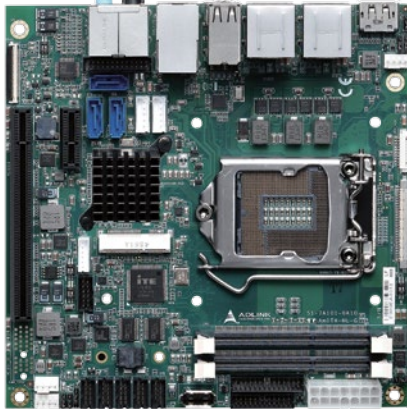


# AmITX-HL-G

## Mini-ITX Industrial Motherboard with Intel® 4th Generation Core™ i7/i5/i3 Desktop Processor



### Features

- 4th generation Intel® Core™ i7/i5/i3 Desktop Processor with Intel® Q87/H81 Chipset
- Dual SODIMM DDR3L-1600 memory sockets (up to 16 GB)
- PCIe x16, PCIe x1 and Mini PCIe expansions
- 3 DisplayPort and optional LVDS output



### Specifications

#### Processor & System

|     |   |
|-----|---|
| CPU | Socket H3 LGA1150 supporting 4th generation Intel® Core™ i7/i5/i3 and Intel® Pentium®/Celeron® processors up to 65W<br>Intel® Core™ i7-4770S Processor 3.1 GHz 4C, 65W<br>Intel® Core™ i7-4770TE Processor 2.3 GHz 4C, 45W<br>Intel® Core™ i5-4570S Processor 2.9 GHz 4C, 65W<br>Intel® Core™ i5-4570TE Processor 2.7 GHz 4C, 35W<br>Intel® Core™ i3-4330 Processor 3.5 GHz 4C, 54W<br>Intel® Core™ i3-4330TE Processor 2.4 GHz 4C, 35W<br>Intel® Pentium® G3420 3.2GHz, 2C, 3M, 54W<br>Intel® Pentium® G3320TE 2.3GHz, 2C, 3M, 35W<br>Intel® Celeron® G1820 2.7GHz, 2M, 2C, 54W<br>Intel® Celeron® G1820TE 2.2GHz, 2C, 2M, 35W |
|-----|---|

Supports Intel® VT, Intel® TXT, Intel® SSE4.2, Intel® HT Technology, Intel® 64 Architecture, Execute Disable Bit, Intel® Turbo Boost Technology 2.0, Intel® AVX2, Intel® AES-NI, PCLMULQDQ Instruction, Intel® Secure Key and Intel® TSX

|                |   |
|----------------|---|
| System Chipset | Intel® Q87 or H81 Chipset   |
| Memory         | Dual channel non-ECC 1333/1666 MHz DDR3L memory up to 16 GB in dual vertical SODIMM sockets   |
| BIOS           | AMI EFI with CMOS backup in 8MB SPI BIOS with Intel® AMT 9.0 support (Q87 only)<br>BIOS socket onboard and SPI header for external BIOS<br>Optional TPM module soldered onboard   |
| SEMA Support   | Supports: voltage/current monitoring, power sequence debug support, AT/ATX mode control, logistics and forensic information, Flat panel control, general purpose PC, failsafe BIOS (dual BIOS), watchdog timer and triple Smart Fan control |
| Debug Header   | 40-pin multipurpose flat cable connector for use in combination with DB-40 debug module providing BIOS POST code LEDs, BMC access, SPI BIOS flashing, power testpoints, debug LEDs  |

#### I/O Interfaces

|                 |   |
|-----------------|---|
| Expansion Slots | 1 PCIe x16 Gen3 slot (PCIe 3.0)<br>1 PCIe x1 Gen2 slot (PCIe 2.0)<br>1 full size Mini PCIe slot supporting PCIe/mSATA and USB (on the bottom side)<br>1 half size Mini PCIe slot supporting PCIe and USB (on the top side)<br>1 SPI header for external BIOS          |
| Serial ATA      | 3x SATA 6 Gbps ports (H81: 2x SATA 6 Gbps and 1x SATA 3 Gbps)<br>Ports 0 and 1 provide clearance for SATADOMS   |
| USB             | 4x USB 3.0 and 4x USB 2.0 on rear I/O (H81: 2x USB 3.0 and 6x USB 2.0)<br>2x USB 2.0 on front panel header<br>2x USB 2.0 on standard header<br>1x USB 2.0 on vertical connector with keep out area for dongle<br>1x USB 2.0 on Mini PCIe and 1x USB 2.0 on mSATA slot |

|              |   |
|--------------|---|
| KB/MS        | 1x PS/2 internal header   |
| Serial Ports | 1x RS-232/422/485 on internal header<br>3x RS-232 on internal headers |
| Digital IO   | 8 GPI, 8GPO on internal feature connector                             |

#### Audio

|             |   |
|-------------|---|
| Audio Codec | Realtek® ALC886   |
| Interfaces  | 7.1 channel audio via 5 jacks and S/PDIF output on rear I/O<br>7.1 channel audio signals and S/PDIF output on internal header |

#### Display

|               |   |
|---------------|---|
| Graphics core | Intel® Generation 7.5 graphics core architecture, supporting 3 independent, simultaneous displays |
| DP            | 3 ports with resolution up to 4096 x 2160 @ 60Hz  |
| LVDS          | Optional single/dual channel 24-bit LVDS up to 1920x1200 @ 60 Hz (occupies one DP port)           |

#### Ethernet

|             |  |
|-------------|--|
| Controller  | 1x Intel® i218 Ethernet controller<br>1x Intel® i210AT Ethernet controller |
| Interface   | 2x PCI Express x1 Bus  |
| Wake On LAN | Yes  |

#### Power

|                    |  |
|--------------------|--|
| Standard Input     | ATX = 12V ±5% / 5Vsb ±5% from internal header<br>AT = 12V ±5% from internal header |
| Peripherals output | Onboard headers for fan and SATA power   |

#### Mechanical and Environmental

|                   |                            |
|-------------------|----------------------------|
| Form Factor       | Mini-ITX                   |
| Dimensions        | 170 mm x 170 mm (L x W)    |
| Operating Temp.   | 0°C to +60°C               |
| Storage Temp.     | -20°C to +80°C             |
| Certifications    | CE, FCC Class A            |
| Relative Humidity | 10% to 90%, non-condensing |

### Ordering Information

| Model Number   | Description/Configuration  |
|----------------|--|
| AmITX-HL-G-Q87 | Mini-ITX for 4th generation Intel® Core™ i7/i5/i3 Desktop Processor with Q87 Chipset |
| AmITX-HL-G-H81 | Mini-ITX for 4th generation Intel® Core™ i7/i5/i3 Desktop Processor with H81 Chipset |

Note: All specifications are subject to change without further notice.

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