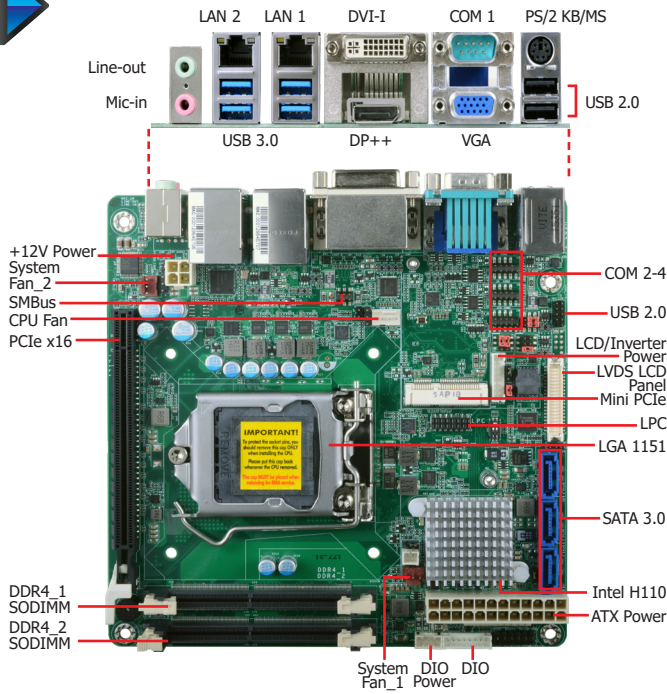


SD100-H110

Desktop

H110

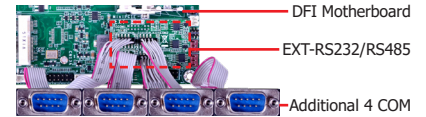


Features

- 2 DDR4 SODIMM up to 32GB
- Four display ports support two independent displays: VGA + LVDS + DVI-I + DP++
- DP++ resolution up to 4096x2304 @ 60Hz
Dual Channel LVDS resolution up to 1920x1200 @ 60Hz
- Multiple expansion: 1 PCIe x16, 1 Mini PCIe
- Rich I/O: 2 Intel GbE, 4 COM, 4 USB 3.0, 4 USB 2.0
- LPC EXT-RS232/485 module extends additional 4 COM ports



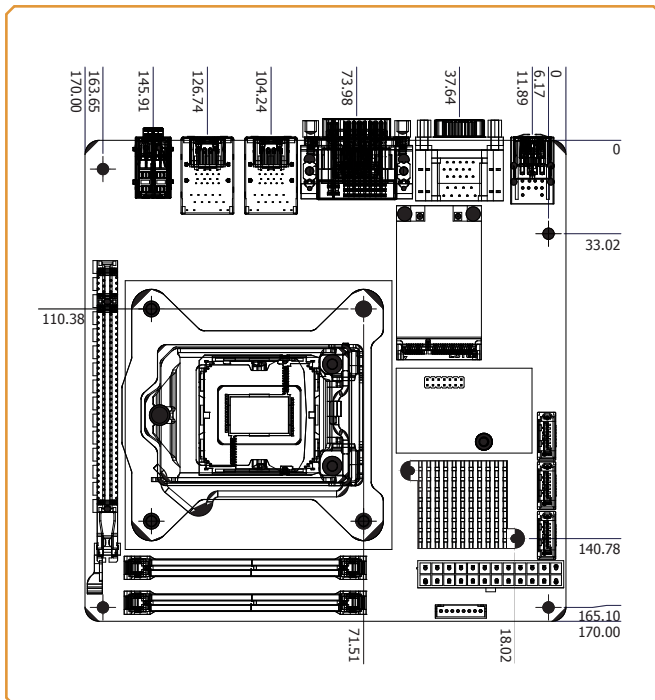
2 Extension Modules for Additional 4 COM Ports (via the LPC connector)



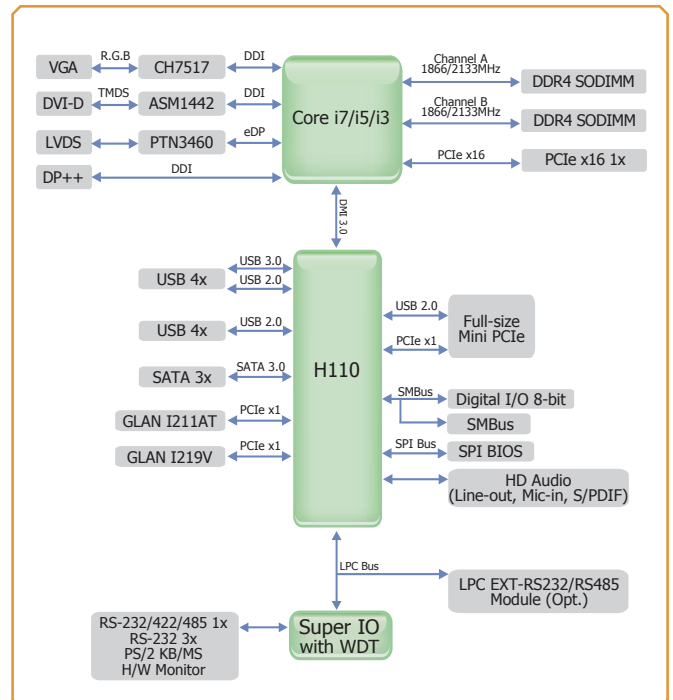
Ordering Information

| Model Name | P/N | Memory | GbE | RS-232/422/485 | RS-232 | USB 3.0 | USB 2.0 | Power | Thermal | Temp. |
|-------------|-----------------|----------|-----|----------------|--------|---------|---------|------------|---------|-----------|
| SD100-H110N | 770-SD1002-100G | 2 SODIMM | 2 | 1 | 3 | 4 | 4 | 24-pin ATX | Active | 0 to 60°C |

Mechanical Drawing



Block Diagram



Specifications

| | | | | |
|-----------------------|---------------------------|---|--|--|
| SYSTEM | Processor | 7th Generation Intel® Core™ Processors, LGA 1151 Socket Intel® Core™ i7-7700 Processor, Quad Core, 8M Cache, 3.6GHz (4.2GHz), 65W Intel® Core™ i5-7500 Processor, Quad Core, 6M Cache, 3.4GHz (3.8GHz), 65W Intel® Core™ i3-7101E Processor, Dual Core, 3M Cache, 3.9GHz, 65W 6th Generation Intel® Core™ Processors, LGA 1151 Socket Intel® Core™ i7-6700, Quad Core, 8M Cache, 3.4GHz (4.0GHz), 65W Intel® Core™ i7-6700TE, Quad Core, 8M Cache, 2.4GHz (3.4GHz), 35W Intel® Core™ i5-6500, Quad Core, 6M Cache, 3.2GHz (3.6GHz), 65W Intel® Core™ i5-6500TE, Quad Core, 6M Cache, 2.3GHz (3.3GHz), 35W Intel® Core™ i3-6100, Dual Core, 3M Cache, 3.7GHz, 47W Intel® Core™ i3-6100TE, Dual Core, 4M Cache, 2.7GHz, 35W Intel® Pentium® G4400, Dual Core, 3M Cache, 3.3GHz, 47W Intel® Pentium® G4400TE, Dual Core, 3M Cache, 2.4GHz, 35W Intel® Celeron® Processor G3900, Dual Core, 2M Cache, 2.8GHz, 65W Intel® Celeron® Processor G3900TE, Dual Core, 2M Cache, 2.6GHz, 35W | | |
| | Chipset | Intel® H110 | | |
| | Memory | Two 260-pin SODIMM up to 32GB | Dual Channel DDR4 1866/2133MHz | |
| | BIOS | Insyde SPI 128Mbit | | |
| | GRAPHICS | Controller | Intel® HD Gen 9 Graphics | |
| GRAPHICS | 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: MPEG2, AVC/H264, JPEG, HEVC/H265, VP8, VP9 | | |
| | Display | 1 x VGA 1 x LVDS 1 x DVI-I (DVI-D signal) 1 x DP++ | VGA: resolution up to 1920x1200 @ 60Hz LVDS: dual channel, resolution up to 1920x1200 @ 60Hz DVI-I: resolution up to 1920x1200 @ 60Hz DP: resolution up to 4096x2304 @ 60Hz | |
| | Dual Displays | VGA + LVDS VGA + DP++ | LVDS + DVI-I (DVI-D signal) LVDS + DP++ | |
| | EXPANSION | Interface | 1 x PCIe x16 (Gen 3) 1 x Full-size Mini PCIe | |
| AUDIO | Audio Codec | Realtek ALC888S-VD2-GR | | |
| ETHERNET | Controller | 1 x Intel® I211AT PCIe (10/100/1000Mbps) | 1 x Intel® I219V PCIe (10/100/1000Mbps) | |
| REAR I/O | Ethernet | 2 x GbE (RJ-45) | | |
| | Serial | 1 x RS-232 (DB-9) | | |
| | USB | 4 x USB 3.0 | 2 x USB 2.0 | |
| | PS/2 | 1 x PS/2 (mini-DIN-6) | | |
| | Display | 1 x VGA 1 x DVI-I (DVI-D signal) 1 x DP++ | | |
| | Audio | 1 x Line-in (available upon request) 1 x Line-out 1 x Mic-in | | |
| | INTERNAL I/O | Serial | 1 x RS-232/422/485 (RS-232 w/ power) (2.00mm pitch) 2 x RS-232 (2.00mm pitch) | |
| INTERNAL I/O | USB | 2 x USB 2.0 (2.00mm pitch) | | |
| | Display | 1 x LVDS LCD Panel Connector | 1 x LCD/Inverter Power | |
| | Audio | 1 x S/PDIF | | |
| | SATA | 3 x SATA 3.0 (up to 6Gb/s) | | |
| | DIO | 1 x 8-bit DIO | | |
| | LPC | 1 x LPC (supports LPC EXT-RS232/RS485 module) | | |
| | SMBus | 1 x SMBus | | |
| | WATCHDOG TIMER | Output & Interval | System Reset, Programmable via Software from 1 to 255 Seconds | |
| | POWER | Type | ATX | |
| Connector | | 4-pin ATX 12V power | 24-pin ATX power | |
| Consumption | | Typical: i7 65W: 12V @ 1.32A (15.89Watt) Max.: i7 65W: 12V @ 7.73A (92.76Watt) | | |
| RTC Battery | | CR2032 Coin Cell | | |
| OS SUPPORT | Microsoft/Linux | Windows 7 (/WES7) 32/64-bit Windows 8.1 (64-bit) Windows 10 IoT Enterprise 64-bit Note: 7th Gen Intel Core processors only support Win 10. | Debian 8 (with VESA graphic driver) CentOS 7 (with VESA graphic driver) Linux | |
| ENVIRONMENT | Temperature | Operating: 0 to 60°C | Storage: -40 to 85°C | |
| | Humidity | Operating: 5 to 90% RH | Storage: 5 to 90% RH | |
| | MTBF | 434,223 hrs @ 25°C; 251,029 hrs @ 45°C ; 157,975 hrs @ 60°C Calculation model: Telcordia Issue 2, Method I Case 3 Environment: GB, GC – Ground Benign, Controlled | | |
| MECHANICAL | Dimensions | Mini-ITX Form Factor | 170mm (6.7") x 170mm (6.7") | |
| | Height | PCB: 1.6mm | Top Side: 20mm, Bottom Side: 3mm | |
| CERTIFICATIONS | CE, FCC Class B, RoHS, UL | | | |

Packing List

| | |
|---|-----------------|
| • 1 SD100-H110 motherboard | |
| • 1 COM port cable (Length: 250mm, 1 x COM ports) | A81-015011-001G |
| • 1 Serial ATA data cable (Length: 500mm) | 332-553001-005G |
| • 1 I/O shield | A49-SD3300-001G |

Optional Items

| | |
|---|-----------------|
| • USB port cable (Length: 200mm) | A81-001032-016G |
| • COM port cable (Length: 250mm, 1 x COM ports) | A81-015011-001G |
| • Serial ATA data cable (Length: 500mm) | 332-553001-005G |
| • Thermal solution (For 35W, Height: 37.3mm) | A71-103004-000G |
| • Thermal solution (For 65W, Height: 72.8mm) | 552-200049-000G |
| • LPC EXT-RS232 module (4 x RS232 ports) | 770-EXTRS1-000G |
| • LPC EXT-RS485 module (4 x RS485 ports) | 770-EXTRS1-100G |
| • DT122 Chassis | 761-DT1220-200G |