

AmITX-BW-I

Thin Mini-ITX Embedded Board with Intel® Pentium®/Celeron® N3000 and Atom™ x5-E8000

Features

- Low-profile Thin Mini-ITX Embedded board
- Intel® Pentium®/Celeron® Processor N3000 Series and Atom™ x5-E8000 Processor
- Up to 8 GB dual channel DDR3L non-ECC at 1600/1333 MHz in stacked SODIMM sockets
- 2x DisplayPort, 1x HDMI, dual channel 18/24-bit LVDS (eDP by build option) supports three independent displays
- Supports Smart Embedded Management Agent (SEMA®) functions




Specifications

Processor & System

CPU	Dual or quad-core Intel® Pentium®/Celeron®/Atom™ Processor SoC, 14nm process Intel® Pentium® N3710 1.6/2.56 (Burst) GHz 6W Intel® Celeron® N3160 1.6/2.24 (Burst) GHz 6W (build option) Intel® Celeron® N3060 1.6/2.48 (Burst) GHz 6W Intel® Celeron® N3010 1.04/2.24 (Burst) GHz 4W (build option) Intel® Atom™ x5-E8000 1.04/2.00 (Burst) GHz, 5W
BIOS	AMI EFI in 8MB SPI BIOS
Debug Interface	40-pin multipurpose flat cable connector for DB-40 debug module providing BIOS POST code LEDs, BMC access, SPI BIOS flashing, power testpoints, debug LEDs
Memory	Dual channel non-ECC 1600/1333 MHz DDR3L memory up to 8GB in dual SODIMM socket
SEMA® Support	Supports voltage/current monitoring, power sequence debug, AT/ATX mode control, logistics and forensic information, flat panel control, general purpose I ² C, failsafe BIOS (dual BIOS), watchdog timer and fan control

I/O Interfaces

Expansion Slots	1x PCIe x1 slot 1x Mini PCIe (half size slot) with USB 1x mSATA (full size slot) with USB SIM card slot (build option) microSD card slot (build option)
Serial ATA	2x SATA 6 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	2x RS-232/422/485 via onboard headers (5V/12V build option) 4x RS-232 via onboard headers
Digital IO	10 GPIO 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 7.1 channel audio and S/PDIF output on internal header

Display

Support	3 independent displays: 1x HDMI, 2x DisplayPort, 1x LVDS switchable from DisplayPort (eDP by build option, in place of LVDS)
GPU Feature Support	Supports 3D rendering, media compositing and video encode/transcode Full hardware acceleration for decode of HEVC, H.264, SVC, VP8, VP9, MPEG4, AVS, H.263 Full hardware acceleration for encode of H.264, SVC, VP8, VP9, AVS, H.263 Supports content protection using PAVP2.0, HDCP 1.4/2.1 and Media Vault DRM DirectX 11.1, OpenGL 4.2, ES 3.0 and OpenCL 1.2 Note: Availability of features dependent on operating system

Ethernet

Controller	2x Intel® Ethernet Controller i211AT (MAC/PHY)
Interface	10/100/1000 GbE connection, 2x RJ-45
Wake-on-LAN	Yes

Power

Standard Input	12V ±5% from internal 4-pin power connector or external DC jack Supports ATX/AT mode
Peripheral Output	Onboard headers for fan and SATA power

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

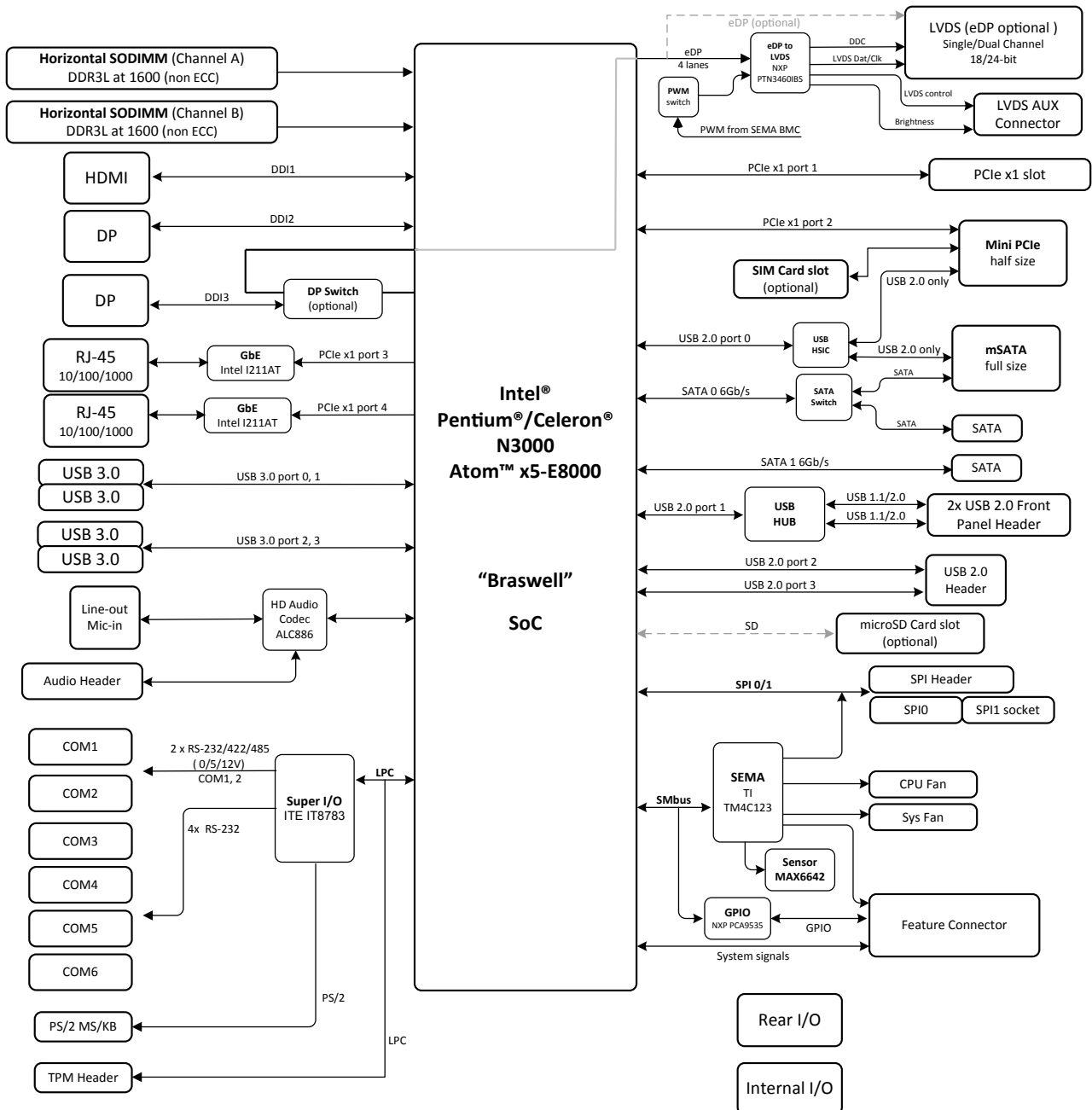
Mechanical and Environmental

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 7/8.1/10 32/64-bit, Linux 32/64-bit
Extended Support (BSP)	WES7, Linux

Functional Diagram



Ordering Information

Modules

Model Number	Description/Configuration
AmlTX-BW-I-N3710	Thin Mini-ITX motherboard with Intel® Pentium® N3710 at 1.6/2.56 (Burst) GHz
AmlTX-BW-I-N3160	Thin Mini-ITX motherboard with Intel® Celeron® N3160 1.6/2.24 (Burst) GHz (build option)
AmlTX-BW-I-N3060	Thin Mini-ITX motherboard with Intel® Celeron® N3060 1.6/2.48 (Burst) GHz
AmlTX-BW-I-N3010	Thin Mini-ITX motherboard with Intel® Celeron® N3010 1.04/2.24 (Burst) GHz (build option)
AmlTX-BW-I-E8000	Thin Mini-ITX motherboard with Intel® Atom™ x5-E8000 1.04/2.00 (Burst) GHz

Packing List

Model Number	Description
32-40344-0000	AmITX-BW-I CPU heat sink B, low-profile, aluminum
30-20875-0000	SATA dual power cable
30-10057-0600	SATA cable
34-25317-0000	AmITX-BW-I standard rear I/O shield

Optional Accessories

Model Number	Description
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)
34-25317-1000	AmITX-BW-I low-profile rear I/O shield
32-40343-0000	AmITX-BW-I CPU heat sink A, low-profile, copper

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