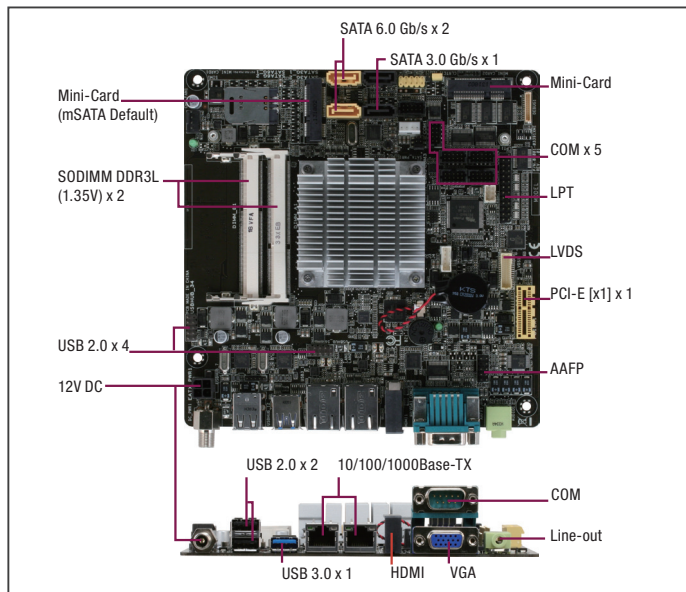


Mini-ITX Embedded Motherboard with Intel® Celeron® J1900/N2807/ Atom™ E3845/E3825 Processor, SATA3 x 2, SATA2 x 2, USB x 8



Specifications

| System | |
|--------------------------|--|
| Processor | Intel® Celeron® J1900 Processor (4C @ 2.00 GHz CPU, 688/854 MHz GFX, 10W TDP), Intel® Celeron® N2807 Processor (2C @ 1.58 GHz CPU, 313/750 MHz GFX, 4.3W TDP), Intel® Atom™ E3845 Processor (4C @ 1.91 GHz CPU, 542/792 MHz GFX, 10W TDP), Intel® Atom™ E3825 Processor (2C @ 1.33 GHz CPU, 533 MHz GFX, 6W TDP) |
| Chipset | — |
| Memory | DDR3L 1333 MHz SODIMM x 2 up to 8 GB (for J1900 / E3845), DDR3L 1333 MHz SODIMM x 1 up to 4 GB (for N2807), DDR3L 1067 MHz SODIMM x 1 up to 4 GB (for E3825), Non-ECC, un-buffered memory, Dual-channel memory architecture flat type |
| I/O Chipset | Fintech 81866D |
| Ethernet | Realtek PCIe Gb LAN 8111G x 2 |
| Audio | Realtek® ALC887 |
| TPM | Infineon SLB9635 TT 1.2 (default : No) |
| Expansion Slots | Full-size Mini-Card (mSATA default) (PCIe+USB optional) + SIM Card (default: No) x 1, Half-size Mini-Card (PCIe+USB) x 1, PCIe [x1] 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 CPU/Chassis |
| WatchDog Timer | 1~255 steps 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 | VGA+LVDS, VGA+HDMI, LVDS+HDMI |
| VGA | Up to 1920 x 1200 @60 Hz |
| DVI | — |
| HDMI | Up to 1920 x 1200 @60 Hz |
| Display Port | — |
| LVDS | Up to 1920 x 1080 @60Hz, Dual Channel 18/24-bit (via CH7511) |
| eDP | — |
| Backlight Control | Voltage/PWM |
| Environment & Power & ME | |
| Battery | Lithium battery |
| Power Requirement | 12VDC |
| Operating Temperature | 32°F ~ 140°F (0°C ~ 60°C) |
| Storage Temperature | -40°F ~185°F (-40°C ~85°C) |
| Operating Humidity | 0% ~ 90% R/H, 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) | 111,131 |

Features

- Intel® Celeron® J1900/N2807/ Atom™ E3845/E3825 Processor
- Dual Displays: VGA x 1, HDMI x 1, LVDS x 1
- Realtek 8111G, Gigabit Ethernet x 2
- SATA 6.0 Gb/s x 2, SATA 3.0 Gb/s x 2 (1 Colay with mSATA)
- USB 3.0 x 1, USB 2.0 x 7
- Full-size Mini-Card with mSATA x 1, Half-size Mini-Card x 1, PCI-E[x1] x 1
- 12V DC Power Input



| Rear Panel I/O Ports | |
|-------------------------|--|
| USB | USB 3.0/2.0 x 1, USB 2.0 x 2 |
| Display I/O | VGA x 1, HDMI x 1 |
| Audio I/O | Line-out x 1 |
| LAN I/O | LAN (RJ-45) port x 2 |
| Serial Port | COM (RS-232)(optional) x 1 |
| PS/2 Port | — |
| Others | DC port (12V) Screw type x 1 |
| Internal I/O Connectors | |
| Storage | SATA3 (6.0Gb/s) x 2, SATA2 (3.0Gb/s) x 2 (1 colay with mSATA), SATA power connector x 1, Full Size Mini-Card slot (mSATA) x 1 |
| USB | USB 2.0 (2 x 5-pin, 2.54mm) x 2 ports support additional 4 USB, USB 2.0 (1x 5-pin, 2.0mm) x 1 port supports additional 1 USB |
| Display I/O | LVDS connector 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 | AAFP x 1 |
| Serial Port | Boxer header for COM (RS-232) x 4, Boxer header for COM (RS-232/422/485) x 1 |
| PS/2 Port | PS/2 Keyboard Mouse 6 PIN Connector x 1 |
| Parallel Port | SPP/EPP Mode |
| DIO | DIO (4in/4out) x 1 |
| FAN | Chassis Fan connector x 1 |
| Power | 12V AUX Power Connector x 1, AT/ATX mode select jumper (default : No) x 1 |
| Others | Half-size Mini-Card (PCIe + USB) x 1, PCIe [x1] x 1, SIM Card Socket(default : No) x 1, LPT PIN header x 1, Front Panel connector x 1, CMOS jumper x 1 |
| OS | |
| OS Support | Windows® 10 64-bit, Windows® 7 32/64-bit, Windows® 8.1 32/64-bit, Linux Fedora |

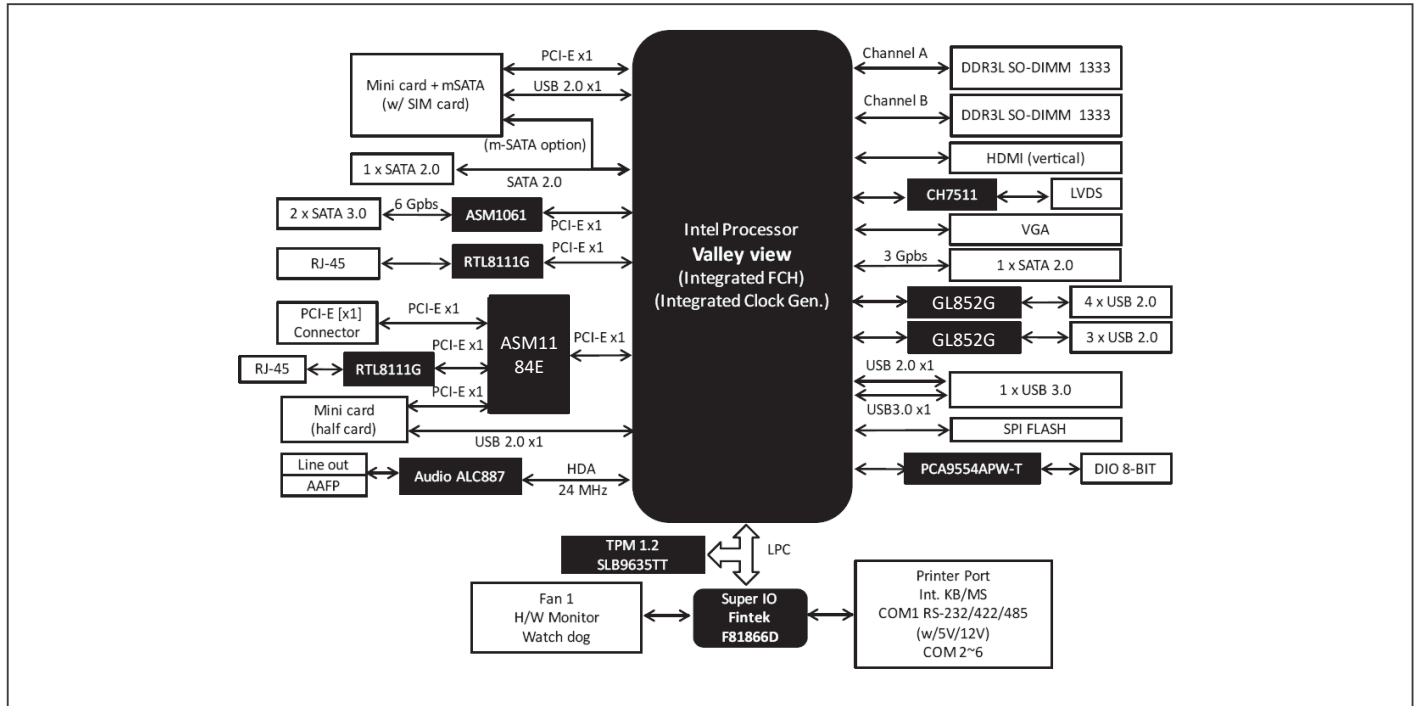
Packing List

- SATA Cable
- SATA Power Cable
- I/O Shield
- Heatsink
- Product CD
- EMB-BT1

Optional Accessories

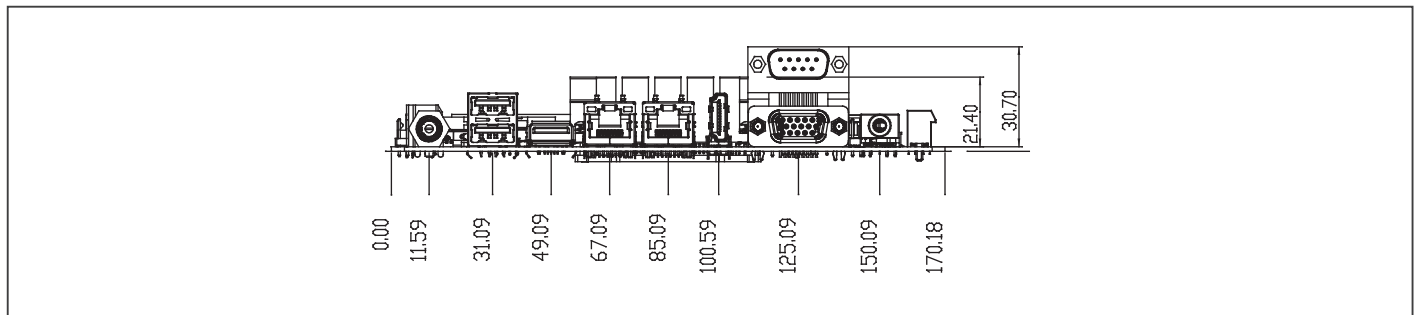
| Part Number | Description |
|-------------|--|
| 1709100330 | USB 2.0 Cable (9P, 330MM, p=2.54mm, w/ bracket) |
| 1709050201 | USB 2.0 Cable (5P, 220MM, p=2.00mm) |
| 1701260305 | LPT Cable (25P, 270MM) |
| 1757908403 | Lockable Adapter 84W |
| 1701100206 | COM Port Cable |
| 1700060152 | PS/2 Cable (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 |
| 125530060A | Lockable Adapter 12V, 5A, 60W |

Block Diagram



Dimension

Unit: mm



Ordering Information

| Part Number | CPU | RAM | Fan/ Fanless | Display | Storage | LVDS | LAN | USB | RS-232 | RS-232/422/485 | Expansion Slot | Power | TPM | Temp. |
|---------------------|-------|-------------------|-----------------|--------------------|--|---------------------------|---------|-----------------------------|--------|----------------|---|--------|-----|------------------------------|
| EMB-BT1-A30-1900-MS | J1900 | DDR3L-1333 x 2 | Fanless | VGA, LVDS, HDMI | SATA2 x 1, SATA3 x 2, Full size Mini-Card x 1 (mSATA) | Dual Channel 18/24-bit | GbE x 2 | USB 3.0 x 1, USB 2.0 x 7 | 5 | 1 | PCIe [x1] x 1, Half-size Mini-Card x 1 (PCIe [x1] x 1 & USB) | 12V DC | — | 32°F ~ 140°F (0°C ~ 60°C) |
| EMB-BT1-A30-3825-MS | E3825 | DDR3L-1066 x 1 | Fanless | VGA, LVDS, HDMI | SATA2 x 1, SATA3 x 2, Full size Mini-Card x 1 (mSATA) | Dual Channel 18/24-bit | GbE x 2 | USB 3.0 x 1, USB 2.0 x 7 | 5 | 1 | PCIe [x1] x 1, half size Mini-Card x 1 (PCIe [x1] x 1 & USB) | 12V DC | — | 32°F ~ 140°F (0°C ~ 60°C) |
| EMB-BT1-A30-3845-MS | E3845 | DDR3L-1333 x 2 | Fanless | VGA, LVDS, HDMI | SATA2 x 1, SATA3 x 2, Full size Mini-Card x 1 (mSATA) | Dual Channel 18/24-bit | GbE x 2 | USB 3.0 x 1, USB 2.0 x 7 | 5 | 1 | PCIe [x1] x 1, half size Mini-Card x 1 (PCIe [x1] x 1 & USB) | 12V DC | — | 32°F ~ 140°F (0°C ~ 60°C) |