AIR-101

Edge AI Inference System with Intel Atom® E3940 QC SoC and Two Intel MA2485 VPUs

Features

- Intel Atom® E3940 Quad Core SoC turbo burst up to 1.8 GHz
- Intel® Movidius™ Myriad™ X VPU MA2485 x 2 Built-in
- Intel® OpenVINO™ toolkit supported
- SATA Slim 64G SSD x1 Built-in
- 204-pin SO-DIMM DDR3L 8GB memory x 1 built-in
- DIN-Rail AI system with essential I/O ports on front-side bezel
- Dual HDMI 4K display, Intel GbE x 2 and USB 3.0 x 4
- M.2 2230 for WIFI or optional VEGA-320 module
- 12V ~ 28V wide-range power input
- Integrated with Edge AI Suite

OpenVINO™ Toolkit

- Model optimizer
- Inference engine
- Supports TensorFlow, Caffe, mxnet, ONNX

Enhanced Inference Efficiency

Scaling AI inference workloads with modular, plug & play design

VEGA-330 built-in

- Two MA2485 VPU
- Full size miniPCIe
- PCIe Gen2 x1, USB 2.0

Specifications

Model Name		AIR-101-S62A1
Processor System	CPU	Intel Atom E3940 Quad Core SoC
	Frequency	1.6 GHz, turbo burst up to 1.8 GHz
Memory	Technology	DDR3L 1866 Mhz
	Built-in	1 x 204-pin SO-DIMM DDR3L 8GB memory (-40 ~ 85 °C) built-in
AI Engine	VPU	Two Intel® Movidius™ Myriad™ X MA2485 (1 x VEGA-330-02A1 Built-in)
	Signal Interface	PCIe Gen2 x 1, USB 2.0
	Software	Advantech Edge AI Suite OpenVINO R2 2019 or latest
	Framework Support	TensorFlow, Caffe
Graphics	Chipset	Intel HD Graphics 500, CPU integrated
	HDMI	HDMI1 : 3840 x 2160 @ 30Hz HDMI2 : 3840 x 2160 @ 30Hz
Ethernet	LAN1	10/100/1000 Mbps Intel i210GbE, supports Wake On LAN
	LAN2	10/100/1000 Mbps Intel i210GbE, supports Wake On LAN
Audio	Interface	Realtek ALC888S, High Defination Audio, Mic-in, Line-out
I/O Interface	Seriel Ports	2 x RS-232/422/485 with auto flow control, COM2 with 5V/12V power supply
	USB Ports	4 x USB 3.0
	GPIO	8-bit programmable DIO (optional)
Expansion	M.2	1 x M.2 2230 E key for WIFI or VEGA-320 module #1
Storage	SSD	1 x SATA Slim 64G SSD (-40 ~ 85 °C) built-in
Software Support	Microsoft Windows	Windows 10 Enterprise 64-bit
	Linux	Ubuntu 16.04.3 LTS (64-bit)
Power Requirement	Power Input Voltage	12 ~ 28 V_{DC}
	Power Adaptor	AC to DC 24V/2.5A 60W (Optional)
Power Consumption	Typical	8.7W
	Max.	19.2W
Mechanical	Construction	Aluminum housing
	Mounting	DIN-rail/Wall Mount
	Dimensions (W x H x D)	53.5 x 158 x 114 mm (2.11" x 6.22" x 4.49")
Environment	Operating Temperature	With built-in VEGA-330: -20 ~ 55 °C, with 0.7m/s air flow With built-in VEGA-330 and optional VEGA-320: -20 ~ 50 °C, with 0.7m/s air flow
	EMC	CE/FCC Class B, CCC, BSMI
	Safety	UL, CB, CCC and BSMI

#1 M.2 slot is hardware interface for wireless communication integration only. System level RF certification is not available.

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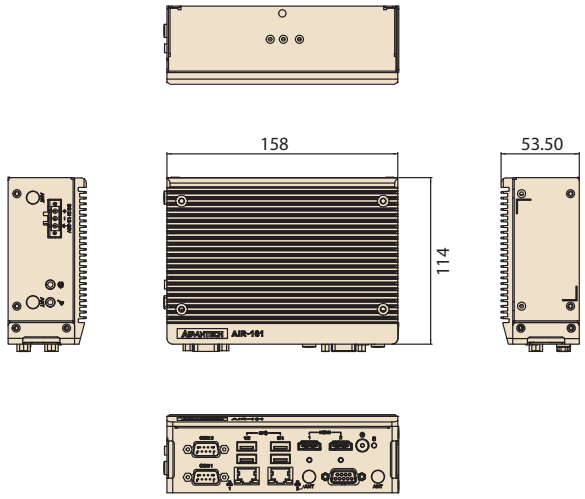
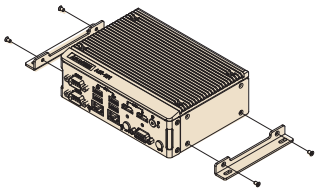
All product specifications are subject to change without notice.

Dimensions

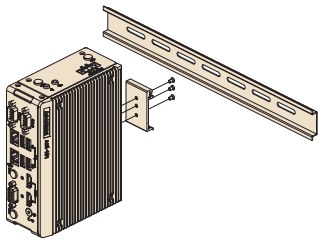
Unit: mm



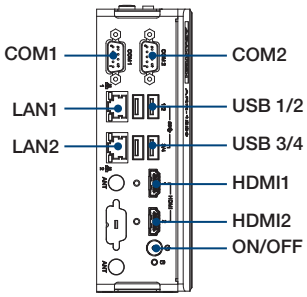
Wall Mount



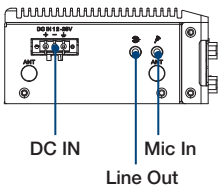
DIN Rail



Front Panel External I/O Mechanical Layout/Drawing



Top Panel External I/O Mechanical Layout/Drawing



Ordering Information

Part No.	CPU	VPU	Memory	Storage	HDMI	GbE	USB 3.0	RS-232/ 422/ 485	Audio	SIM	M.2	Power Input	Operating Temp.
AIR-101-S62A1	Intel Atom E3940 1.6 GHz SoC	Two Intel Movidius Myriad X MA2485 Built-in	8GB Built-in	64GB Slim SATA Built-in	2	2	4	2	Mic-in, Line-out	1	1	12~28 V_{DC}	-20 ~ 55 °C

Packing List

Part Number	Description
-	1 x AIR-101 Unit
-	1 x User Manual (Simplified Chinese)
-	Wrench for top cover
1960015198T011	1x DIN-rail bracket
1652004519	1x 3-pin terminal block

Embedded OS

Part Number	Description
20706WX9ES0084	Win10 IoT LTSC 64bit w/ Edge AI Suite

Optional Items

Part Number	Description
96PSA-A60W24T2-3	AC to DC Adaptor, 24V/2.5A 60W
1702002600	Power cable 3-pin 183cm, USA type
1702002605	Power cable 3-pin 183cm, EU type
1702031801	Power cable 3-pin 183cm, UK type
1700000237	Power cable 3-pin 183cm, PSE type
1700023855-01	1M lockable HDMI cable
1700023856-01	3M lockable HDMI cable
1700019967	GPIO cable, F Cable 2*5P-2.0/D-SUB 9P(F) 15CM
AMK-W003	ARK-1220L wall mount kit
VEGA-320-01A1*	M.2 2230 Edge AI acceleration module with One Intel Myriad X
AMK-A0032*	VEGA-320 thermal kit for AIR-101

Note* Please place order on optional VEGA-320 and AMK-A0032 together.