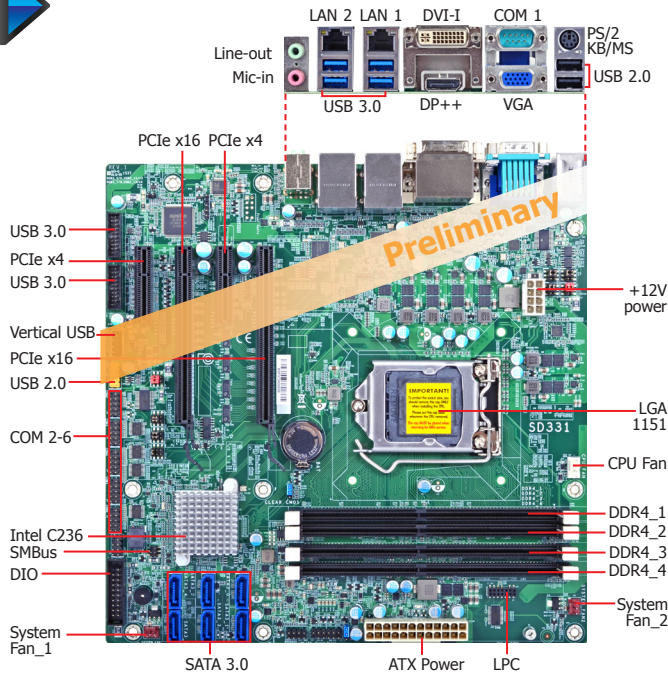


SD331-C236

Workstation

C236



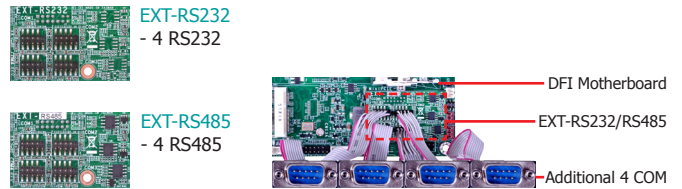
Preliminary

Features

- 4 DDR4 ECC DIMM up to 64GB
- Three independent displays: VGA + DVI-I + DP++
- DP++ resolution up to 4096x2304 @ 60Hz
- Multiple expansion: 2 PCIe x16 (1 x16 or 2 x8 signal), 2 PCIe x4, 1 LPC
- Rich I/O: 2 Intel GbE, 6 COM, 8 USB 3.0, 6 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)



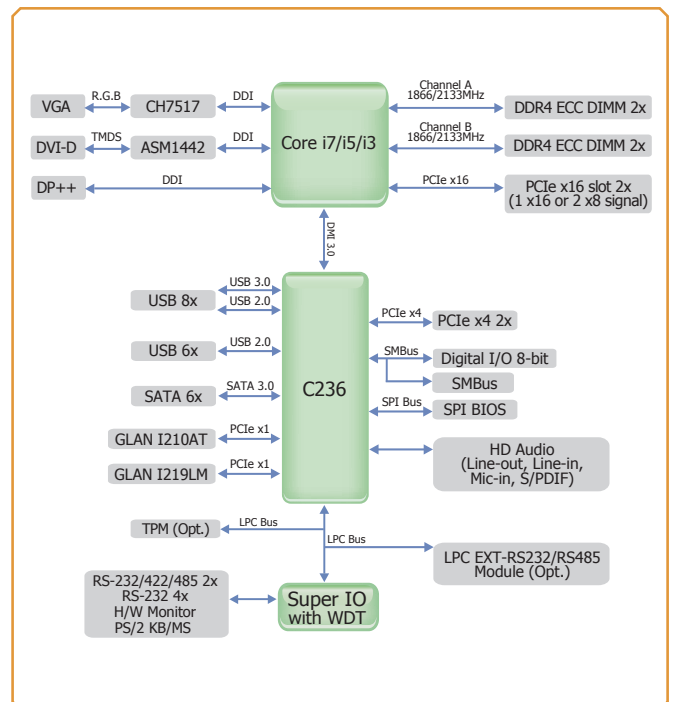
Ordering Information

| Model Name | P/N | Memory | GbE | RS-232/422/485 | RS-232 | USB 3.0 | USB 2.0 | Power | Thermal | Temp. |
|------------|-----------------|--------|-----|----------------|--------|---------|---------|------------|---------|-----------|
| SD331-C236 | 770-SD3311-100G | 4 DIMM | 2 | 2 | 4 | 8 | 6 | 24-pin ATX | Active | 0 to 60°C |

Mechanical Drawing



Block Diagram



Specifications

| | | | |
|-----------------------|------------------------------|--|---|
| SYSTEM | Processor | 6th Generation Intel® Core™ Processors, LGA 1151 Socket Intel® Xeon® Processor E3-1275 v5, Quad Core, 8M Cache, 3.6GHz (4.0GHz), 80W (ECC Supported) Intel® Xeon® Processor E3-1225 v5, Quad Core, 6M Cache, 3.3GHz (3.7GHz), 80W (ECC Supported) Intel® Xeon® Processor E3-1268L v5, Quad Core, 8M Cache, 2.4GHz (3.4GHz), 35W (ECC Supported) Intel® Core™ i7-6700 Processor, Quad Core, 8M Cache, 3.4GHz (4.0GHz), 65W Intel® Core™ i7-6700TE Processor, Quad Core, 8M Cache, 2.4GHz (3.4GHz), 35W Intel® Core™ i5-6500 Processor, Quad Core, 6M Cache, 3.2GHz (3.6GHz), 65W Intel® Core™ i5-6500TE Processor, Quad Core, 6M Cache, 2.3GHz (3.3GHz), 35W Intel® Core™ i3-6100 Processor, Dual Core, 4M Cache, 65W Intel® Core™ i3-6100TE Processor, Dual Core, 4M Cache, 2.7GHz, 35W (ECC Supported) Intel® Pentium® Processor G4400, Dual Core, 3M Cache, 3.3GHz, 65W Intel® Pentium® Processor G4400TE, Dual Core, 3M Cache, 2.9GHz, 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® C236 Chipset | |
| | Memory | Four 288-pin ECC DIMM up to 64GB | Dual Channel DDR4 1866/2133MHz |
| | BIOS | Insyde SPI 128Mbit | |
| | GRAPHICS | Controller | Intel® HD Gen 9 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 DVI-I (DVI-D signal) 1 x DP++ | VGA: resolution up to 1920x1200 @ 60Hz DVI-I: resolution up to 1920x1200 @ 60Hz DP++: resolution up to 4096x2304 @ 60Hz |
| | Triple Displays | VGA + DVI-I (DVI-D signal) + DP++ | |
| EXPANSION | Interface | 2 x PCIe x16 (1 x16 or 2 x8 signal) (Gen 3) 2 x PCIe x4 (Gen 3) | |
| 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 3.0 2 x USB 2.0 | |
| | Serial | 1 x RS-232/422/485 (RS-232 w/ power) (DB-9) | |
| | 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-out, 1 x Mic-in, 1 x Line-in (available upon request) | |
| | INTERNAL I/O | Serial | 1 x RS-232/422/485 (RS-232 w/ power) (2.54mm pitch) 4 x RS-232 (2.54mm pitch) |
| | USB | 4 x USB 3.0 (2.00mm pitch) 4 x USB 2.0 (2.54mm pitch) or 2 x USB 2.0 (2.54mm pitch) + 1 x Vertical USB 2.0 (type A) (available upon request) | |
| | Audio | 1 x Audio (Line-out/Mic-in) 1 x S/PDIF | |
| | SATA | 6 x SATA 3.0 (up to 6Gb/s) | RAID 0/1/5/10 |
| | GPIO | 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 | |
| SECURITY | TPM | Available Upon Request | |
| POWER | Type | ATX | |
| | Connector | 8-pin ATX 12V power | 24-pin ATX power |
| | Consumption | Typical: Xeon 80W: 12V @ 3.43A (41.18Watt) Max.: Xeon 80W: 12V @ 6.87A (82.41Watt) | |
| | RTC Battery | CR2032 Coin Cell | |
| OS SUPPORT | | Windows 7 (/WES7) 32/64-bit Windows 8.1 (64-bit) Windows 10 IoT Enterprise 64-bit | Debian 8 (with VESA graphic driver) CentOS 7 (with VESA graphic driver) Ubuntu 15.10 (Intel graphic driver available) |
| ENVIRONMENT | Temperature | Operating: 0 to 60°C | Storage: -40 to 85°C |
| | Humidity | Operating: 5 to 90% RH | Storage: 5 to 90% RH |
| | MTBF | 374,618 hrs @ 25°C; 211,926 hrs @ 45°C; 133,291 hrs @ 60°C Calculation Model: Telcordia Issue 2, Method Case 3 Environment: GB, GC – Ground Benign, Controlled | |
| MECHANICAL | Dimensions | microATX form factor | 244mm (9.6") x 244mm (9.6") |
| | Height | PCB: TBD | Top Side: TBD, Bottom Side: TBD |

Packing List

| | |
|---|-----------------|
| • 1 SD331-C236 motherboard | |
| • 1 COM port cables (Length: 260mm) | 332-054028-004G |
| • 1 Serial ATA data cable (Length: 500mm) | 332-553001-005G |
| • 1 I/O shield | A49-SD3300-000G |
| • 1 DVD | |

Optional Items

| | |
|--|-----------------|
| • USB 2.0 port cable (Length: 350/398mm) | 332-253010-026G |
| • USB 3.0 port cable (Length: TBD) | TBD |
| • COM port cable (Length: 260mm) | 332-054028-004G |
| • 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 |
| • Thermal solution (For 95W, Height: 69.3mm) | 761-103001-000G |
| • LPC EXT-RS232 module (4 x RS232 ports) | 770-EXTRS1-000G |
| • LPC EXT-RS485 module (4 x RS485 ports) | 770-EXTRS1-100G |