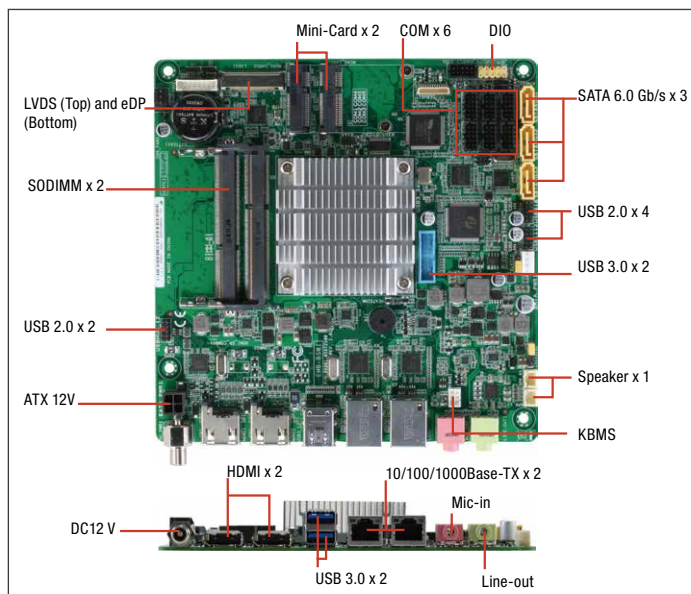


Thin Mini-ITX Embedded Motherboard with Intel® Atom™ N3710/N3060 Processor, SATA 6.0 Gb/s x 3, USB x 10



Specifications

| System | |
|--------------------------|---|
| Processor | Intel® Atom™ N3710 Processor, (4C @ 2.4GHz CPU (Burst Mode), 400/700 MHz GFX (Turbo), ~6W TDP), Intel® Atom™ N3060 Processor, (2C @ 2.08GHz CPU (Burst Mode), 20/600MHz GFX (Turbo), ~6W TDP) |
| Chipset | — |
| Memory | DDR3L 1600 MHz SODIMM x 2 up to 8 GB, Non-ECC, un-buffered memory, Dual-channel memory architecture flat type |
| Graphics | Intel® HD Graphics |
| I/O Chipset | F81866D |
| Ethernet | Intel® i211AT x 2 |
| Audio | Realtek® ALC3236 |
| TPM | Infineon SLB96XX TT 1.2/2.0 (default: No) |
| Expansion Slots | Full-size Mini-Card (mSATA default) (PCIe+USB optional) x 1, Half-size Mini-Card (PCIe+USB) x 1 |
| BIOS | 64 M bit Flash ROM, AMI BIOS |
| H/W Monitor | Temperature Monitor on CPU/System, Voltage Monitor on Vcore/5V/3.3V/12V, Fan Monitor on Chassis |
| WatchDog Timer | 1~255 step by software program |
| Smart Fan Control | Chassis Fan (fanless) |
| Wake On LAN/PXE | Yes (WOL/PXE) |
| Power State | S3, S4, S5 |
| Graphics | |
| Graphics Chipset | Intel® HD Graphics |
| Graphics Multi Display | 2 HDMI + LVDS (Default), 2 HDMI + eDP (BOM Change) |
| VGA | — |
| DVI | — |
| HDMI | Up to 2560 x 1600 @60 Hz, 3840 x 2160 @30Hz |
| Display Port | — |
| LVDS | Up to 1920 x 1080 @60Hz, Dual Channel 18/24-bit (via CH7511) |
| eDP | Up to 2560 x 1440 @60Hz |
| Backlight Control | Voltage / PWM, use HW control |
| Environment & Power & ME | |
| Battery | Lithium battery |
| Power Requirement | 12-24V DC (wide range: 12V-5% ~ 24V +10%) |
| Operating Temperature | 32°F ~ 140°F (0°C ~ 60°C) |
| Storage Temperature | -40°F ~ 185°F (-40°C ~ 85°C) |
| Operating Humidity | 0% ~ 90%RH, non-condensing |
| Certificate | CE & FCC |
| Form Factor | Mini-ITX, 6.7" x 6.7" (170mm x 170mm) |
| Weight | 1.1 lb (0.5 Kg) |
| MTBF (Hours) | — |

Features

- Intel® Atom™ N3710/N3060 Processor
- DDR3L 1333/1600 MHz SODIMM x 2, Up to 8 GB
- Three Independent Display: LVDS x 1, HDMI x 2, eDP x 1
- SATA 6.0 Gb/s x 3
- USB 3.0 x 4, USB 2.0 x 6
- Half-size Mini-Card (PCIe + USB) x 1, Full-size Mini-Card (mSATA default) (PCIe + USB optional) x 1
- 12-24V DC
- Low Profile



Rear Panel I/O Ports

| | |
|-------------|----------------------------------|
| USB | USB 3.0 x 2 |
| Display I/O | HDMI x 2 |
| Audio I/O | Mic-in x 1, Line-out x 1 |
| LAN I/O | LAN (RJ-45) port x 2 |
| Serial Port | — |
| PS/2 Port | — |
| Others | DC port (12V~24V) Screw type x 1 |

Internal I/O Connectors

| | |
|---------------|---|
| Storage | SATA3 (6.0Gb/s) x 3 (1 colay with mSATA), SATA power connector x 1, Full Size Mini-Card (mSATA) x 1 |
| USB | USB 3.0 (2x10PIN, 2.00mm) x 1 port supports additional 2 USB, USB 2.0 (2x5PIN, 2.00mm) x 3 ports support additional 6 USB |
| Display I/O | LVDS connector (40PIN, default) x 1, eDP connector (colay with LVDS, optional) x 1, LVDS 3V /5V jumper x 1, LCD DC / PWM mode jumper x 1, LCD backlight connector (inverter) x 1, LCD backlight 12V/5V jumper x 1 |
| Audio I/O | Speaker x 1 |
| Serial Port | Boxer header for COM (RS-232) x 5, Boxer header for COM (RS-232/422/485) x 1 |
| PS/2 Port | PS/2 Keyboard Mouse 6 PIN Connector x 1 |
| Parallel Port | — |
| DIO | DIO (4-in/4-out) x 1 |
| FAN | Chassis Fan connector x 1 |
| Power | 12V AUX Power Connector x 1, AT/ATX mode select jumper (optional) x 1 |
| Others | Front Panel connector x 1, CMOS jumper x 1 |

OS

| | |
|------------|---|
| OS Support | Windows® 7 32/64-bit, Windows® 8.1 32/64-bit, Windows® 10 32/64-bit, Linux Fedora |
|------------|---|

Packing List

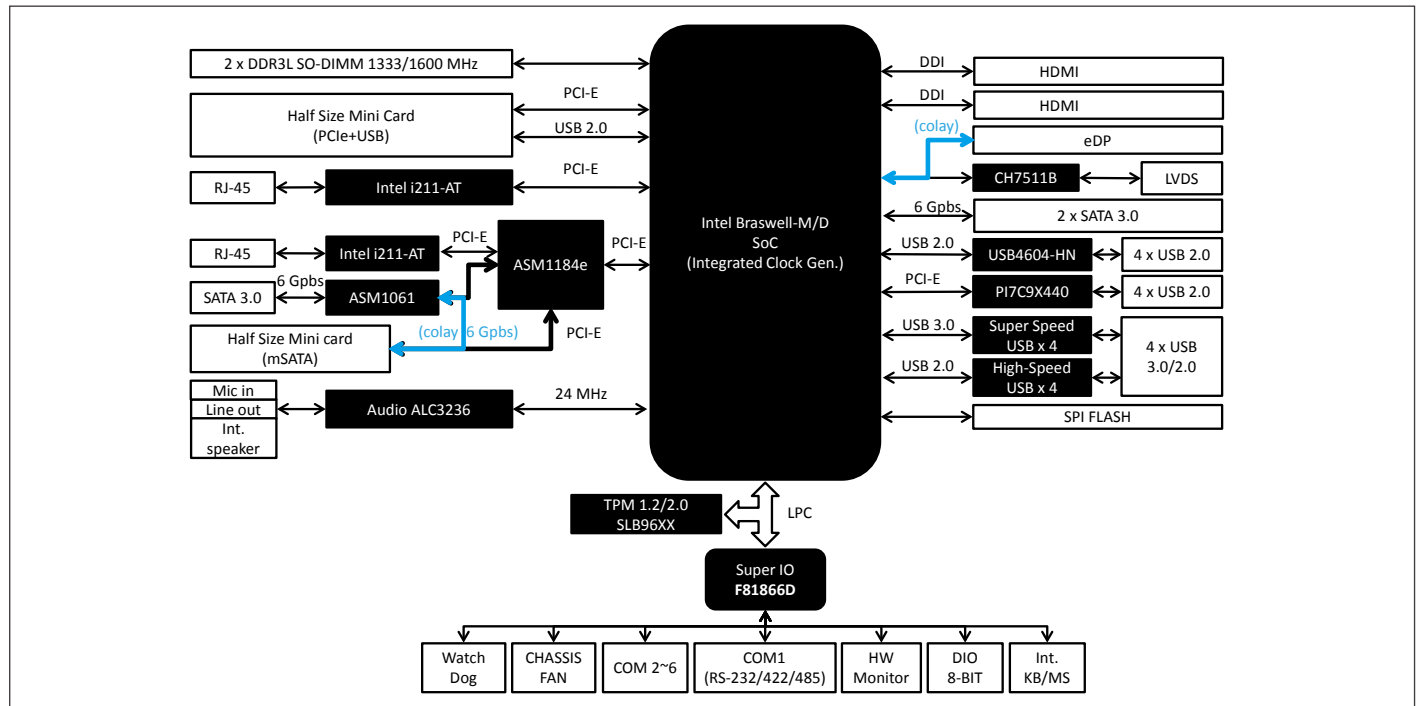
- SATA Cable
- SATA Power Cable
- I/O Shield
- Heatsink
- Product CD
- EMB-BSW1

Optional Accessories

| Part Number | Description |
|-------------|--|
| 1709100330 | USB 2.0 Cable (9P, 330MM, p=2.54mm, w/ bracket) |
| 1709050201 | USB 2.0 Cable (5P, 220MM, p=2.00mm) |
| 1701260305 | LPT Cable (25P, 270MM) |
| 1757306007 | Lockable Adapter 60W |
| 1757908403 | Lockable Adapter 84W |
| 1701100206 | COM Port Cable |
| 1700060152 | PS/2 cable (6P, 150mm, p=2.00mm) |
| 170910020K | USB 2.0 Cable (9P, 200MM, p=2.54mm, w/o bracket) |
| 1702150300 | SATA Power Cable 4P, 2.54mm |

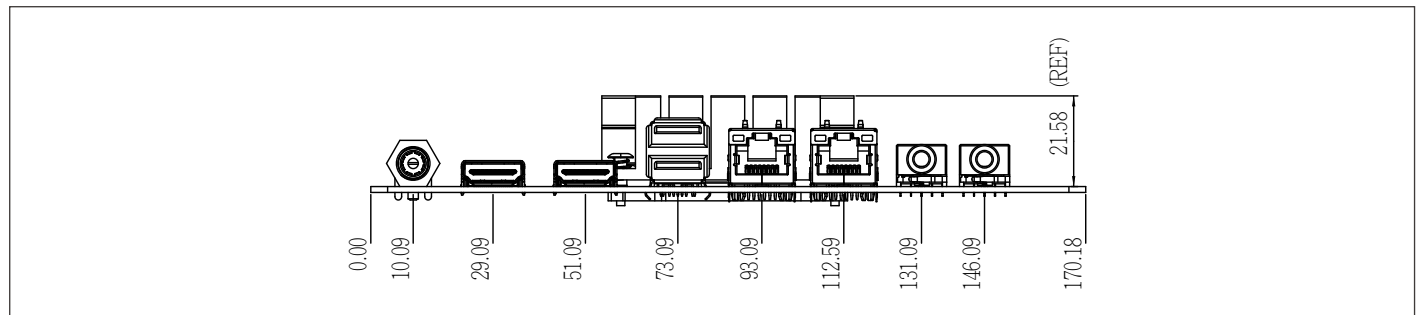
EMB-BSW1

Block Diagram



Dimension

Unit: mm



Order Information

| Part number | CPU | RAM | Fan/Fanless | Display | Storage | LVDS | LAN | USB | RS-232 | RS-232/422/485 | Expansion Slot | Power | TPM | Temp. |
|-----------------------|-------|------------|-------------|----------------|--|------------------------|---------|--------------------------|--------|----------------|---|----------|-----|------------|
| EMB-BSW1-A10-3710-HHL | N3710 | SODIMM x 2 | Fanless | LVDS, HDMI x 2 | SATA3 x 2, Full size Mini-Card x 1 (mSATA) | Dual Channel 18/24-bit | GbE x 2 | USB 3.0 x 4, USB 2.0 x 6 | 5 | 1 | Full-size Mini-Card (mSATA default) x 1, Half-size Mini-Card (PCIe + USB) x 1 | 12-24VDC | No | 0°C - 60°C |
| EMB-BSW1-A10-3060-HHL | N3060 | SODIMM x 2 | Fanless | LVDS, HDMI x 2 | SATA3 x 2, Full size Mini-Card x 1 (mSATA) | Dual Channel 18/24-bit | GbE x 2 | USB 3.0 x 4, USB 2.0 x 6 | 5 | 1 | Full-size Mini-Card (mSATA default) x 1, Half-size Mini-Card (PCIe + USB) x 1 | 12-24VDC | No | 0°C - 60°C |

Note: All specifications are subject to change without notice.

2016/03/8