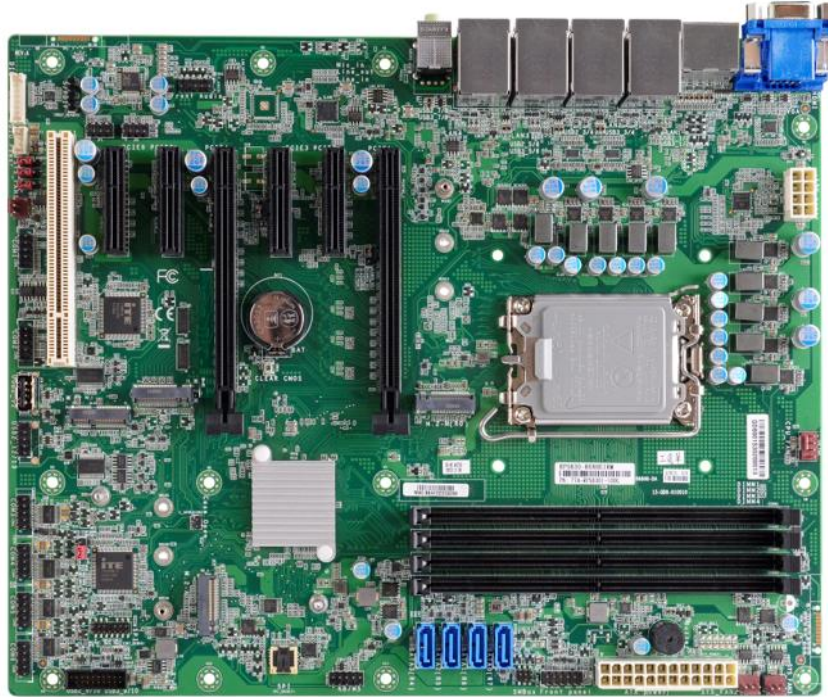




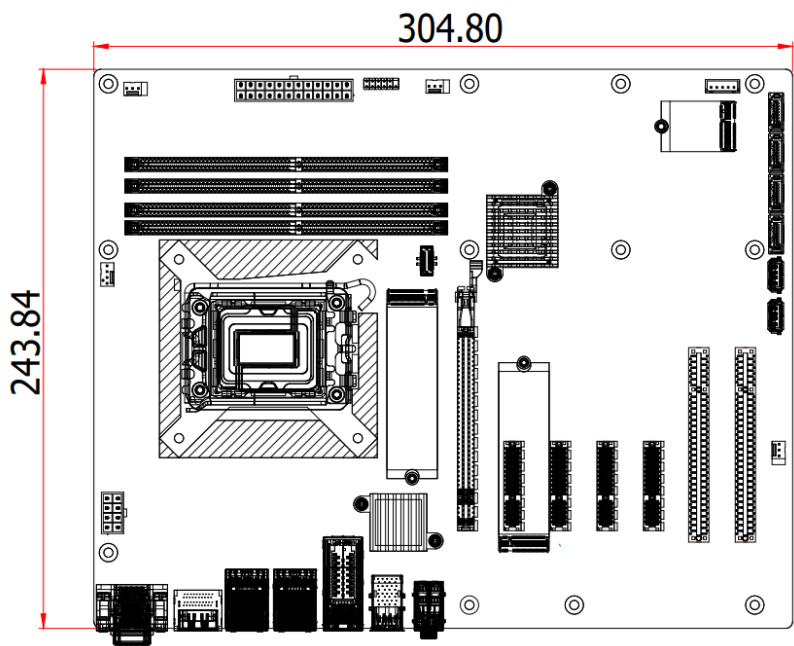
ATX Industrial 13th/12th Generation Motherboard With Intel® R680E Chipset

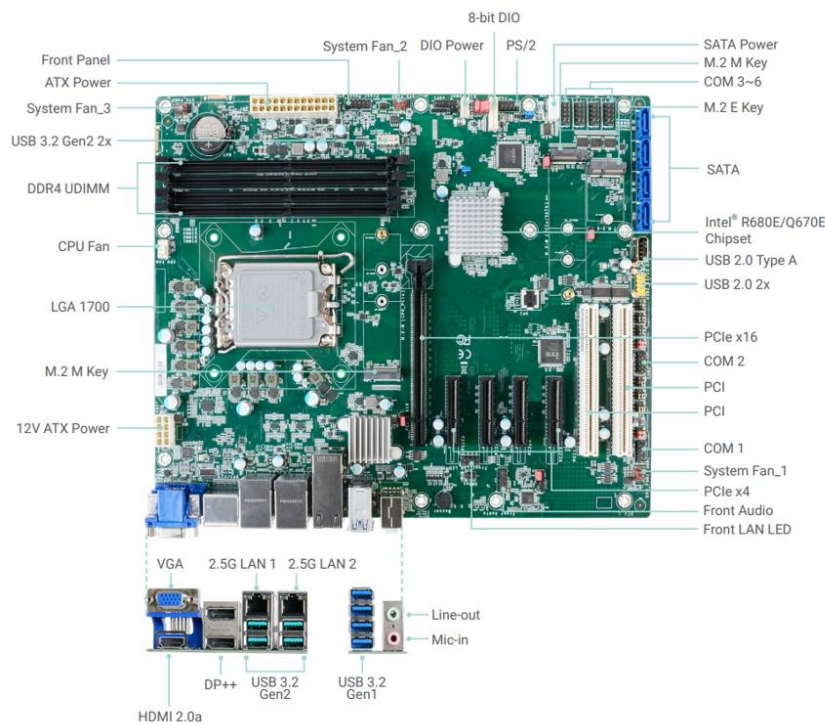
- Intel 12/13th Gen Core™ with Intel® R680E
- 4 DDR5 UDIMM up to 128GB
- Multiple Expansion: 2 PCIe x16, 4 PCIe x4, 1 PCI, 2 M.2 M key, 1 M.2 E Key, 1 M.2 A Key
- Quad Displays: VGA, 2 DP++, HDMI
- Rich I/O: 2 Intel GbE, 6 COM, 4 USB 3.2 Gen2, 10 USB 3.2 Gen1, 13 USB 2.0
- 15-Year CPU Life Cycle Support until Q1 '37 (Based on Intel IOTG Roadmap)

SYSTEM	PROCESSORS	13th Generation Intel® LGA 1700 Socket Processors, TDP support up to 125W Intel® Core™ i9-13900E (24 Cores, 36M Cache, up to 5.2 GHz); 65W Intel® Core™ i9-13900TE (24 Cores, 36M Cache, up to 5.0 GHz); 35W Intel® Core™ i7-13700E (16 Cores, 30M Cache, up to 5.1 GHz); 65W Intel® Core™ i7-13700TE (16 Cores, 30M Cache, up to 4.8 GHz); 35W Intel® Core™ i7-13700T (16 Cores, 30M Cache, up to 4.9 GHz); 35W Intel® Core™ i5-13500E (14 Cores, 24M Cache, up to 4.6 GHz); 65W Intel® Core™ i5-13500TE (14 Cores, 24M Cache, up to 4.5 GHz); 35W Intel® Core™ i5-13500T (14 Cores, 24M Cache, up to 4.6 GHz); 35W Intel® Core™ i5-13400E (10 Cores, 20M Cache, up to 4.6 GHz); 65W Intel® Core™ i3-13100E (4 Cores, 12M Cache, up to 3.3 GHz); 60W Intel® Core™ i3-13100TE (4 Cores, 12M Cache, up to 4.1 GHz); 35W Intel® Core™ i3-13100T (4 Cores, 12M Cache, up to 4.2 GHz); 35W 12th Generation Intel® LGA 1700 Socket Processors, TDP support up to 125W Intel® Core™ i9-12900E (16 Cores, 30M Cache, up to 5.0 GHz); 65W Intel® Core™ i9-12900TE (16 Cores, 30M Cache, up to 4.8 GHz); 35W Intel® Core™ i7-12700E (12 Cores, 25M Cache, up to 4.8 GHz); 65W Intel® Core™ i7-12700TE (12 Cores, 25M Cache, up to 4.6 GHz); 35W Intel® Core™ i5-12500E (6 Cores, 18M Cache, up to 4.5 GHz); 65W Intel® Core™ i5-12500TE (6 Cores, 18M Cache, up to 4.3 GHz); 35W Intel® Core™ i3-12100E (4 Cores, 12M Cache, up to 4.2 GHz); 60W Intel® Core™ i3-12100TE (4 Cores, 12M Cache, up to 4.0 GHz); 35W Intel® Pentium® G7400E (2 Cores, 6M Cache, 3.6 GHz); 46W Intel® Pentium® G7400TE (2 Cores, 6M Cache, 3.0 GHz); 35W Intel® Celeron® G6900E (2 Cores, 4M Cache, 3.0 GHz); 46W Intel® Celeron® G6900TE (2 Cores, 4M Cache, 2.4 GHz); 35W
	CHIPSET	Intel® R680E Chipset
	MEMORY	Four 288-pin UDIMM up to 128GB Dual Channel DDR5 5600 MHz
	BIOS	AMI SPI 256Mbit
GRAPHICS	CONTROLLER	Intel® HD Gen 9 Graphics
	FEATURE	OpenGL 4.5, 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 2 x DP++ 1 x HDMI 2.0a VGA: resolution up to 1920x1200 @ 60Hz DP++: resolution up to 4096x2304 @ 60Hz HDMI: resolution up to 4096x2160 @ 24Hz
	QUAD DISPLAYS	VGA + 2 x DP++ + HDMI
EXPANSION	INTERFACE	2 x PCIe x16 (Gen 4, 16 or 8+8) 3 x PCIe x4 (Gen 4) 1 x PCIe x4 (Gen 3, co-lay M.2 M key, function selected by BIOS.) 1 x PCI 1 x M.2 E key 1 x M.2 A key (support M2-00B) 1 x M.2 M key (PCIe x4 NVMe, SATA) 1 x M.2 M key (opt. co-lay PCIe x4 slot, function selected by BIOS.)
	AUDIO CODEC	Realtek ALC885
AUDIO	AUDIO CODEC	Realtek ALC885
ETHERNET	CONTROLLER	1 x Intel® I226-LM (Core i9/i7/i5 support iAMT) 1 x Intel® I226-LM (co-lay I210-AT)
REAR I/O	ETHERNET	1 x 2.5GbE (RJ-45) 1 x 1GbE (RJ-45, opt. 2.5GbE)
	SERIAL	N/A
	USB	4 x USB 3.2 Gen 2 4 x USB 3.2 Gen 1
	PS/2	N/A
	DISPLAY	1 x VGA 2 x DP++ 1 x HDMI
	AUDIO	1 x Line-out 1 x Mic-in 1 x Line-in (opt., MOQ required)

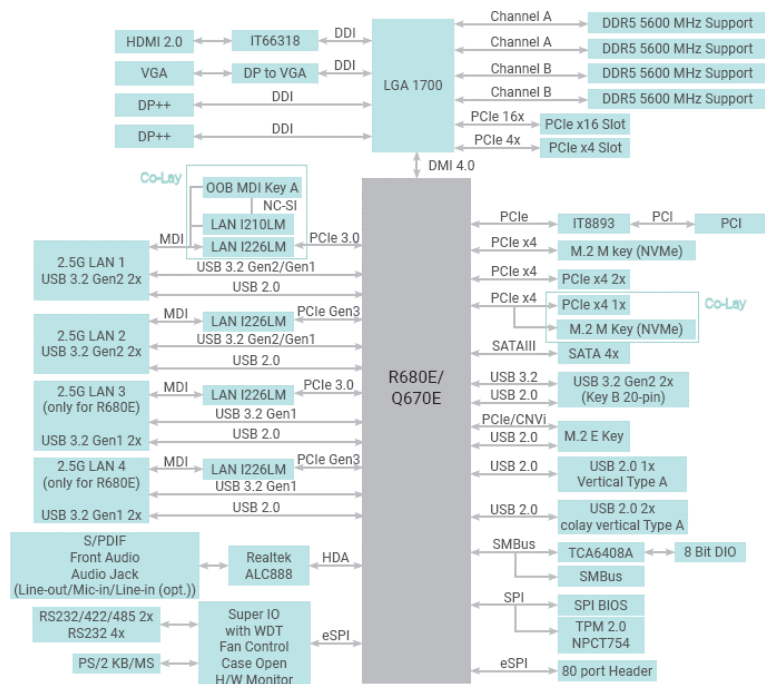
INTERNAL I/O	SERIAL	2 x RS-232/422/485 4 x RS-232
	USB	2 x USB 3.2 Gen1 1 x USB 2.0 Type A 2 x USB 2.0 (Colay vertical Type A, MOQ required)
	AUDIO	1 x Front Audio Header 1 x S/PDIF
	SATA	4 x SATA 3.0 (up to 6Gb/s, SATA 3) RAID 0/1/5/10
	DIO	1 x 8-bit DIO
	LPC	1 x LPC (supports LPC EXT-RS232/RS485 module)
	SMBUS	1 x SMBus
WATCHDOG TIMER	OUTPUT & INTERVAL	System Reset, Programmable via Software from 1 to 255 Seconds
SECURITY	TPM	Nuvoton TPM2.0 (opt., MOQ required)
POWER	TYPE	ATX
	CONNECTOR	8-pin ATX 12V power; 24-pin ATX power
	CONSUMPTION	TBD
OS SUPPORT	RTC, BATTERY	CR2032 Coin Cell
	MICROSOFT	Windows 10 IoT Enterprise 64-bit Windows Server 2022
	LINUX	Linux
ENVIRONMENT	TEMPERATURE	Operating: -5 to 65°C Storage: -30 to 60°C with RTC Battery; -40 to 85°C without RTC Battery
	HUMIDITY	Operating: 5 to 95% RH Storage: 5 to 95% RH
	MTBF	TBD
MECHANICAL	DIMENSIONS	ATX Form Factor 305mm (12") x 244mm (9.6")
	HEIGHT	PCB: 1.6mm Top Side: 33.3mm, Bottom Side: 4mm
CERTIFICATIONS		CE, FCC Class B, UKCA

Dimensions





Block Diagram



Standard Services



Integrated Components



Revision Controlled



Fully Tested & Documented



Software Installed



Full Traceability



ISO Certified



OEM Customisation