

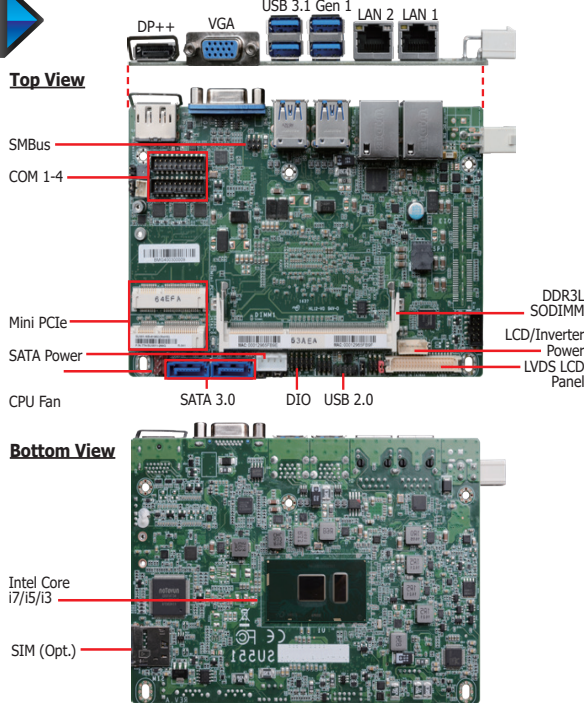


7th/6th Gen Intel® Core™
3.5"



SU551

ULT



Features

- 1 DDR3L SODIMM up to 8GB
- Three independent displays: VGA + LVDS + DP++
- DP++ resolution up to 4096x2304 @ 60Hz
- Wireless communication: Mini PCIe
- Rich I/O: 2 Intel GbE, 4 COM, 4 USB 3.1 Gen 1, 2 USB 2.0

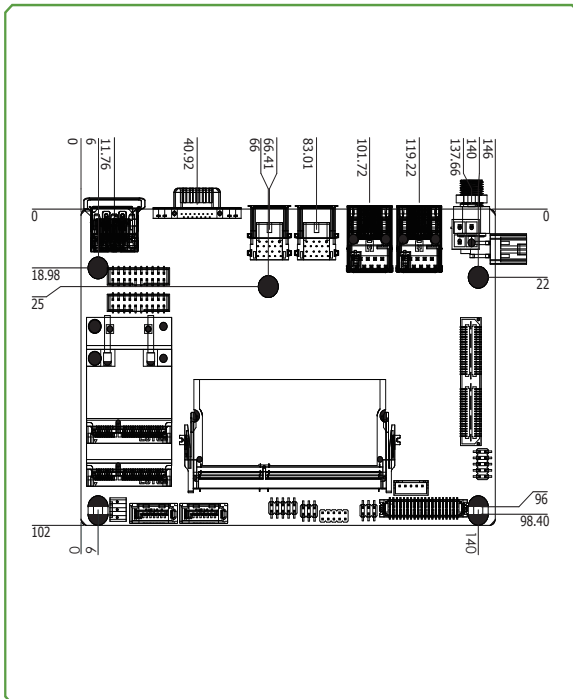


Ordering Information

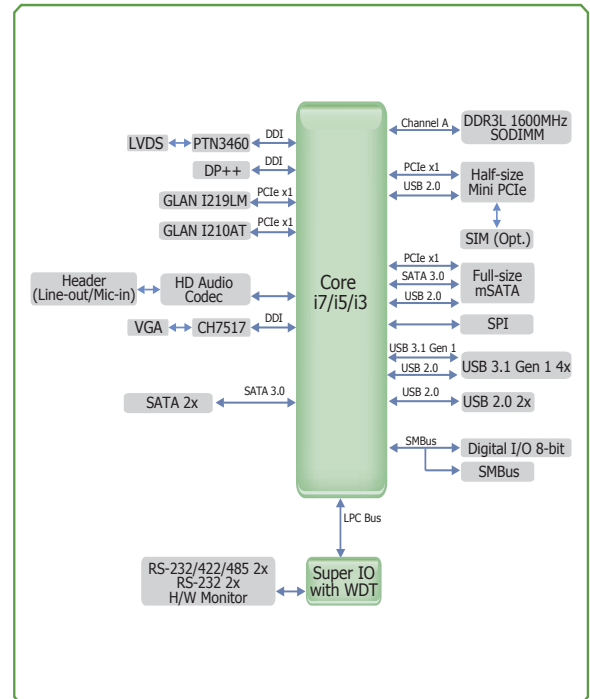
*Note 1: -20~70°C models are supported upon request with MOQ requirement.
Note 2: Support Kaby Lake CPU upon request.

| Model Name | P/N | Processor | Memory | GbE | RS-232/422/485 | RS-232 | USB 3.1 Gen 1 | USB 2.0 | Power | Thermal | Temp. |
|----------------|-----------------|-----------|----------|-----|----------------|--------|---------------|---------|--------|---------|-------------|
| SU551-NB-6300U | 770-SU5511-000G | i5-6300U | 1 SODIMM | 2 | 2 | 2 | 4 | 2 | 12V DC | Fanless | 0 to 60°C |
| SU551-NB-3955U | 770-SU5511-100G | 3955U | 1 SODIMM | 2 | 2 | 2 | 4 | 2 | 12V DC | Fanless | 0 to 60°C |
| SU551-NB-6100U | 770-SU5511-200G | i3-6100U | 1 SODIMM | 2 | 2 | 2 | 4 | 2 | 12V DC | Fanless | 0 to 60°C |
| SU551-NB-6600U | 770-SU5511-300G | i7-6600U | 1 SODIMM | 2 | 2 | 2 | 4 | 2 | 12V DC | Fanless | 0 to 60°C |
| SU551-NE-6600U | 770-SU5511-400G | i7-6600U | 1 SODIMM | 2 | 2 | 2 | 4 | 2 | 12V DC | Fanless | -20 to 70°C |
| SU551-NE-6300U | 770-SU5511-500G | i5-6300U | 1 SODIMM | 2 | 2 | 2 | 4 | 2 | 12V DC | Fanless | -20 to 70°C |

Mechanical Drawing



Block Diagram





Specifications

| | | | |
|-----------------------|------------------------------|--|---|
| SYSTEM | Processor | 6th Generation Intel® Core™ Processors, BGA 1356 Intel® Core™ i7-6600U Processor, Dual Core, 4M Cache, 2.6GHz (3.4GHz), 15W Intel® Core™ i5-6300U Processor, Dual Core, 3M Cache, 2.4GHz (3.0GHz), 15W Intel® Core™ i3-6100U Processor, Dual Core, 3M Cache, 2.3GHz, 15W Intel® Celeron® Processor 3955U, Dual Core, 2M Cache, 2.0GHz, 15W 7th Generation Intel® Core™ Processors, BGA 1356 Intel® Core™ i7-7600U Processor, Dual Core, 4M Cache, 2.8GHz (3.9GHz), 15W Intel® Core™ i5-7300U Processor, Dual Core, 3M Cache, 2.6GHz (3.5GHz), 15W Intel® Core™ i3-7100U Processor, Dual Core, 3M Cache, 2.4GHz, 15W Intel® Celeron® Processor 3965U, Dual Core, 2M Cache, 2.2GHz, 15W | |
| | Memory | One 204-pin SODIMM up to 8GB | Single Channel DDR3L 1600MHz |
| | BIOS | Insyde SPI 128Mbit | |
| GRAPHICS | Controller | Intel® HD Graphics GT Series | |
| | Feature | OpenGL 5.0, DirectX 12, OpenCL 2.1 HW Decode: AVC/H.264, MPEG2, VC1/WMV9, JPEG/MJPEG, HEVC/H265, VP8, VP9 HW Encode: AVC/H.264, MPEG2, JPEG, HEVC/H265, VP8, VP9 | |
| | Display | 1 x VGA 1 x LVDS 1 x DP++ | VGA: resolution up to 1920x1200 @ 60Hz LVDS: dual channel 48-bit, resolution up to 1920x1200 @ 60Hz DP++: resolution up to 4096x2304 @ 60Hz |
| EXPANSION | Triple Displays | VGA + LVDS + DP++ | |
| | Interface | 1 x Full-size Mini PCIe (PCIe/USB/SATA, SATA by default) 1 x Half-size Mini PCIe (PCIe/USB, PCIe by default) 1 x SIM (supported by half-size Mini PCIe) (available upon request) | |
| AUDIO | Audio Codec | Realtek ALC888S-VD2-GR | |
| ETHERNET | Controller | 1 x Intel® I210AT PCIe (10/100/1000Mbps) 1 x Intel® I219LM PCIe with iAMT11.0 (10/100/1000Mbps) (only Core i7/i5 supports iAMT) | |
| REAR I/O | Ethernet | 2 x GbE (RJ-45) | |
| | USB | 4 x USB 3.1 Gen 1 | |
| | Display | 1 x VGA 1 x DP++ | |
| INTERNAL I/O | Serial | 2 x RS-232/422/485 (2.0mm pitch) 2 x RS-232 (2.0mm pitch) | |
| | USB | 2 x USB 2.0 (2.0mm pitch) | |
| | Display | 1 x LVDS LCD Panel Connector | 1 x LCD/Inverter Power |
| | Audio | 1 x Audio (Line-out/Mic-in) | |
| | SATA | 2 x SATA 3.0 (up to 6Gb/s) | 1 x SATA Power |
| | DIO | 1 x 8-bit DIO | |
| | SMBus | 1 x SMBus | |
| WATCHDOG TIMER | Output & Interval | System Reset, Programmable via Software from 1 to 255 Seconds | |
| POWER | Type | Single 12V +/-10% DC | |
| | Connector | Right Angle Connector (4-pin) | DC Jack (available upon request) Vertical Type Connector (4-pin) (available upon request) |
| | Consumption | Typical: 6300U:12V @ 0.40A (4.80Watt) Max.: 6300U:12V @ 2.08A (24.96Watt) | |
| | RTC Battery | CR2032 Coin Cell | |
| OS SUPPORT | Microsoft | Windows 7 (/WES7) 32/64-bit Windows 8.1 (64-bit) Windows 10 IoT Enterprise 64-bit | |
| | Linux | Debian 8 (with VESA graphic driver) CentOS 7 (with VESA graphic driver) Linux | |
| ENVIRONMENT | Temperature | Operating: 0 to 60°C (Opt. -20 to 70°C) | Storage: -40 to 85°C |
| | Humidity | Operating: 5 to 90% RH | Storage: 5 to 90% RH |
| | MTBF | SU551 : 430,978 hrs @ 25°C; 253,129 hrs @ 45°C ; 157,798 hrs @ 60°C | |
| MECHANICAL | Dimensions | 3.5" SBC Form Factor | 146mm (5.75") x 102mm (4.02") |
| | Height | PCB: 1.6mm | Top Side: 15.5mm, Bottom Side: 4.0mm |
| CERTIFICATIONS | CE, FCC, RoHS | | |

Packing List

| | |
|---|-----------------|
| • 1 SU551 board | |
| • 1 COM port cable (Length: 300mm, 2 x COM ports) | A81-015020-001G |
| • 1 Serial ATA data cable (Length: 500mm) | 332-553001-005G |
| • 1 Serial ATA data cable (Length: 300mm) | 332-553001-205G |
| • 1 Serial ATA power cable (Length: 250mm) | A81-004041-016G |
| • 1 Heat sink 0 to 60°C (Height: 20.85mm) | A71-011084-000G |
| • 1 Heat sink wide temp (Height: 30.85mm) | A71-011083-000G |

Optional Items

| | |
|----------------------------------|-----------------|
| • USB port cable (Length: 200mm) | A81-001032-016G |
| • Power adapter (60W, 12V) | 671-106012-000G |
| • Heat spreader (Height: 11mm) | A71-011078-000G |
| • 1 Audio cable (Length: 160mm) | A81-022007-016G |

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