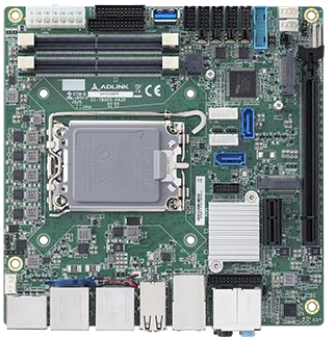
AmITX-AD-G

Mini-ITX Embedded Board with 15th Gen Intel® Core™ Processor





Features

- High-Performance Computing — Intel® Core™ Processors (Series 2) with Intel® Q670E/H610E chipset
- DDR5 5600 Memory up to 128GB — Enhances overall system responsiveness
- Immersive 4K Multi-Display — Supports up to four 4K displays with maximum resolution of 4096x2304@60Hz (HBR2)
- Flexible Expansion: PCIe Gen4 x16, PCIe Gen3 x1 and dual M.2 slots

Ordering Information

AmITX-AD-G/Q670E	Gaming Mini-ITX MB with Intel® Bartlett Lake 12P CPU
AmITX-AD-G-/H610E	Gaming Mini-ITX MB with Intel® Bartlett Lake 12P CPU

Optional Accessories

30-20876-1000	COM Port Cable, 1 Port, 25cm
30-20874-0000	USB 2.0 Cable, 2 ports, 20cm (H610E)
30-20873-0000	USB 3.2 Gen 1 Cable, 2 ports, 20cm

Packing List

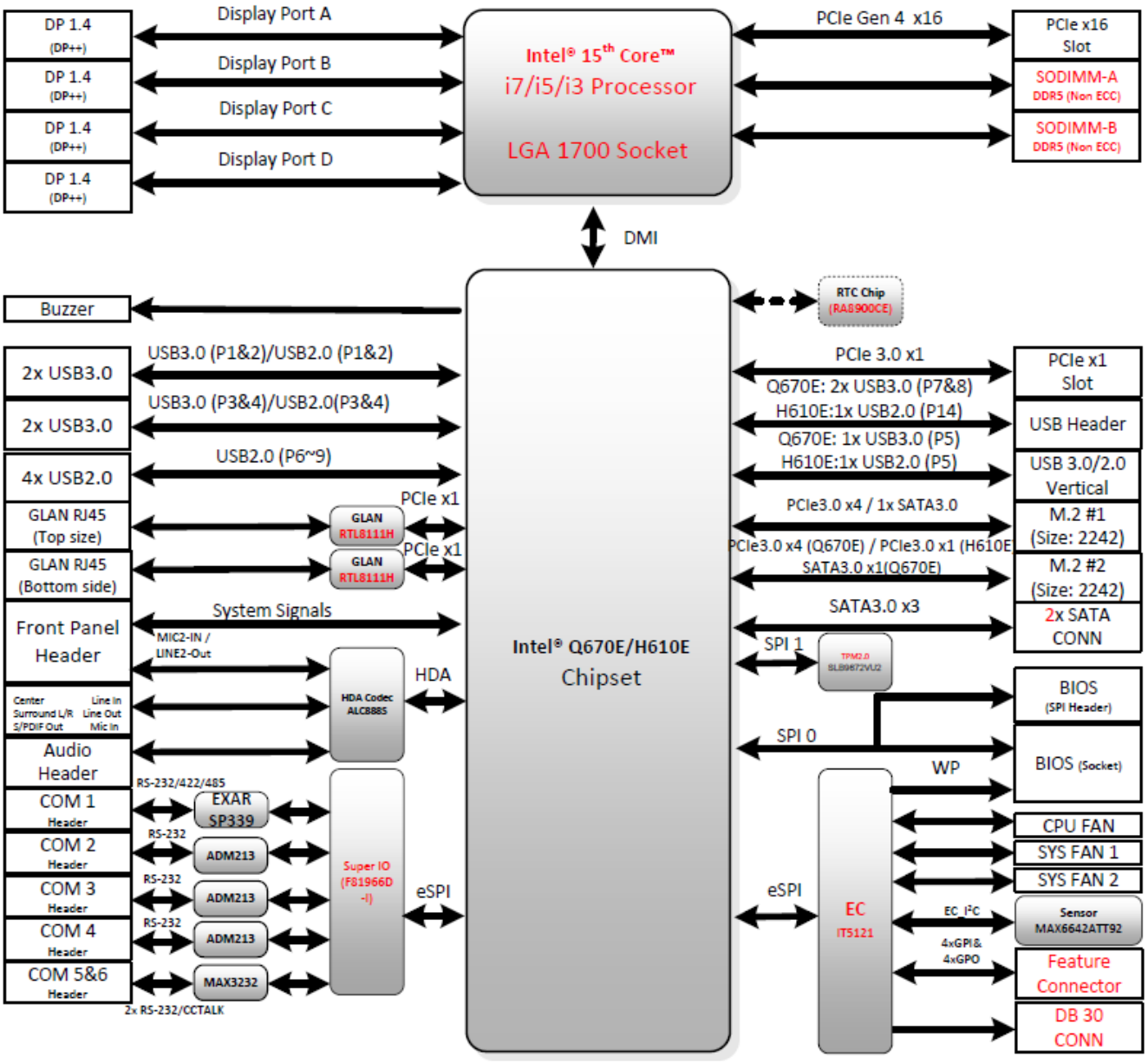
34-25329-0000	Rear I/O Shield
30-20875-0000	SATA Dual Power Cable
30-10057-0600	SATA Cable
30-20872-0000	ATX/AT Power Cable

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Specifications

Model Name	AmITX-AD-G
Processor & System	
CPU	15th Gen Intel® Core™ Processor with Intel® Q670E/H610E chipset (Q670E: main SKU)
Memory	Dual-channel DDR5-5600 (ECC/Non-ECC), up to 128GB via dual SODIMM
BIOS	EFI BIOS (16 MB SPI) Onboard SPI socket + external SPI header; Dual BIOS Support TPM module soldered onboard Precision RTC (optional)
TPM 2.0	TPM module soldered onboard
SEMA®	Supports Smart Embedded Management Agent (SEMA®) functions
Debug Header	30-pin multipurpose flat cable connector. Use in combination with DB-40 debug module providing BIOS POST code LEDs, BMC access, SPI BIOS, flashing, power testpoints, debug LEDs
I/O Interface	
Expansion Slots	1x PCIe Gen4 x16 slot 1x PCIe Gen3 x1 slot 2x M.2 (M Key, supports 2242 and NVMe boot) M.2 #1: (Q670E) PCIe Gen3 x4; (H610E) PCIe Gen3 x4 and w/ SATA interface M.2 #2: (Q670E) PCIe Gen3 x4; (H610E) PCIe Gen3 x1 and w/o SATA interface 1x SPI header for external BIOS
Serial ATA	2× SATA 6 Gbps 2x SATA power connectors
USB	• Rear I/O: 4× USB 3.2 Gen1, 4× USB 2.0 • Internal: 2× USB 3.2 Gen1 headers (H610E: 1x USB 2.0) • Vertical connector: 1x USB 3.2 Gen 1 (H610E: USB 2.0)
Serial Ports	**1× RS-232/422/485 + 3× RS-232:** • 2x RS-232/ccTalk • All via internal headers **9-bit protocol support**
Digital I/O	8x GPIO via onboard feature connector
Audio	
Audio Codec	Realtek® ALC888S
Interfaces	**Rear:** 7.1-channel audio (5 jacks) + S/PDIF **Internal:** 7.1-channel audio + S/PDIF
Display	
Graphics Core	Intel® Xe graphics architecture, up to 32 EUs; up to 4 independent displays
Display Port	Up to 4× DisplayPort 1.2 (Q670E: 4x; H610E: 3×); 4096×2304@60Hz (HBR2)
Ethernet	
Controller/Interface	2× Realtek RTL8111H GbE
Interface	PCIe x1 Bus, 10/100/1000 connection
Power	
Input	ATX: 12V ±5% / 5Vsb ±5%; AT: 12V ±5%
Output	Onboard headers for fan and SATA power; 14-pin ATX power connector
Mechanical and Environmental	
Form Factor	Mini-ITX (170 x 170mm)
Operating Temperature	0°C to 60°C
Certifications	CE, FCC Class A
Humidity	95% RH @ 40°C (non-condensing)

Functional Diagram



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