

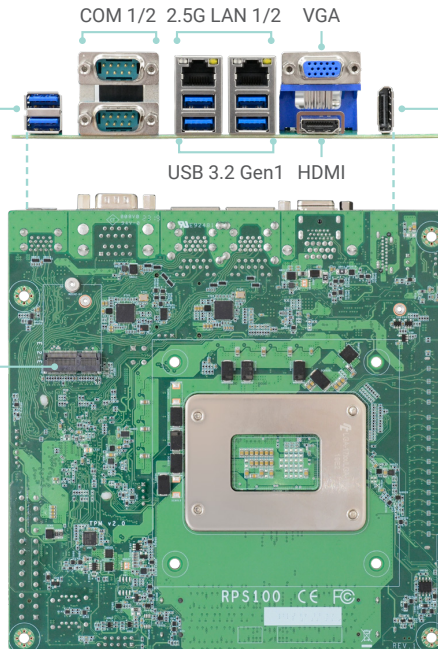
RPS100

Desktop

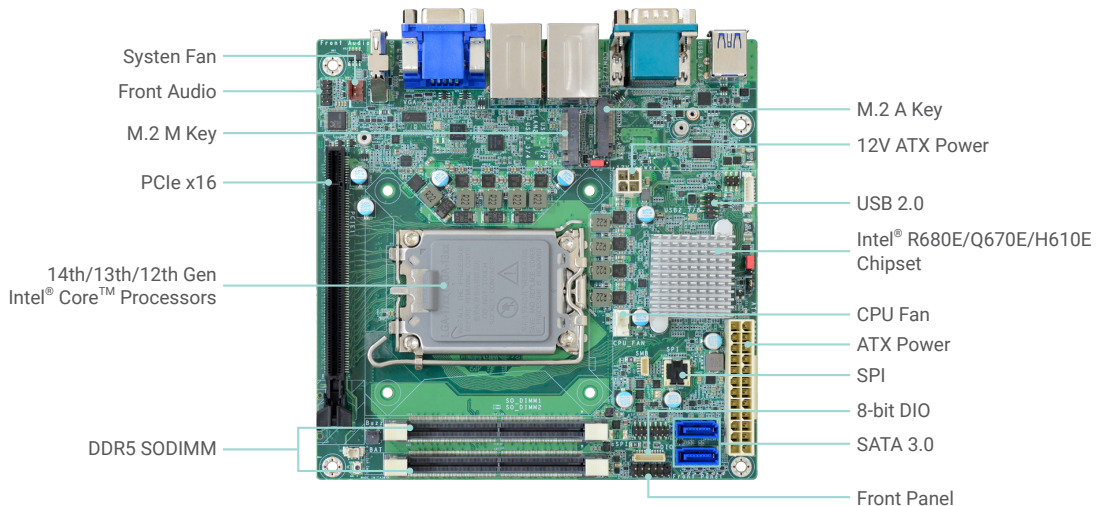
14th/13th/12th Gen Intel® Core™
Mini-ITX



R680E: USB 3.2 Gen2
Q670E: USB 3.2 Gen1
H610E: USB 2.0



Bottom View



Top View

KEY FEATURES



DDR5

2 DDR5 SODIMM up to 64GB



4K High Resolution

Supports 4K resolution



Quad Displays

1 DP++ + 1 HDMI + 1 VGA + M2A Display (eDP/LVDS/VGA/HDMI)



Multiple Expansion

1 PCIe x16, 1 M.2 M key, 1 M.2 E Key, 1 M.2 A Key



Rich I/O

2 Intel 2.5GbE, 2 COM, up to 2 USB 3.2 Gen2, 4 USB 3.2 Gen1, 2 USB2.0 headers

SPECIFICATION

SYSTEM	Processor	<p>14th Generation Intel® LGA 1700 Socket Processors, TDP support up to 65W</p> <p>13th Generation Intel® LGA 1700 Socket Processors, TDP support up to 65W</p> <p>Intel® Core™ i9-13900E (24 Cores, 36M Cache, up to 5.2 GHz); 65W</p> <p>Intel® Core™ i9-13900TE (24 Cores, 36M Cache, up to 5.0 GHz); 35W</p> <p>Intel® Core™ i7-13700E (16 Cores, 30M Cache, up to 5.1 GHz); 65W</p> <p>Intel® Core™ i7-13700TE (16 Cores, 30M Cache, up to 4.8 GHz); 35W</p> <p>Intel® Core™ i7-13700T (16 Cores, 30M Cache, up to 4.9 GHz); 35W</p> <p>Intel® Core™ i5-13500E (14 Cores, 24M Cache, up to 4.6 GHz); 65W</p> <p>Intel® Core™ i5-13500TE (14 Cores, 24M Cache, up to 4.5 GHz); 35W</p> <p>Intel® Core™ i5-13500T (14 Cores, 24M Cache, up to 4.6 GHz); 35W</p> <p>Intel® Core™ i5-13400E (10 Cores, 20M Cache, up to 4.6 GHz); 65W</p> <p>Intel® Core™ i3-13100E (4 Cores, 12M Cache, up to 3.3 GHz); 60W</p> <p>Intel® Core™ i3-13100TE (4 Cores, 12M Cache, up to 4.1 GHz); 35W</p> <p>Intel® Core™ i3-13100T (4 Cores, 12M Cache, up to 4.2 GHz); 35W</p> <p>12th Generation Intel® LGA 1700 Socket Processors, TDP support up to 65W</p> <p>Intel® Core™ i9-12900E (16 Cores, 30M Cache, up to 5.0 GHz); 65W</p> <p>Intel® Core™ i9-12900TE (16 Cores, 30M Cache, up to 4.8 GHz); 35W</p> <p>Intel® Core™ i7-12700E (12 Cores, 25M Cache, up to 4.8 GHz); 65W</p> <p>Intel® Core™ i7-12700TE (12 Cores, 25M Cache, up to 4.6 GHz); 35W</p> <p>Intel® Core™ i5-12500E (6 Cores, 18M Cache, up to 4.5 GHz); 65W</p> <p>Intel® Core™ i5-12500TE (6 Cores, 18M Cache, up to 4.3 GHz); 35W</p> <p>Intel® Core™ i3-12100E (4 Cores, 12M Cache, up to 4.2 GHz); 60W</p> <p>Intel® Core™ i3-12100TE (4 Cores, 12M Cache, up to 4.0 GHz); 35W</p> <p>Intel® Pentium® G7400E (2 Cores, 6M Cache, 3.6 GHz); 46W</p> <p>Intel® Pentium® G7400TE (2 Cores, 6M Cache, 3.0 GHz); 35W</p> <p>Intel® Celeron® G6900E (2 Cores, 4M Cache, 3.0 GHz); 46W</p> <p>Intel® Celeron® G6900TE (2 Cores, 4M Cache, 2.4 GHz); 35W</p>						
	Chipset	Intel® R680E/Q670E/H610E Chipset						
	Memory	<p>2x 262-pin SODIMM up to 64GB</p> <p>Dual Channel DDR5 4800MHz</p> <p>ECC memory supported by R680 with i7 and i5</p>						
	BIOS	AMI SPI 256Mbit						
	GRAPHICS	Controller	Intel® UHD Graphics 700 series					
GRAPHICS	Feature	<p>OpenGL 4.5, DirectX 12, OpenCL 2.1</p> <p>HW Decode: AVC/H.264, MPEG2, VC1/WMV9, JPEG/MJPEG, HEVC/H265, VP8, VP9</p> <p>HW Encode: MPEG2, AVC/H264, JPEG, HEVC/H265, VP8, VP9</p>						
	Display	<table border="0"> <tr> <td>1 x HDMI</td> <td>HDMI: resolution up to 3840x2160 @ 24Hz</td> </tr> <tr> <td>1 x DP++</td> <td>DP++: resolution up to 3840x2160 @ 60Hz</td> </tr> <tr> <td>1 x VGA</td> <td>VGA: resolution up to 2048x1536 @ 60Hz</td> </tr> </table>	1 x HDMI	HDMI: resolution up to 3840x2160 @ 24Hz	1 x DP++	DP++: resolution up to 3840x2160 @ 60Hz	1 x VGA	VGA: resolution up to 2048x1536 @ 60Hz
	1 x HDMI	HDMI: resolution up to 3840x2160 @ 24Hz						
1 x DP++	DP++: resolution up to 3840x2160 @ 60Hz							
1 x VGA	VGA: resolution up to 2048x1536 @ 60Hz							
Quad Displays	HDMI + DP++ + VGA + M2A-Display (optional)							
EXPANSION	Interface	<p>1 x PCIe Gen 5 x16 (Bifurcation 1 x16, 2 x8)</p> <p>1 x M.2 2230 E Key (PCIe Gen3x1 and USB2.0, support Intel® CNVi)</p> <p>1 x M.2 3060 A Key support DFI M2A-display module (opt. MOQ required)</p> <p>R680E/Q670E:</p> <p>1 x M.2 2280 M Key (PCIe Gen 3x4 or SATA3)</p> <p>H610E:</p> <p>1 x M.2 2280 M Key (PCIe Gen 3x1 or SATA3)</p>						
	AUDIO	Audio Codec	Realtek ALC888S					
	ETHERNET	Controller	<p>R680E/Q670E:</p> <p>1 x Intel® I226LM (10/100/1000/2500Mbps)</p> <p>1 x Intel® I226V (10/100/1000/2500Mbps)</p> <p>H610E:</p> <p>2 x Intel® I226V (10/100/1000/2500Mbps)</p>					
REAR I/O	Ethernet	2 x 2.5GHz RJ45						
	USB	R680E:	2 x USB 3.2 Gen2 4 x USB 3.2 Gen1					
		Q670E:	6 x USB 3.2 Gen1					
		H610E:	4 x USB 3.2 Gen1 2 x USB 2.0					
Display	1 x DP++ 1 x HDMI 1 x VGA							
Serial	2 x RS-232/422/485							
INTERNAL I/O	USB	2 x USB 2.0 (2.0mm pitch)						
	Display	1 x M.2 A key, support M2A-Display (eDP/LVDS/VGA/HDMI/DP) by optional						
	Audio	1 x Line-out/Mic-in						
	SATA	2 x SATA 3.0						
	DIO	1 x 8-bit DIO						
	SMBus	1 x SMBus						

SPECIFICATION

WATCHDOG TIMER	Output & Interval	System Reset, Programmable via Software from 1 to 255 Seconds	
SECURITY	TPM	dTPM (default) fTPM (option)	
POWER	Type	ATX	
	Connector	4-pin ATX 12V power 24-pin ATX power	
	Consumption	TBD	
	RTC Battery	CR2032 Coin Cell	
OS SUPPORT	Microsoft	Windows IoT Enterprise 10 LTSC Windows 11	
	Linux	Linux	
ENVIRONMENT	Temperature	Operating: -5°C ~ 65°C	
		Storage: -40°C ~ 85°C	
	Humidity	Operating: 5% ~ 90% RH	
		Storage: 5% ~ 90% RH	
MTBF	TBD		
MECHANISM	Dimensions	Mini-ITX Form Factor	170mm (6.7") x 170mm (6.7")
	Height	PCB: 1.6mm Top Side: TBD	
CERTIFICATION	Certification	CE, FCC, RoHS	

ORDERING INFORMATION

Model Name	P/N	Description
RPS100-R680EDB	770-RPS1001-000G	RPS100-R680EDB, 2 DDR5, Rear I/O(DP++/HDMI/VGA, I, 2 LAN, 6 USB 3.2 Gen2, 2 COM), Internal I/O (M.2 M/E/A Key, 2 USB 2.0, w/TPM), ATX, -5°C ~ 65°C
RPS100-Q670EDB	770-RPS1001-100G	RPS100-Q670EDB, 2 DDR5, Rear I/O(DP++/HDMI/VGA, I, 2 LAN, 6 USB 3.2 Gen2, 2 COM), Internal I/O (M.2 M/E/A Key, 2 USB 2.0, w/TPM), ATX, -5°C ~ 65°C
RPS100-H610EDB	770-RPS1001-200G	RPS100-H610EDB, 2 DDR5, Rear I/O(DP++/HDMI/VGA, I, 2 LAN, 2 USB 3.2 Gen2, 2 USB3.2Gen1, 2 COM), Internal I/O (M.2 M/E/A Key, 4 USB 2.0, w/TPM), ATX, -5°C ~ 65°C

PACKING LIST

1 RPS100 motherboard
1 Serial ATA data cable (Length: 500mm)
1 I/O shield (P/N: TBD)
3 M.2 screw/standoff

OPTIONAL ITEMS

Thermal solution (For 65W, Height: 46mm)	A71-101137-000G
Thermal solution (For 35W, Height: 39mm)	A71-101136-000G

Assured Systems

Assured Systems is a leading technology company with over 1,500 regular clients in 80 countries, deploying over 85,000 systems to a diverse customer base in 12 years of business. We offer high-quality and innovative rugged computing, display, networking and data collection solutions to the embedded, industrial, and digital-out-of-home market sectors.

US

sales@assured-systems.com

Sales: +1 347 719 4508
Support: +1 347 719 4508

1309 Coffeen Ave
Ste 1200
Sheridan
WY 82801
USA

EMEA

sales@assured-systems.com

Sales: +44 (0)1785 879 050
Support: +44 (0)1785 879 050

Unit A5 Douglas Park
Stone Business Park
Stone
ST15 0YJ
United Kingdom

VAT Number: 120 9546 28
Business Registration Number: 07699660