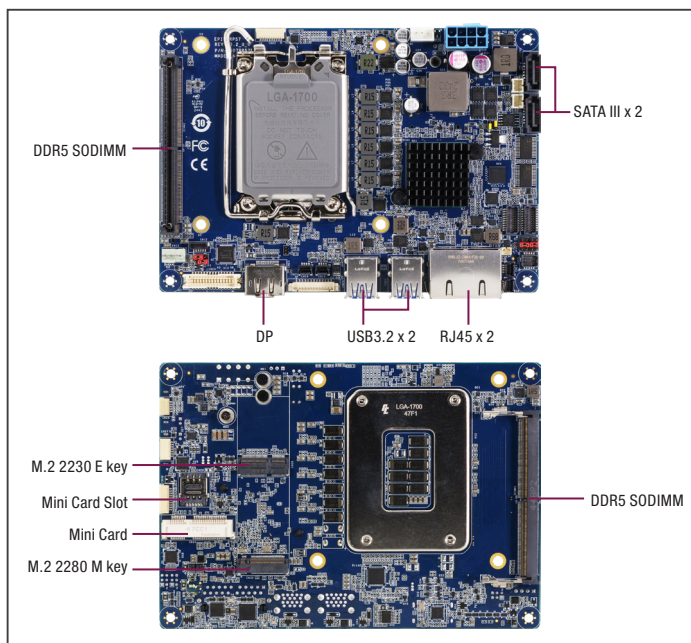


EPIC-BTS7 PRELIMINARY

EPIC Board with 12th/13th/14th Gen Intel® Core™ and Series 2 Processors



Features

- EPIC Board with 12th/13th/14th Gen Intel® Core™ and Series 2 Processors
- DDR5 SODIMM 4800/5200/5600 MT/s x 2, up to 64 GB
- Triple Display: DP x 1, VGA x 1, LVDS x 1
- 2.5GbE x 1, GbE x 1
- USB 3.2 Gen 2 x 2, USB 3.2 Gen 1 x 2
- M.2 2280 M-Key x 1, M.2 E-Key 2230 x 1, Mini Card x 1
- COM Port x 4, GPIO 8-bit, TPM 2.0, DC 12Vin or DC 19Vin ~ 24Vin

USB	USB 3.2 Gen 2 (Type-A) x 2 USB3.2 Gen 1 (Type-A) x 2
Serial Port	—
Video	DP 1.2 x 1
Internal I/O	
USB	USB2.0 x 4 (Pin Header)
Serial Port	RS-232/422/285 x 2 RS-232 x 2 (Pin Header)
Video	VGA x 1, LVDS x 1
SATA	SATA 6Gb/s x 2 +5V SATA Power Connector x 2
Audio	—
DIO/GPIO	8 bit
SMBus/I2C	SMBus/I2C (change by BOM)
Touch	—
Fan	4 Pin Smart Fan
SIM	—
Front Panel	Power Button, Reset Button, Power LED, SATA LED, Buzzer
Others	—
Expansion	
Mini PCI-E/mSATA	Full-size mSATA/Mini Card (Default: Mini PCIe, SATA configuration subject to BOM change)
M.2	M.2 2280 M-Key x 1 (PCIe 3.0 [x4]) M.2 2230 E-Key x 1 (PCIe 3.0 [x1] + USB 2.0)
Others	—
Environment & Certification	
Operating Temperature	32°F ~ 140°F (0°C ~ 60°C) (Note: To achieve the best performance, keeping the EPIC-BTS7 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® H610E Chipset
Memory Type	DDR5 4800/5200/5600, Dual-Channel SODIMM x 2, non-ECC, up to 64GB (DDR Speed dependent on CPU SKU)
BIOS	UEFI
Wake On Lan	Yes
Watchdog Timer	255 Levels
Security	TPM 2.0 (Optional)
RTC Battery	Lithium Battery 3V/240mAh
Dimension	4.53" x 6.50" (115mm x 165mm)
OS Support	Windows 10 (64bit) / Windows 11 (64bit) Ubuntu 22.04.2/kernel 5.19.0
Power	
Power Requirement	DC 19Vin ~ 24Vin DC 12Vin (Note: For stable performance, it is recommended to use a power supply unit rated at 24A @12V DC output to accommodate potential maximum peak power requirements.)
Power Supply Type	AT/ATX
Connector	8-Pin Connector
Power Consumption	Intel Core Series2 251E, DDR5 32GB x2,10A@+12V (Typical) Intel Core Series2 251E, DDR5 32GB x 2,24A@+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	Dual Channel 18/24bit LVDS x 1
Display Interface	DP 1.2 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	—
Audio Interface	—
Speaker	—
External I/O	
Ethernet	Intel® Ethernet Controller I226, 2.5GbE RJ-45 x 1 Intel® Ethernet Connection I219, GbE RJ-45 x 1

Packing List

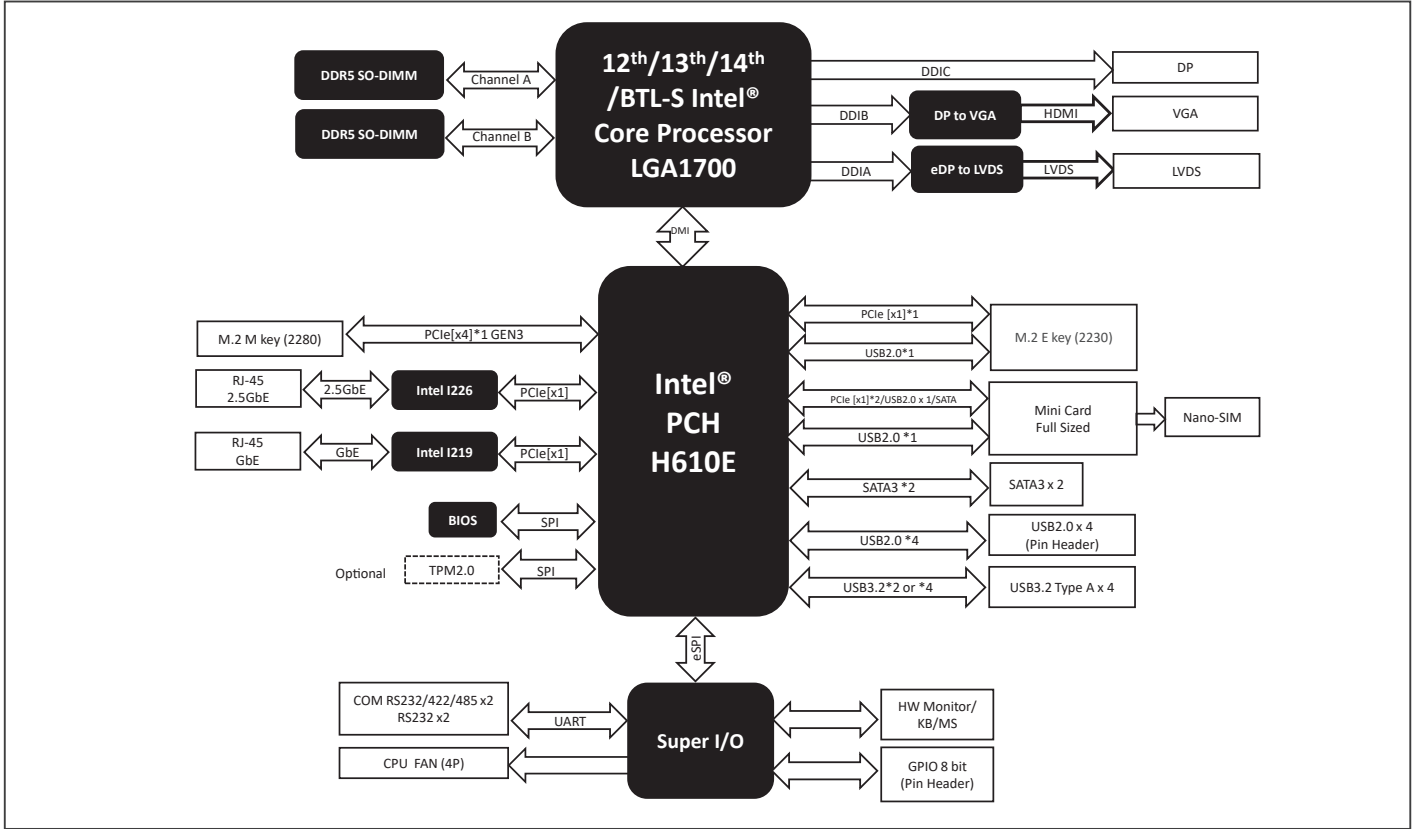
- EPIC-BTS7 x 1
- CPU Cooler Bracket x 2
- Screw Kit x 1

Optional Accessories

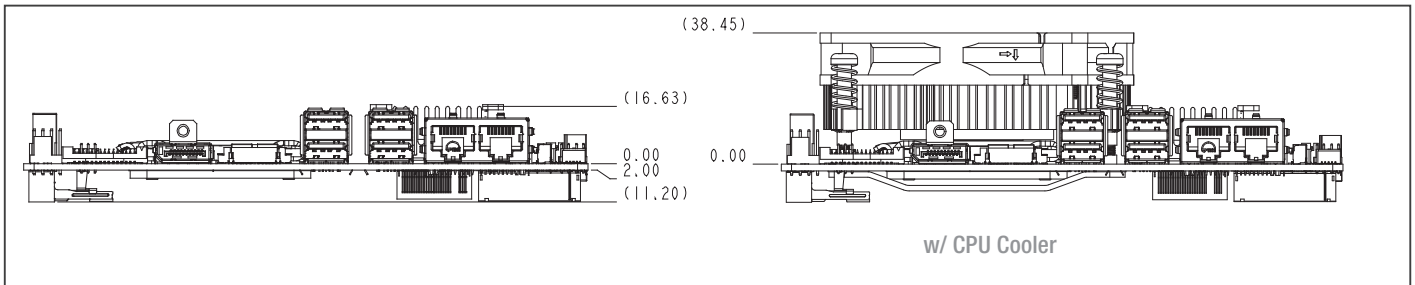
Part Number	Description	QTY
170X000593	SATA cable, Length 15 cm 1	1
1702150155	SATA Power Cable, Length 15cm 1	1
170X000231	Dual COM Port, Length 30 cm 1	1
170X000880	USB 2.0 Cable.20cm	1
170X001025	8pin power cable for 19-24V	1
170X001132	3 Pin ATX Cable	1
1255X00021	AC/DC Power Supply.100-240VAC/5A.24VDC.480W.20A.Din Rail.	1
EPIC-RPS9-FAN01	CPU Cooler for EPIC-BTS9/RPS7/RPS9	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-BTS7-A10-0001	LGA 1700 Socket Type (with H610E)	DDR5 SODIMM x2	DP x 1, VGA x 1 (Internal), LVDS x 1 (Internal)	SATA 6.0 Gbps x 2	2.5GbE x 1, GbE x 1	USB3.2 Gen2 x 2, USB3.2 Gen1 x 2, USB2.0 x 4	COM RS232/422/485 x 2, COM RS232 x 2	mini Card (Full Size), M.2 2280 M key x 1, M.2 2230 E key x 1	2.0	DC+19Vin to +24Vin	0°C ~ 60°C	GPIO 8 bits, Nano SIM x 1
EPIC-BTS7-A10-0002	LGA 1700 Socket Type (with H610E)	DDR5 SODIMM x2	DP x 1, VGA x 1 (Internal), LVDS x 1 (Internal)	SATA 6.0 Gbps x 2	2.5GbE x 1, GbE x 1	USB3.2 Gen2 x 2, USB3.2 Gen1 x 2, USB2.0 x 4	COM RS232/422/485 x 2, COM RS232 x 2	mini Card (Full Size), M.2 2280 M key x 1, M.2 2230 E key x 1	2.0	DC+12Vin	0°C ~ 60°C	GPIO 8 bits, Nano SIM x 1