AmITX-BT-I

Mini-ITX Industrial Motherboard with 4th Gen Intel® Atom™ Processor E3800 Series SoC

Features

- Single, dual or quad core Intel® Atom™ Processor E3800 Series and Celeron® SoC
- Up to 8 GB Dual SODIMM socket DDR3L at 1333MHz
- 18/24-bit dual channel LVDS and HDMI
- OpenGL 3.0, OpenCL 1.2, DX11, H.264, MPEG2, MCV, VC-1, VP8 support
- Supports Smart Embedded Management Agent (SEMA®) functions
- Extreme Rugged Operating Temperature: -40°C + 85°C (build option, Atom™ E38xx series only)



Specifications

Processor & System

CPU

Atom™ E3845 1.91 GHz 542/792 (Turbo) 10W (4C/1333)
Atom™ E3825 1.33 GHz 533 (No Turbo) 6W (2C/1066) Atom™ E3827 1.75 GHz 533/792 (Turbo) 8W (2C/1333)
Atom™ E3826 1.46 GHz 533/667 (Turbo) 7W (2C/1066)
Atom™ E3815 1.46 GHz 400 (No Turbo) 5W (1C/1066)
Celeron® N2930 1.83 GHz, 313/854 (Turbo) 7.5W (4C/1333)
Celeron® J1900 2.00 GHz, 688/854 (Turbo) 10W (4C/1333)

Supports single, dual or quad Out-of-Order Execution (OOE) processor cores, Intel® VT-x, Intel® SSE4.1 and SSE4.2, Intel® 64 architecture, IA 32-bit , PCLMULQDQ Instruction DRNG, Intel® Thermal Monitor (TM1 & TM2)
Note: the availability of the features dependent on processor SKU

Memory

Dual channel non-ECC 1333/1066 MHz DDR3L memory up to 8GB in dual stacked SODIMM sockets

BIOS

AMI EFI 8MB SPI BIOS

SEMA Support

Supports: Voltage/Current monitoring, Power sequence debug support, AT/ATX mode control, Logistics and Forensic information, Flat Panel Control, General Purpose I2C, Failsafe BIOS (dual BIOS), Watchdog Timer and Fan Control

Debug Header

40-pin multipurpose flat cable connector. Use in combination with DB-40 debug module providing BIOS POST code LED, BMC access, SPI BIOS flashing, Power Testpoints, Debug LEDs

I/O Interfaces

Expansion Slots

1x PCIe x1 slot compliant with PCI Express Base 2.0 specification
1x Mini-PCIe full card support with USB and SIM card socket
1x mSATA full card support with USB

Serial ATA

2x SATA 3.0 Gbps port (one shared with mSATA)

USB

4x USB 3.0 on rear I/O
2x USB 2.0 via front panel header
2x USB 2.0 via onboard header
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 on rear I/O, 1x RS-232/422/485 on rear I/O
2x RS-232 and 2x RS-232/422/485 (with 5V/12V optional) support on internal headers

Digital IO

10x GPI, 10x GPO on internal feature connector

Specifications

Onboard Storage

eMMC

Optional soldered eMMC with extra space 8-64GB capacity

Audio

Audio Codec

Realtek ALC886

Interfaces

Line-out, Mic-in on rear I/O

7.1 channel signals and S/PDIF output on internal header

Display

Graphics Core

Intel® Gen7 graphics core

VGA

Analog VGA up to 1920x1200 @ 60 Hz

HDMI

Supports HDMI 1.3a, up to 2560 x 1600 x 24bpp @ 60 Hz

LVDS

Single/Dual channel 24-bit up to 1920 x 1200 @ 60 Hz, support non-EDID type

Ethernet

Controller: 2x Intel® i211AT (MAC/PHY) Ethernet controller

Interface: PCIe x1 bus

Wake-on-LAN: Yes

Power

Standard Input

ATX = 12V±5% / 5Vsb ±5% from internal header

AT = 12V±5% from internal header or external screw connector

Peripherals Output

Onboard headers for fan and SATA power

Mechanical and Environmental

Dimensions: 170 mm x 170 mm (L x W)

Operating Temp.

Standard: 0°C to 60°C

Extreme Rugged™: -40°C + 85°C
(build option, Atom™ E38xx series only)

Humidity

5-90% RH operating, non-condensing

5-95% RH storage

Shock and Vibration

IEC 60068-2-64 and IEC-60068-2-27

MIL-STD-202F, Method 213B, Table 213-I, Condition A and Method 214A, Table 214-I, Condition D

Relative Humidity

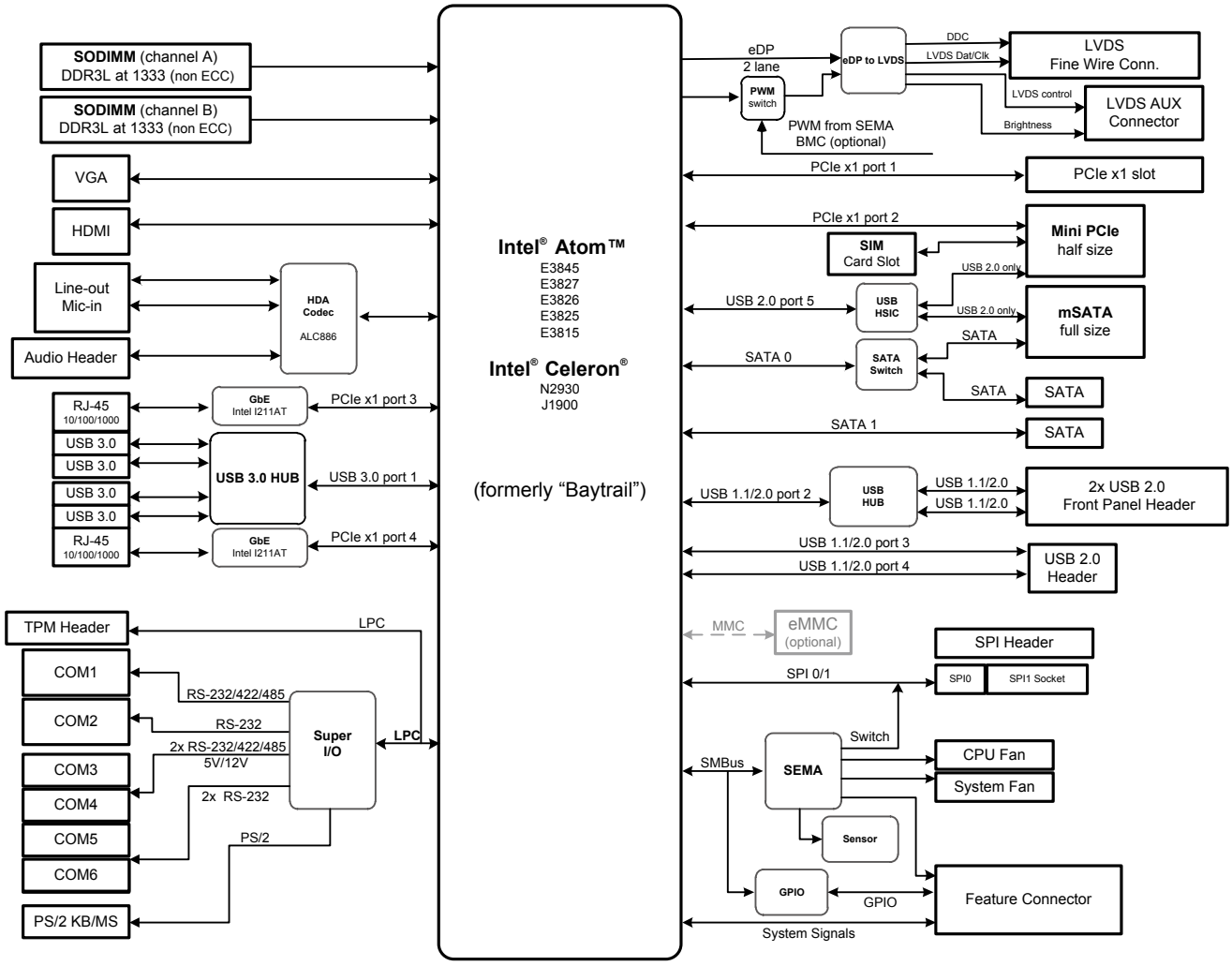
10% to 90%, non-condensing

HALT

Thermal Stress, Vibration Stress, Thermal Shock and Combined Test

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 these "build option" part numbers will need to be newly created and this will result in production lead times.

Functional Diagram



Ordering Information

- **AmITX-BT-I-E3845**
  Mini-ITX motherboard with Intel® Atom™ E3845 processor at 1.91 GHz
- **AmITX-BT-I-E3827**
  Mini-ITX otherboard with Intel® Atom™ E3827 processor at 1.75 GHz
- **AmITX-BT-I-E3826**
  Mini-ITX motherboard with Intel® Atom™ E3826 processor at 1.46 GHz
- **AmITX-BT-I-E3825**
  Mini-ITX motherboard with Intel® Atom™ E3825 processor at 1.33 GHz
- **AmITX-BT-I-E3815**
  Mini-ITX motherboard with Intel® Celeron® E3815 processor at 1.46 GHz
- **AmITX-BT-I-N2930**
  Mini-ITX motherboard with Intel® Celeron® N2930 processor at 1.83 GHz
- **AmITX-BT-I-J1900**
  Mini-ITX motherboard with Intel® Celeron® J1900 processor at 2.00 GHz

Packing List

- **30-20872-1000**
  ATX/AT Power Cable
- **30-20875-0000**
  SATA Dual Power Cable
- **30-10057-0600**
  SATA Cable
- **34-25313-0000**
  Rear I/O Shield

Optional Accessories

- **30-20876-0000**
  COM Port Cable, 1 Port, 25cm
- **30-20873-0000**
  PS/2 KB/MS Cable, 40cm
- **30-20874-1000**
  USB 2.0 Cable, 2 ports, 20cm
- **32-20493-0000**
  4010- CJ CPU Cooler with Fan (0°C to 60°C)
- **32-20494-0000**
  4020-CJ CPU Cooler with Fan (-40°C to 85°C)
- **32-20510-0000**
  CU-CJ CPU Passive Heatsink (0°C to 60°C)

LRI Distribuída no Brasil pela LRI | vendas@lri.com.br | 51 2129-3000

All products and company name listed are trademarks or trade names of their respective companies.
Updated Mar. 01, 2017. ©2017 ADLINK Technology, Inc. All Rights Reserved.
All specifications are subject to change without further notice.