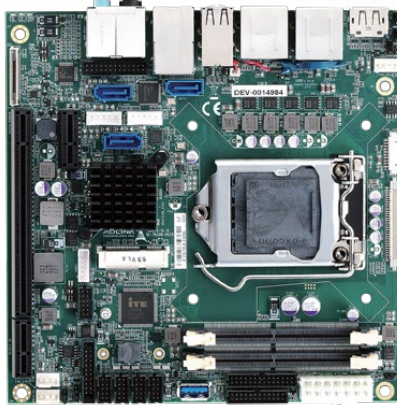


# AmITX-SL-G

## Mini-ITX Embedded Board with 6th Gen Intel® Core™ i7/i5/i3 Desktop Processor



### Features

- 6th Gen Intel® Core™ i7/i5/i3 Desktop Processor with Intel® Q170/H110 Chipset
- Up to 32 GB dual channel DDR4 at 2133MHz
- PCIe x16, PCIe x1 and Mini PCIe expansion
- 3 DisplayPort outputs on rear IO



### Specifications

#### Processor & System

CPU Socket LGA1151 supporting 6th generation Intel® Core™ i7/i5/i3 and Intel® Pentium®/Celeron® processors up to 65W  
Intel® Core™ i7-6700 Processor, 4C GT2 8M 3.4/4.0 GHz, 65W  
Intel® Core™ i7-6700TE Processor, 4C GT2 8M 2.4/3.4 GHz, 35W  
Intel® Core™ i5-6500 Processor, 4C GT2 6M 3.2/3.6 GHz, 65W  
Intel® Core™ i5-6500TE Processor, 4C GT2 6M 2.3/3.3 GHz, 35W  
Intel® Core™ i3-6100 Processor, 2C GT2 4M, 65W  
Intel® Core™ i3-6100TE Processor, 2C GT2 4M 2.7 GHz, 35W  
Intel® Pentium® G4400 Processor, 2C GT1 3M 3.3 GHz, 65W  
Intel® Pentium® G4400TE Processor, 2C GT1 3M 2.4 GHz, 35W  
Intel® Celeron® G3900 Processor, 2C GT1 2M 2.8 GHz, 65W  
Intel® Celeron® G3900TE Processor 2C GT1 2M 2.3 GHz, 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-NI

Chipset Intel® Q170/H110 Chipset

BIOS AMI EFI in 16MB SPI BIOS with Intel® AMT 11.0 support (Q170 only)

SPI header for external BIOS, optional onboard SPI BIOS socket

Debug Interface 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

Memory Dual channel non-ECC 1866/2133 MHz DDR4 memory up to 32 GB in dual vertical SODIMM sockets

SEMA Support Supports: voltage/current monitoring, power sequence debug support, AT/ATX mode control, logistics and forensic information, flat panel control, general purpose I°C, failsafe BIOS (dual BIOS), watchdog timer and triple Smart Fan control

#### I/O Interfaces

Expansion Slots 1 PCIe x16 Gen3  
1 PCIe x1 Gen2  
1 Mini PCIe (full size slot) supporting PCIe + USB or mSATA  
1 Mini PCIe (half size slot) supporting PCIe + USB

Serial ATA 3x SATA 6 Gbps ports  
USB 4x USB 3.0 and 4x USB 2.0 on rear I/O  
2x USB 3.0 onboard header (H110: USB 2.0)  
1x USB 3.0 on vertical connector with keep out area for dongle (H110: USB 2.0)

KB/MS 1x PS/2 internal header

Serial Ports 1x RS-232/422/485 via onboard header  
3x RS-232 via onboard headers

Digital IO 10 GPIO via onboard feature connector

#### Audio

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

#### Display

Graphics Core Intel® Generation 9 Graphics supporting DirectX 11/12, OGL4.3/4.4, 3 independent, simultaneous displays  
DisplayPort 3 ports with resolution up to 4096 x 2160 pixels resolution  
LVDS Single/dual channel 24-bit LVDS up to 1920x1200 @ 60 Hz (from eDP-to-LVDS converter)  
eDP (optional) Supports 4096 x 2304 resolution @ 60Hz, 24bpp (not available concurrently with LVDS)

#### Ethernet

Controller 1x Intel® i219LM Ethernet controller  
1x Intel® i211AT Ethernet controller  
Interface 2x PCI Express x1 Bus  
Wake-on-LAN Yes

#### TPM (optional)

Chipset Atmel AT97SC3204  
Type TPM 1.2

#### Power

Standard Input ATX: 12V ±5% / 5Vsb ±5%  
AT: 12V ±5%  
Peripheral Output Onboard headers for fan and SATA power

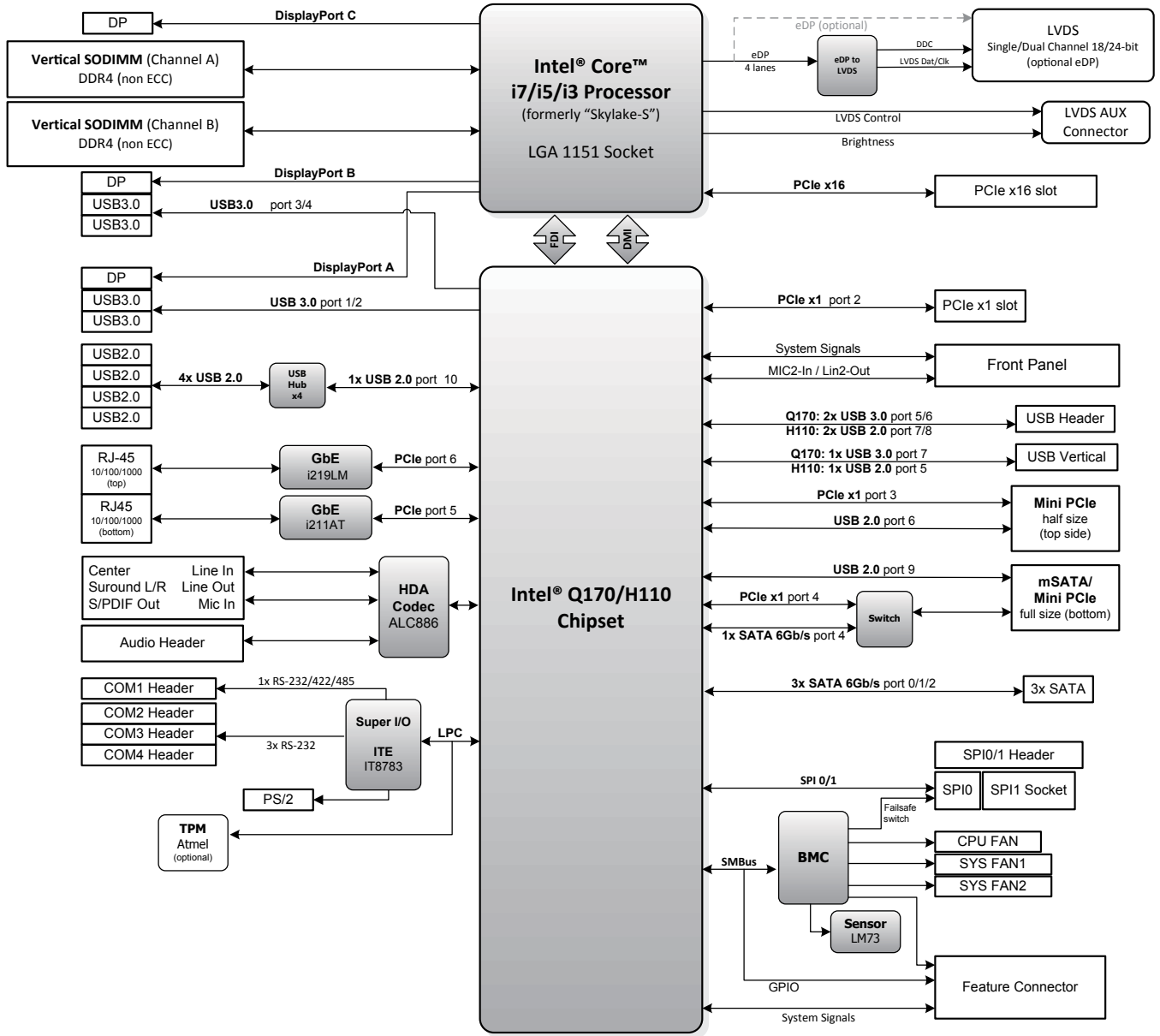
#### Mechanical and Environmental

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

#### Operating Systems

Standard Support Windows 7/8 32/64-bit, Linux 32/64-bit  
Extended Support (BSP) WES7/8, Linux, VxWorks

# Functional Diagram



# Ordering Information

## Modules

Model Number	Description/Configuration
AmITX-SL-G-Q170	Mini-ITX Embedded Board with 6th generation Intel® Core™ i7/i5/i3 Desktop Processor with Q170 Chipset
AmITX-SL-G-H110	Mini-ITX Embedded Board with 6th generation Intel® Core™ i7/i5/i3 Desktop Processor with H110 Chipset