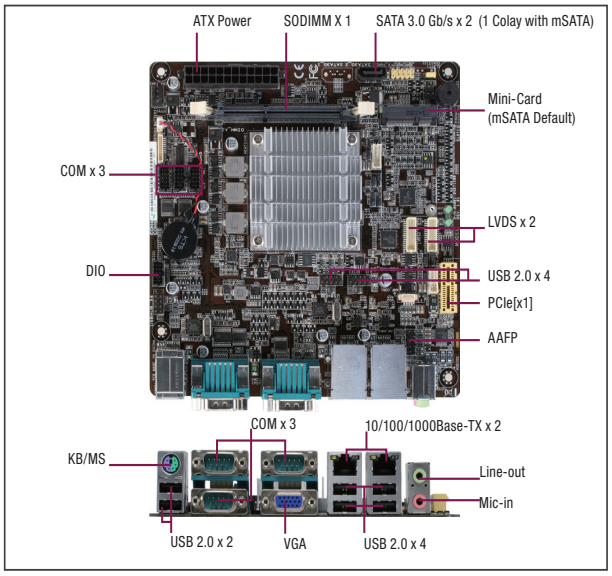
10

Industrial Motherboards

EMB-BT2

Mini-ITX Embedded Motherboard with Intel® Celeron® J1900 Processor, SATA2 x 2, USB 2.0 x 10, Dual LVDS



Features

- Intel® Celeron® J1900 Processor
- Realtek 8111H, Gigabit Ethernet x 2
- Dual Displays: VGA + LVDS, Dual LVDS
- SATA 3.0 Gb/s x 2
- USB 2.0 x 10
- Full-size Mini-Card with mSATA x 1, PCI-E [x1] x 1
- ATX Power

Specifications

System	
Processor	Intel® Celeron® J1900 Processor (4C @ 2.00 GHz CPU, 688/854 MHz GFX, 10W TDP)
Chipset	—
Memory	DDR3L 1333 MHz SODIMM x 1 up to 8 GB, Non-ECC, un-buffered memory
I/O Chipset	Fintech 81866D
Ethernet	Realtek PCIe Gb LAN 8111H x 2
Audio	Realtek® ALC897
TPM	Infineon SLB9635 TT 1.2 (default : No)
Expansion Slots	Full-size Mini-Card (mSATA default PCIe+USB optional) 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, Dual LVDS
VGA	Up to 1920 x 1200 @60 Hz
DVI	—
HDMI	—
Display Port	—
LVDS	Dual 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	ATX
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)	290,990
Rear Panel I/O Ports	
USB	USB 2.0 x 6
Display I/O	VGA x 1
Audio I/O	Mic-in x 1, Line-out x 1
LAN I/O	LAN (RJ-45) port x 2
Serial Port	COM (RS-232/422/485) x 1, COM (RS-232) x 2
PS/2 Port	PS/2 Keyboard Mouse combo x 1
Others	—
Internal I/O Connectors	
Storage	SATA2 (3.0Gb/s) x 2 (1 colay with mSATA), Ful Size Mini-Card slot (mSATA) x 1
USB	USB 2.0 (2 x 5-pin, 2.54mm) x 2 ports support additional 4 USB
Display I/O	LVDS connector x 2, LVDS 3V /5V jumper x 2, LCD DC / PWM mode jumper x 2, LCD backlight connector (inverter) x 2, LCD backlight 12V /5V jumper x 2, LCD push button for backlight control (2PIN) x 2
Audio I/O	AAFP x 1, Speaker x 1
Serial Port	Box header for COM (RS-232) x 3
PS/2 Port	—
Parallel Port	—
DIO	DIO (4in/4out) x 1
FAN	Chassis Fan connector x 1
Power	24PIN ATX power connector x 1, AT/ATX mode select jumper (default : No) x 1
Others	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 3G Cable
- Heatsink
- I/O Shield
- EMB-BT2

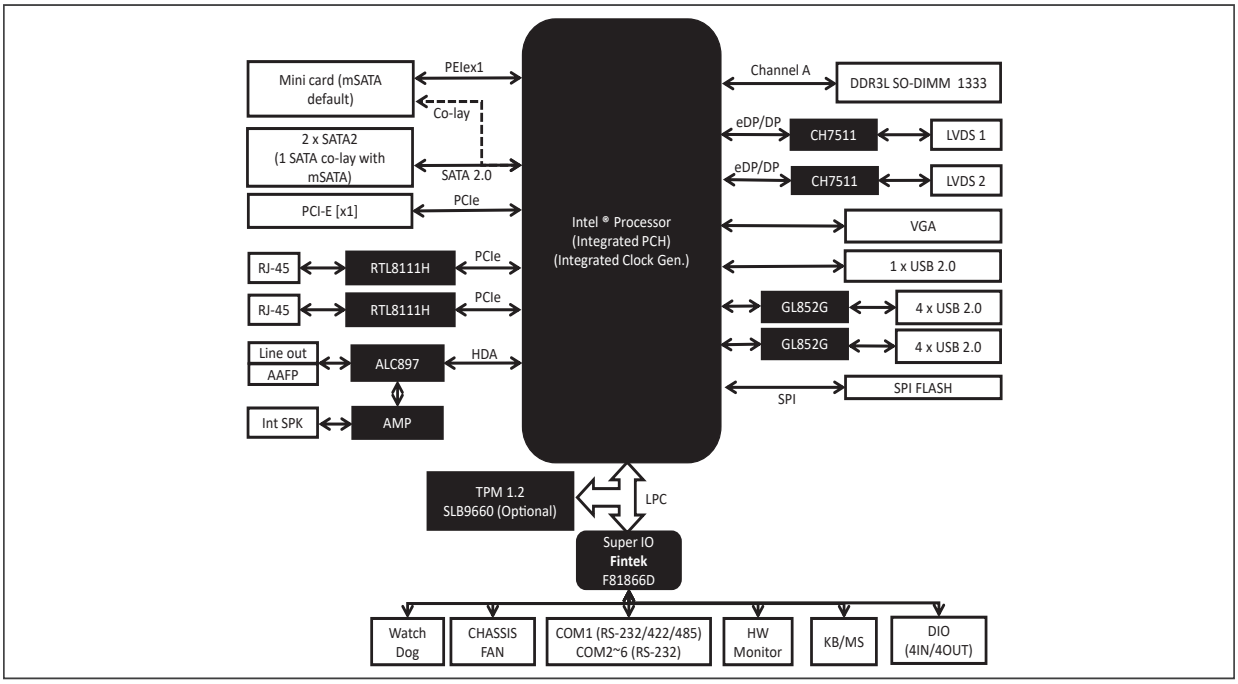
Optional Accessories

Part Number	Description
1709100330	USB 2.0 Cable (9P, 330MM, p=2.54mm, w/ bracket)
1701100206	COM Port Cable
170910020K	USB 2.0 Cable (9P, 200MM, p=2.54mm, w/o bracket)

Note: All specifications are subject to change without notice.

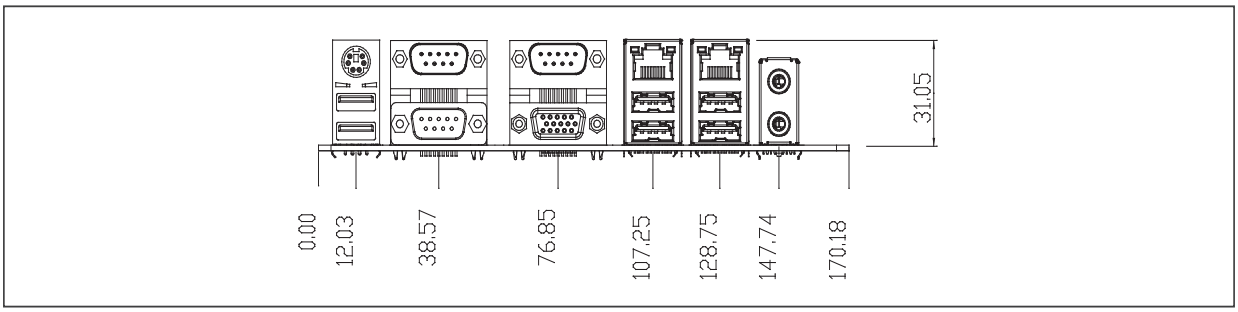
EMB-BT2

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-BT2-A14-1900-D1-MSH	J1900	SODIMM x 1	Fanless	VGA, LVDS x 2	SATA2 x 1, Full-Size Mini-Card x 1(mSATA)	Dual Channel 18/24-bit x 2	GbE x 2	USB 2.0 x 10	5	1	Full-size Mini-Card (mSATA default, PCIe x 1 optional) x 1, PCIe[x1] x 1	ATX	—	32°F ~ 140°F (0°C ~ 60°C)

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