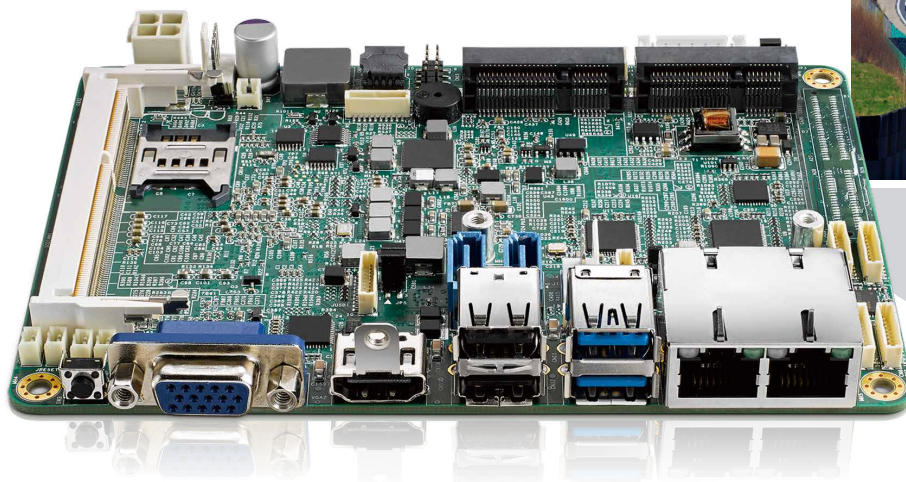


EMBC-2000

3.5" Embedded Single Board Computer with Intel Atom® x7-E3950 Processor (Apollo Lake)

- Quad Core Intel Atom® x7-E3950 SoC (Apollo Lake-I), up to 3 independent Ultra HD displays
- Supports DDR3L 1866MHz memory, up to 8GB
- Display : Lockable HDMI, VGA, 24-bit LVDS
- 2 GigE LAN support IEEE 1588 (PTP)
- 6 USB, 2 Mini PCIe, 1 SIM, 2 SATA III
- 16 GPIO, 4 COM RS-232/422/485 with 2 Isolated
- TPM 2.0 supported
- 12V DC Power Input, optional supports 9V to 36V wide range DC power input
- Fanless, -40°C to 75°C Operating Temperature
- Optional for M.2, Mini PCIe expansions



Machine Vision



In-Vehicle Infotainment



Factory Automation



ITS (Intelligent Transportation System)



Specifications

System

Processor	Intel Atom® x7-E3950 Processor (up to 2M Cache, 2.0GHz)
BIOS	AMI
SIO	IT8786E
Memory	1 DDR3L 1866MHz SO-DIMM, up to 8GB
OS	Windows 10, Linux

Graphics

Processor	Intel® HD Graphics 505
Interface	- HDMI : Up to 3840 x 2160 @30Hz - VGA : Up to 1920 x 1440 @60Hz - LVDS : Dual channel 24-bit, up to 1920 x 1200

Ethernet

LAN 1	Intel® I210 GigE LAN supports IEEE 1588
LAN 2	Intel® I210 GigE LAN supports IEEE 1588

Audio

Audio Codec	Realtek ALC888S-VD, 7.1 Channel HD Audio
Audio Interface	1 Mic-in, 1 Line-out

I/O Interface

Front I/O	- 2 RJ45 Connector - 2 USB 3.0 Connector - 2 USB 2.0 Connector - 1 Lockable HDMI Connector - 1 VGA Connector - 1 Power Button - 1 Reset Button
Internal I/O	- 1 ATX 4-Pin Power Connector - 1 DDR3L SO-DIMM Socket - 1 USB 2.0 Connector for 2 USB Port - 4 COM RS-232/422/485 Connector (2 with isolation) - 2 10-pin Box Header for GPIO - 1 Mic-in - 1 Line-out - 1 LVDS Connector - 1 LVDS Backlight Connector - 2 Mini PCIe Connector - 1 SIM Card Socket - 2 SATA Connector - 1 SATA Power Connector - 1 Fan Connector - 1 LPC Debug Header - 1 Reset Header - 1 Power Header - 1 Battery Header

Storage

SATA	2 SATA III (6Gbps) (1 co-use with mSATA)
mSATA	1 SATA III (Mini PCIe Type, 6Gbps)

Expansion

Mini PCIe	2 Mini PCIe Socket : - 1 Mini PCIe for PCIe/USB/SIM Card - 1 Mini PCIe for PCIe/USB/Optional mSATA
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Power

Power Input	- Single 12V DC Power Input - 9V to 36V DC Power Input (Optional, via Power Module)
Power Interface	ATX Power Connector

Others

TPM	Optional Infineon SLB9665 supports TPM 2.0, LPC Interface
Watchdog Timer	Reset : 1 to 255 sec./min. per step
HW Monitor	Monitoring temperature, voltages. Auto throttling control when CPU overheats.

Mechanical

Dimensions	146mm x 102mm (5.75" x 4.02")
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Environment

Operating Temp.	-40°C to 75°C (-40°F to 167°F)
Storage Temp.	-40°C to 85°C (-40°F to 185°F)
Humidity	5% to 95% Humidity, Non-condensing
Relative Humidity	95% at 75°C
EMC	CE, FCC

Packing List

EMBC-2000 SBC	x1
Driver/User Manual DVD	x1
Cable Kit	
- COM Port Cable	x2
- USB 2.0 Cable	x1
- Audio Cable	x1
- SATA Data Cable	x1
- SATA Power Cable	x1

Order Information

Model Name	CPU	GigE LAN	COM (Isolated)	USB	GPIO	Mini PCIe
EMBC-2000	Intel Atom® x7-E3950	2	4 (2)	6	16	2
EMBC-2000C			2 (0)			

Optional Accessories

61-13Q1009-0DA	COM Port Cable
61-193102U-156	USB 2.0 Cable
61-13T10LM-3CG	Audio Cable
61-13B0707-386	SATA Data Cable
61-13P0430-08A	SATA Power Cable
61-13S33KM-3CG	KB/MS Cable
WPM-101	Wide-Range 9V to 36V DC-in Power Module
EMBC-2000 Heat Spreader	Heat Spreader for EMBC-2000

Dimensions & Drawing

Unit : mm (inch)

