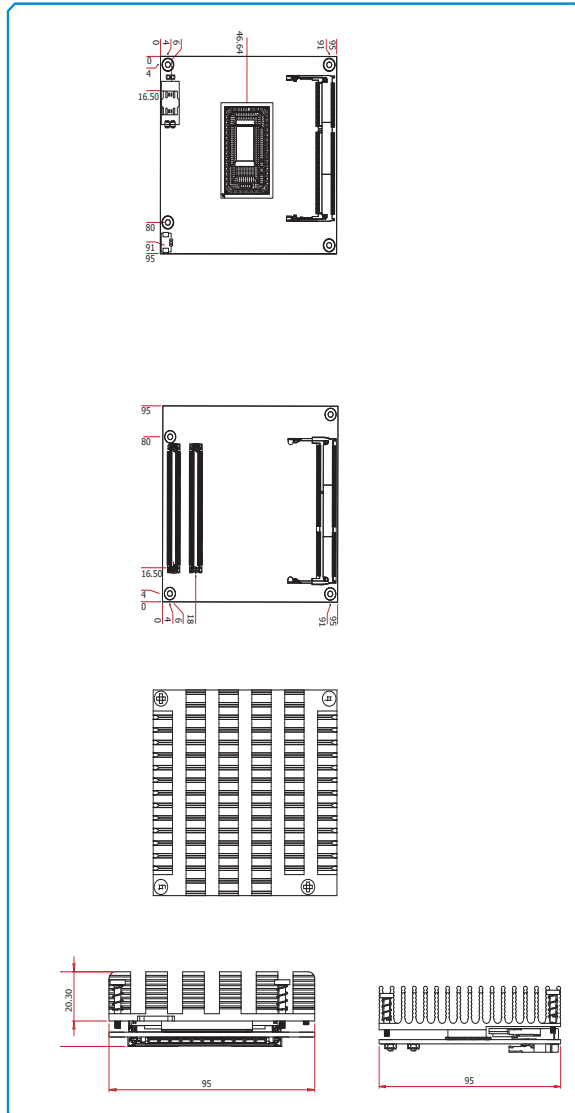
## Features

- Dual channel DDR3L 1600MHz SODIMM up to 16GB
- Three independent displays: VGA\*/DDI + LVDS\*/eDP + DDI
- DP++ supports 4K x 2K resolution
- Multiple expansion: 8 PCIe x1, 1 LPC, 1 I<sup>2</sup>C, 1 SMBus
- Rich I/O: 1 Intel GbE, 4 USB 3.0, 8 USB 2.0

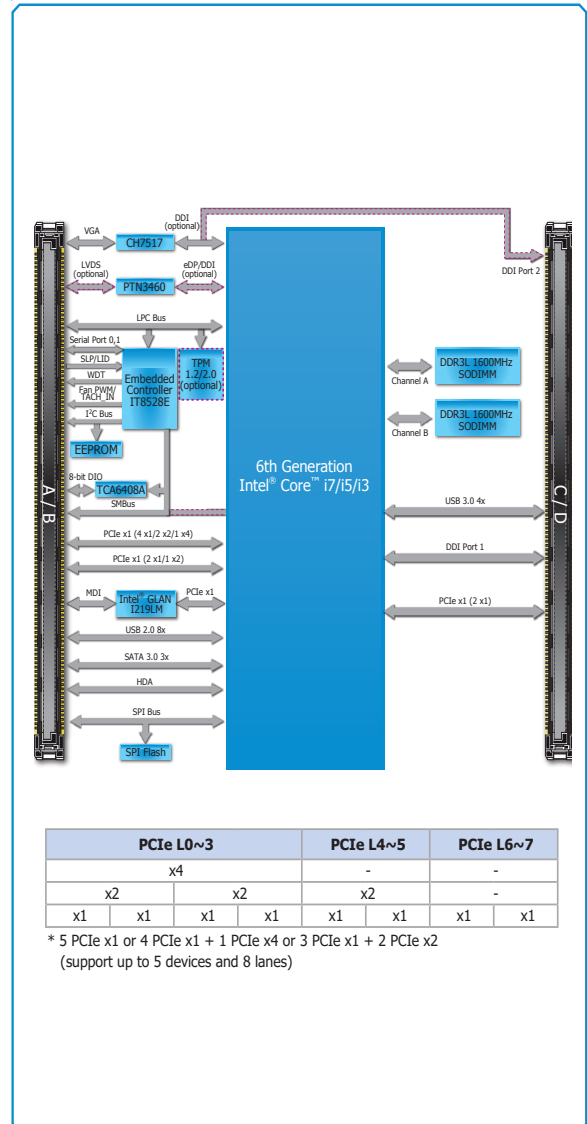
\* Populated by default



## Mechanical Drawing



## Block Diagram





### Specifications

|                    |                        |  |  |
|--------------------|------------------------|--|--|
| <b>SYSTEM</b>      | <b>Processor</b>       | 6th Generation Intel® Core™ Processors, BGA 1356<br>Intel® Core™ i7-6600U Processor, Dual Core, 4M Cache, 2.6GHz (3.4GHz), 15W<br>Intel® Core™ i5-6300U Processor, Dual Core, 3M Cache, 2.4GHz (3.0GHz), 15W<br>Intel® Core™ i3-6100U Processor, Dual Core, 3M Cache, 2.3GHz, 15W<br>Intel® Celeron® Processor 3955U, Dual Core, 2M Cache, 2.0GHz, 15W |  |
|                    | <b>Memory</b>          | Two 204-pin SODIMM up to 16GB  | Dual Channel DDR3L 1600MHz   |
|                    | <b>BIOS</b>            | Insyde SPI 128Mbit   |  |
|                    | <b>GRAPHICS</b>        | <b>Controller</b>  | Intel® HD Graphics   |
|                    | <b>Feature</b>         | OpenGL 5.0, DirectX 12, OpenCL 2.1<br>HW Decode: AVC/H.264, MPEG2, VC1/WMV9, JPEG/MJPEG, HEVC/H265, VP8, VP9<br>HW Encode: AVC/H.264, MPEG2, JPEG, HEVC/H265, VP8, VP9   |  |
|                    | <b>Display</b>         | 1 x VGA/DDI (DDI available upon request)<br>1 x LVDS/eDP (eDP available upon request)<br>1 x DDI   | VGA: resolution up to 1920x1200 @ 60Hz<br>LVDS: dual channel 24-bit, resolution up to 1920x1200 @ 60Hz<br>HDMI: resolution up to 4096x2160 @ 24Hz or 2560x1600 @ 60Hz<br>DP++: resolution up to 4096x2304 @ 60Hz<br>eDP: resolution up to 4096x2304 @ 60Hz |
|                    | <b>Triple Displays</b> | VGA + LVDS + DDI   | DDI + eDP + DDI  |
|                    | <b>EXPANSION</b>       | <b>Interface</b>   | 5 PCIe x1 or 4 PCIe x1 + 1 PCIe x4 or 3 PCIe x1 + 2 PCIe x2 (support up to 5 devices and 8 lanes)<br>1 x LPC<br>1 x I <sup>2</sup> C<br>1 x SMBus<br>2 x UART (TX/RX)  |
| <b>AUDIO</b>       | <b>Interface</b>       | HD Audio   |  |
| <b>ETHERNET</b>    | <b>Controller</b>      | 1 x Intel® I219LM with iAMT11.0 PCIe (10/100/1000Mbps) (only Core i7/i5 supports iAMT)   |  |
| <b>I/O</b>         | <b>USB</b>             | 4 x USB 3.0<br>8 x USB 2.0   |  |
|                    | <b>SATA</b>            | 3 x SATA 3.0 (up to 6Gb/s)<br>RAID 0/1/5/10  |  |
|                    | <b>DIO</b>             | 1 x 8-bit DIO  |  |
|                    | <b>WATCHDOG TIMER</b>  | <b>Output &amp; Interval</b>   | System Reset, Programmable via Software from 1 to 255 Seconds  |
| <b>SECURITY</b>    | <b>TPM</b>             | Available Upon Request   |  |
| <b>POWER</b>       | <b>Type</b>            | 12V, 5VSB, VCC_RTC (ATX mode)  | 12V, VCC_RTC (AT mode)   |
|                    | <b>Consumption</b>     | Typical: I7-6600U: 12V @ 0.86A (10.28Watt)<br>Max.: I7-6600U: 12V @ 1.372A (16.46Watt)   |  |
| <b>OS SUPPORT</b>  |                        | Windows 7/WES7 (32/64-bit)<br>Windows 8.1 (64-bit)<br>Windows 10 IoT Enterprise (64-bit)   | Ubuntu 16.04 (Intel graphic driver available)  |
| <b>ENVIRONMENT</b> | <b>Temperature</b>     | Operating: 0 to 60°C<br>-40 to 85°C (with cooler)  | Storage: -40 to 85°C   |
|                    | <b>Humidity</b>        | Operating: 5 to 90% RH   | Storage: 5 to 90% RH   |
|                    | <b>MTBF</b>            | 921,923 hrs @ 25°C; 460,715 hrs @ 45°C; 256,677 hrs @ 60°C<br>Calculation Model: Telcordia Issue 2, Method Case 3<br>Environment: GB, GC – Ground Benign, Controlled   |  |
| <b>MECHANICAL</b>  | <b>Dimensions</b>      | COM Express® Compact   | 95mm (3.74") x 95mm (3.74")  |
|                    | <b>Compliance</b>      | PICMG COM Express® R2.1, Type 6  |  |

### Ordering Information

| Model Name            | P/N             | Processor | Memory   | VGA/DDI | LVDS/eDP | GbE | USB 3.0 | USB 2.0 | SATA | Power  | Thermal | Temp.     |
|-----------------------|-----------------|-----------|----------|---------|----------|-----|---------|---------|------|--------|---------|-----------|
| <b>SU968-BS-6600U</b> | 770-SU9681-100G | i7-6600U  | 2 SODIMM | VGA     | LVDS     | 1   | 4       | 8       | 3    | ATX/AT | Fanless | 0 to 60°C |
| <b>SU968-BS-6300U</b> | 770-SU9681-400G | i5-6300U  | 2 SODIMM | VGA     | LVDS     | 1   | 4       | 8       | 3    | ATX/AT | Fanless | 0 to 60°C |
| <b>SU968-BS-3955U</b> | 770-SU9681-500G | 3955U     | 2 SODIMM | VGA     | LVDS     | 1   | 4       | 8       | 3    | ATX/AT | Fanless | 0 to 60°C |

Note: i3-6100U is supported upon request with MOQ requirement.

### Packing List

|                                |                 |
|--------------------------------|-----------------|
| • 1 SU968 board                |                 |
| • 1 DVD                        |                 |
| • 1 Heat sink (Height: 23.8mm) | A71-011060-000G |

### Optional Items

|                                |                 |
|--------------------------------|-----------------|
| • COM332-B carrier board kit   | 770-CM3321-000G |
| • Heat spreader (Height: 11mm) | A71-011070-000G |

## Assured Systems

Assured Systems is a leading technology company with over 1,500 regular clients in 80 countries, deploying over 85,000 systems to a diverse customer base in 12 years of business. We offer high-quality and innovative rugged computing, display, networking and data collection solutions to the embedded, industrial, and digital-out-of-home market sectors.

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