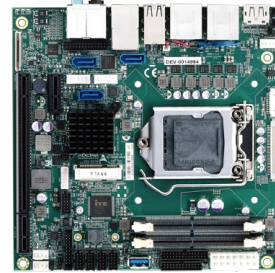


AmITX-SL-G

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

Features

- 6th Gen Intel® Core™ i7/i5/i3, Intel® Pentium® and Celeron® 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
- Supports Smart Embedded Management Agent (SEMA®) functions

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, ATX mode control, logistics and forensic information, flat panel control, general purpose I2C, 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

Note: "Build option" indicates an alternative BOM configuration to support additional or alternative functions that are not available on the standard product.
 Be aware that part numbers for SKUs with "build options" will need to be created and may cause production lead times.

Specifications

- **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 (build option)**

- 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**

- 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**

- Dimension(mm): 170 mm x 170 mm (L x W)

- **Operating Temperature**

- Standard: 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

- **Intelligent Middleware**

- **SEMA®**

- Local management, control of embedded computer systems

- Extended EAPI for monitoring, controlling and analytics applications

- Multiple OS support and across platforms (x86, ARM)



- **Intelligent IOT Platform**

- **SEMA Cloud®**

- Application ready comprehensive industrial grade IoT Platform Connecting Devices to a Cloud Platform and to Web Applications

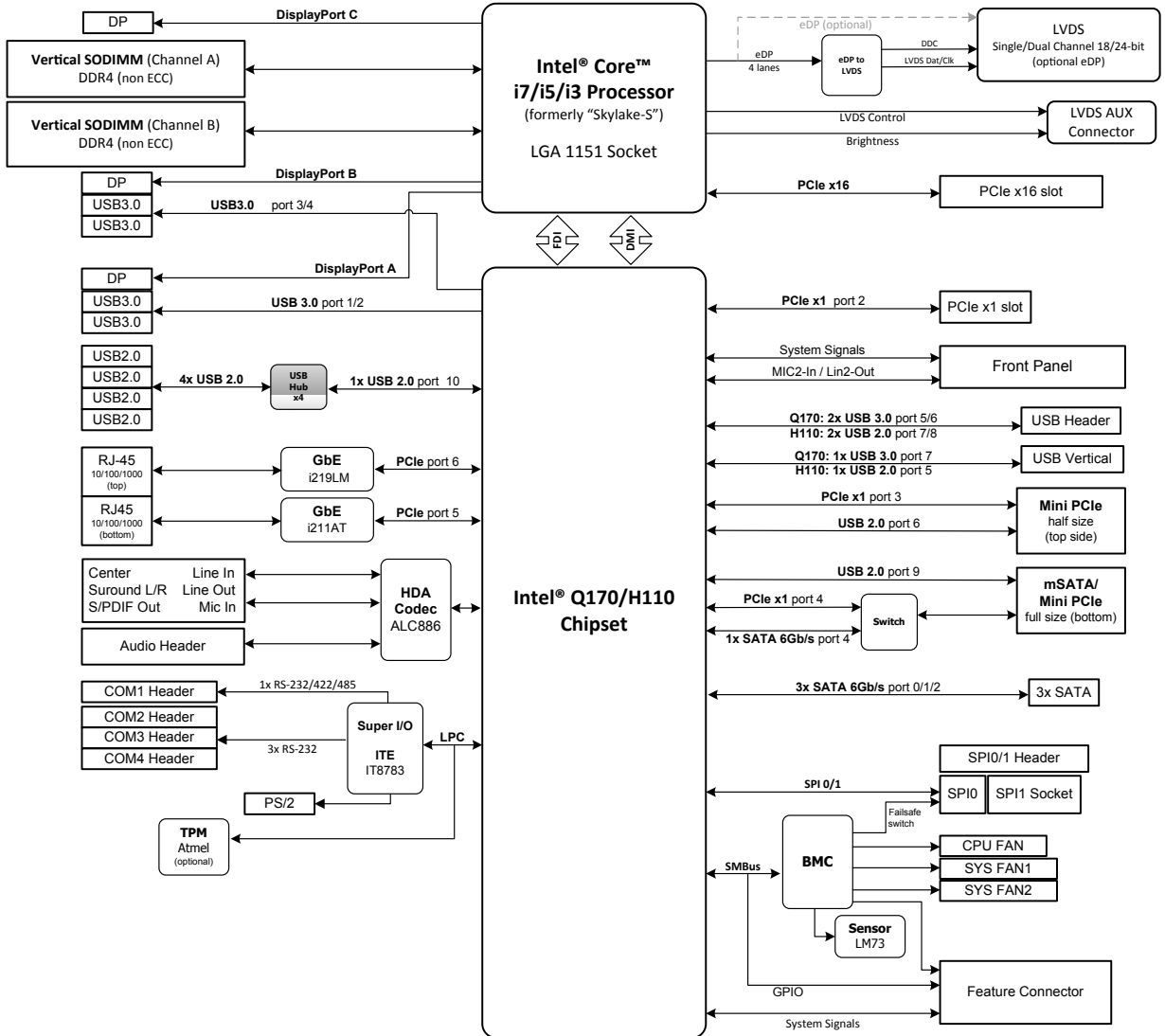
- Remote monitoring and controlling managing of connected devices

- Enabling integration of operational device data into business processes

- Cloud based Platform as a Service (PaaS)



Functional Diagram



Ordering Information

- **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



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