

Features

- 12th/13th/14th Generation Intel® Core™ and Series 2 Processors
- DDR5 SODIMM 4800 x 2, up to 64 GB
- Triple Display: HDMI 2.0 x 1, eDP x 1, VGA x 1
- Intel® I226 2.5GbE x 3, Intel® I219-LM GbE x 1
- USB 3.2 Gen 2 x 2 (Rear I/O), USB 2.0 x 2 (Pin Header)
- M.2 2280 M-key x 1, M.2 3052 B-key x 1, M.2 2230 E-key x 1, FPC (PCIe3.0[x2] x 1), PCIe4.0[x8] x 1
- COM Port x 2, GPIO 8-bit, DC 12V in

| | |
|----------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Video | HDMI 2.0 x 1, up to 3840 x 2160 @60Hz |
| Internal I/O | |
| USB | USB 2.0 x 2 |
| Serial Port | COM 1 (RS-232/422/485, supports RI only) COM 2 (RS-232/422/485, supports 12V/5V/RI) |
| Video | eDP 1.4 x 1, up to 3840 x 2160 VGA x 1, up to 1920 x 1080 |
| SATA | SATA 6Gb/s x 2 +5V SATA Power Connector x 2 |
| Audio | Audio Header x 1 |
| DIO/GPIO | GPIO 8-bits |
| SMBus/I2C | SMBus/I2C (change by BOM, I2C only for Windows 10) |
| Touch | — |
| Fan | 4 Pin Smart Fan |
| SIM | Nano SIM x 1 |
| Front Panel | Power Button, Reset Button, Power LED, SATA LED, Buzzer |
| Others | TCC x 1 (R680E sku only) |
| Expansion | |
| Mini PCI-E/mSATA | — |
| M.2 | M.2 2280 M-Key x 1 (PCIe 4.0 [x4], R680E & Q670E SKU support) M.2 3052 B-Key x 1 (PCIe 3.0 [x1] + USB 3.0) M.2 2230 E-Key x 1 (PCIe 3.0 [x1] + USB 2.0) |
| Others | PCIe 4.0 [x8] Slot x 1 (Supplies maximum 25W to the PCIe peripheral) FPC Connector x 1 (PCIe 3.0 [x2]) |
| Environment & Certification | |
| Operating Temperature | 32°F ~ 140°F (0°C ~ 60°C) (Note: To achieve the best performance, keeping the EPIC-BTS9 operating with 0.5m/sec airflow when DDR5 SODIMM1 installed on bottom side is recommended) |
| Storage Temperature | -40°F ~ 185°F (-40°C ~ 85°C) |
| Operating Humidity | 0% ~ 90% relative humidity, non-condensing |
| MTBF (Hours) | 353,666 |
| EMC | CE/FCC Class A |

Specifications

| | |
|---------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| System | |
| Form Factor | 4" EPIC Board |
| CPU | 14th Generation Intel® Core™ Processor (up to 35W/65W) 13th Generation Intel® Core™ Processor (up to 35W/65W) 12th Generation Intel® Core™ Processor (up to 35W/65W) Intel® Core™ processors (Series 2) (up to 35W/65W) |
| Chipset | Intel 600 Series Chipset (R680E/Q670E/H610E) |
| Memory Type | DDR5 4800 Dual Channel SODIMM x 2, up to 64GB (ECC support only for R680E) |
| BIOS | UEFI |
| Wake On Lan | Yes |
| Watchdog Timer | 255 Levels |
| Security | TPM 2.0 |
| RTC Battery | Lithium Battery 3V/240mAh |
| Dimension | 4.53" x 6.50" (115mm x 165mm) |
| OS Support | Windows® 10/11 (64-bit) Ubuntu 24.04.2/Kernel 6.14.0-27-generic x86_64 |
| Power | |
| Power Requirement | +12V, support ERP (Note: To achieve stable performance, using the power supply unit rated 22A@12V DC output, to meet the potential maximum peak requirement is recommended) |
| Power Supply Type | AT/ATX |
| Connector | 6-Pin Connector |
| Power Consumption | Intel® Core™ 7 Processor 251E, DDR5 32GB x 2, 24.76A @+12V (Max) |
| Display | |
| Controller | Intel® UHD Graphics 770 (i5 SKU and above) Intel® UHD Graphics 730 (i3 SKU) Intel® UHD Graphics 710 (Intel® Celeron® G6900TE SKU) |
| LVDS/eDP | eDP 1.4 x 1, up to 3840 x 2160 |
| Display Interface | HDMI 2.0 x 1, up to 3840 x 2160 @60Hz VGA x 1, up to 1920 x 1080 |
| Multiple Display | Up to 3 Simultaneous Displays |
| Audio | |
| CODEC | Realtek ALC897 |
| Audio Interface | Line-In/Line-Out/MIC |
| Speaker | — |
| External I/O | |
| Ethernet | Intel® Ethernet Controller I226, 2.5GbE RJ-45 x 3 Intel® Ethernet Connection I219, GbE RJ-45 x 1 |
| USB | USB 3.2 Gen 1 x 1 USB 3.2 Gen 2 x 1 |
| Serial Port | — |

Packing List

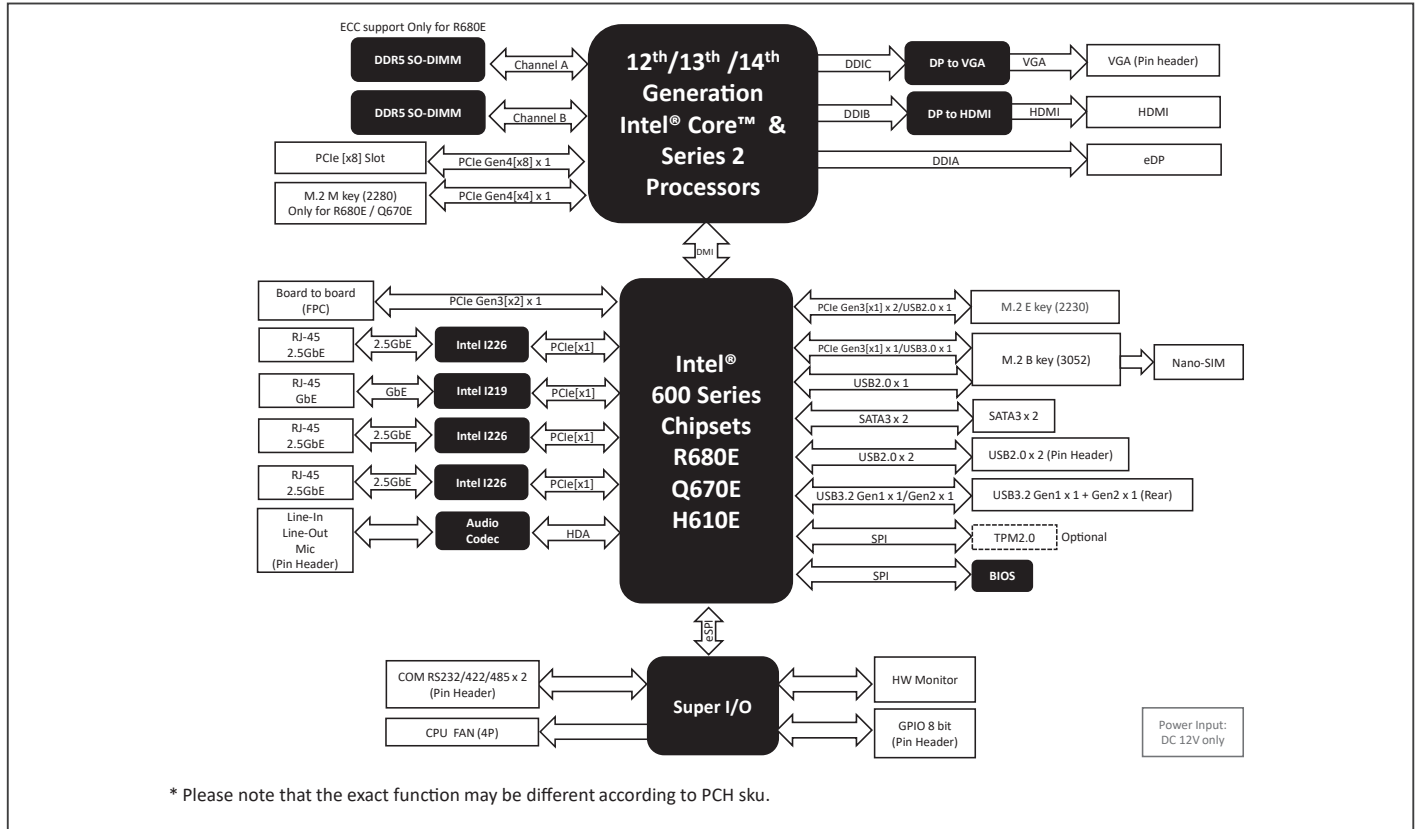
- EPIC-BTS9 x 1
- CPU Cooler Bracket x 2
- Screw Kit x 1

Optional Accessories

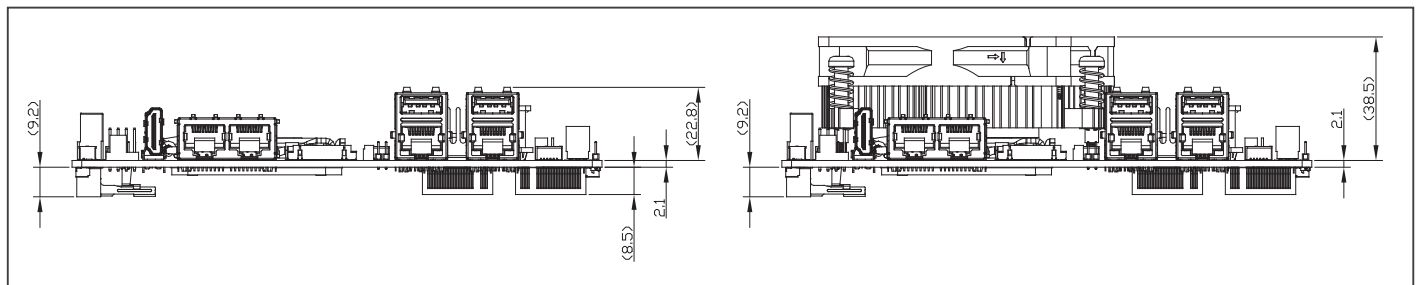
| Part Number | Description | QTY |
|-----------------|--------------------------------------------------|-----|
| 170X000593 | SATA cable, Length 15 cm | 1 |
| 1702150155 | SATA Power Cable, Length 15cm | 1 |
| 170X000231 | Dual COM Port, Length 30 cm | 1 |
| 1702200208 | 3 Pin ATX Cable | 1 |
| 170010010D | Dual USB2.0 Cable, Length 10 cm | 1 |
| 170X000517 | Audio Cable, Length 20 cm | 1 |
| 170X000603 | Front Panel Cable, Length 10 cm | 1 |
| 170X000823 | 3x2 DC in Power Cable | 1 |
| EPIC-RPS9-FAN01 | CPU Cooler for EPIC-ADS7 & EPIC-RPS9 & EPIC-BTS9 | 1 |



Block Diagram



Dimension Unit: mm



Ordering Information

| Part Number | CPU | Memory | Display | Storage | LAN | USB | COM Port | Expansion | TPM | Power | Operating Temperature | Others |
|--------------------|----------------------------------|---------------------------|----------------------------|-------------------|---------------------|--------------------------------------------------|-------------------|--------------------------------------------------------------------------------------------|-----|----------------------------|-----------------------|------------------------------------------|
| EPIC-BTS9-A11-0001 | LGA1700 Socket Type (with R680E) | DDR5 SODIMM x 2 | eDP x 1, HDMI x 1, VGA x 1 | SATA 6.0 Gbps x 2 | 2.5GbE x 3, GbE x 1 | USB3.2 Gen2 x 1 USB3.2 Gen1 x 1 USB2.0 x 2 | RS232/422/485 x 2 | M.2 2280 M-Key x 1, M.2 3052 B-Key x 1, M.2 2230 E-Key x 1, PCIe[x8] x 1, FPC x 1 | 2.0 | +12Vin (3x2 ATX Connector) | 0°C ~ 60°C | GPIO 8 bits, Nano SIM x 1, TCC x 1 |
| EPIC-BTS9-A11-0002 | LGA1700 Socket Type (with Q670E) | DDR5 SODIMM x 2 (Non-ECC) | eDP x 1, HDMI x 1, VGA x 1 | SATA 6.0 Gbps x 2 | 2.5GbE x 3, GbE x 1 | USB3.2 Gen2 x 1 USB3.2 Gen1 x 1 USB2.0 x 2 | RS232/422/485 x 2 | M.2 2280 M-Key x 1, M.2 3052 B-Key x 1, M.2 2230 E-Key x 1, PCIe[x8] x 1, FPC x 1 | 2.0 | +12Vin (3x2 ATX Connector) | 0°C ~ 60°C | GPIO 8 bits, Nano SIM x 1 |
| EPIC-BTS9-A11-0003 | LGA1700 Socket Type (with H610E) | DDR5 SODIMM x 2 (Non-ECC) | eDP x 1, HDMI x 1, VGA x 1 | SATA 6.0 Gbps x 2 | 2.5GbE x 3, GbE x 1 | USB3.2 Gen2 x 1 USB3.2 Gen1 x 1 USB2.0 x 2 | RS232/422/485 x 2 | M.2 3052 B-Key x 1, M.2 2230 E-Key x 1, PCIe[x8] x 1, FPC x 1 | 2.0 | +12Vin (3x2 ATX Connector) | 0°C ~ 60°C | GPIO 8 bits, Nano SIM x 1 |