



WISE DeviceOn Edge intelligence system User Guide

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ADVANTECH

Enabling an Intelligent Planet

Edge Intelligence System with
Intel 11th generation with Edge X API
and WISE-DeviceOn
EI-52

NEW



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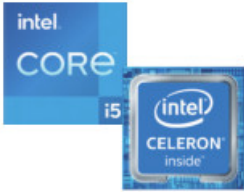
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Features

- Intel 11th gen. Core i5/i3/Celeron
- Pre-installed Edge X with data acquisition API
- Pre-installed WISE-DeviceOn for device management and remote control
- 8/16 GB DDR4 Memory Built-in
- 64 GB SATA Slim SSD Built-in
- Compact 156 x 112 x 60mm dimensions
- 4K HDMI and DP 1.4a Dual Display
- Compatible with optional VEGA-330 AI Module supported by Intel Movidius Myriad X VPU
- Compatible with optional AIW-355 5G module
- Intel VNNI support for AI and deep learning

Introduction

Advantech EI-52 is a compact box-designed high-performance Edge Intelligence system. It is powered by Intel® 11th gen. Core i5/i3/Celeron Processor, with software Edge X API for data acquisition and WISE-DeviceOn for device management and remote control. EI-52 is the ideal ready-to-use edge intelligence solution that generates values from data, a device to the resource.

	Edge-X	
Intel 11th Core i5/i3/Celeron Processor • 2x Performance than previous Gen. • Outstanding 12 Gen. GFX Graphic Performance • VNNI instructions for AI/Deep learning performance boost	Edge X API Built-in • Expandable Data Acquisition API • Easy for 2nd Development • Support Azure, AWS, AliCloud	WISE-DeviceOn Built-in • Device Management and Remote control • Acronis for system backup and recovery • Macfee for data and device security

Specifications

		EI-52			
Processor System	CPU	Core i5-1145G7E	Core i3-1115G4E		Celeron 6305 E
	System Chipset	Integrated into CPU			
Memory	Technology	Dual-Channel DDR4 3200 MHz 260 pin SO-DIMM			
	Capacity	Core i5 SKU: 1x 16 GB 260-pin SO-DIMM DDR4 2400 MHz memory (-20 ~ 85 °C) built-in. Max. capacity 64GB. Core i3 & Celeron SKU: 1x 8 GB 260-pin SO-DIMM DDR4 2666 MHz memory (-20 ~ 85 °C) built-in. Max. capacity 64GB.			
Graphics	Chipset	Intel 12th gen. Graphics			
	Graphic Engine	Direct X 12.1, OpenGL 4.6 HW Encode: H.265/HEVC, H.264/AVC, VP9, SCC HW Decode: H.265/HEVC, H.264/AVC, VP9, SCC			
	HDMI	1 x HDMI 2.0b: 4096×2160@60Hz			
	DP	1 x DP 1.4a: 4096×2160@60Hz			
	Dual Display	HDMI + DP			
Storage	SSD	1 x 64 GB SATA Slim SSD (-40 ~ 85 °C) built-in			
	LAN1	10/100/1000 Mbps Intel i219 GbE			

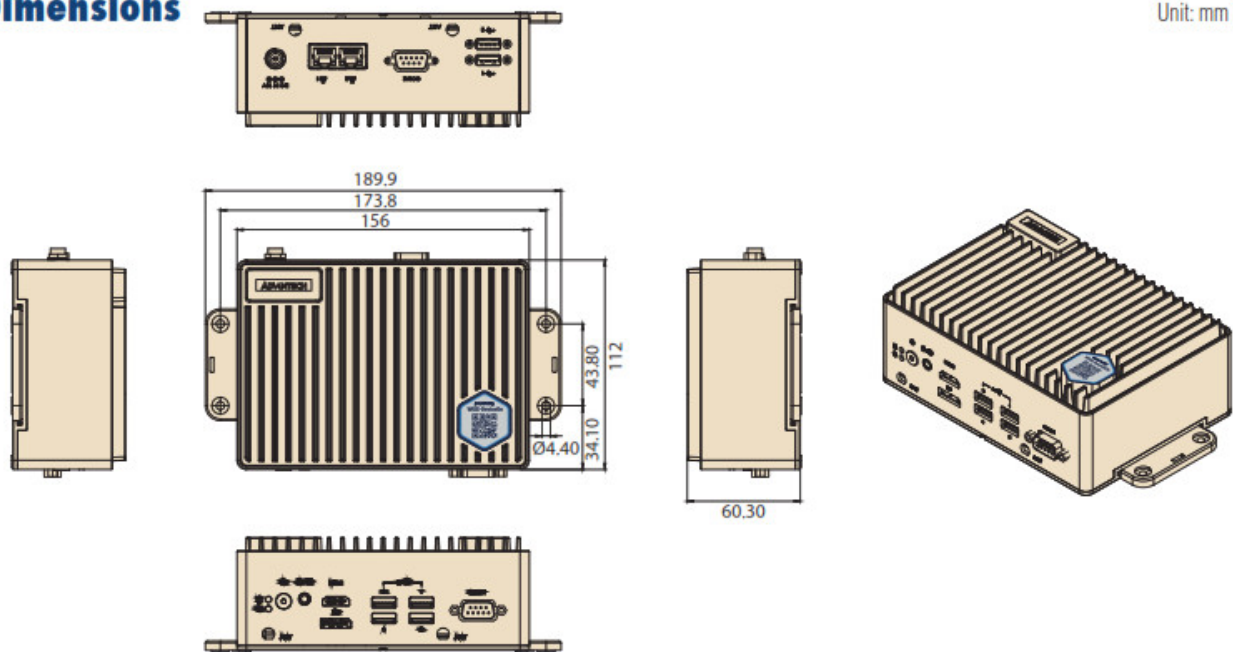
I/O Interface	LAN2	10/100/1000 Mbps Intel i210 GbE
	USB 2.0/USB 3.0	2/4
	Audio	1 x Mic-in, Line-out, Realtek ALC888S HD Audio
	Serial	2 x RS-232/422/485
Expansion	Mini PCIe	1 x Full-size Mini PCIe #1
	M.2	1 x 2280 M key #1
Trusted Platform Module	TPM 2.0	SLB9670XQ2.0
Power Requirement	Power Input Voltage	19 VDC
	Power Type	ATX/AT, default ATX
Power Consumption	Typical	16.5W
	Max.	34.3W
Physical Characteristics	Mounting	Wall Mount
	Dimensions (W x H x D)	156 x 112 x 60 mm
	Weight	0.94 Kg
Environment	Operating Temperature	-10 ~ 50 °C, with 0.7m/s airflow
Software Support	Microsoft Windows	Windows 10 IoT 64-bit
	Linux	Ubuntu 20.04 supported (BSP by project support)
	Others	Advantech Edge X pre-installed in Win10 image WISE-DeviceOn pre-installed in Win10 image
Certification	EMC	CE/FCC Class B, CCC, BSMI
	Safety	UL, CB, CCC, BSMI

#1 Mini PCIe and M.2 slots are hardware interfaces for wireless communication integration only. System-level RF certification is not available.

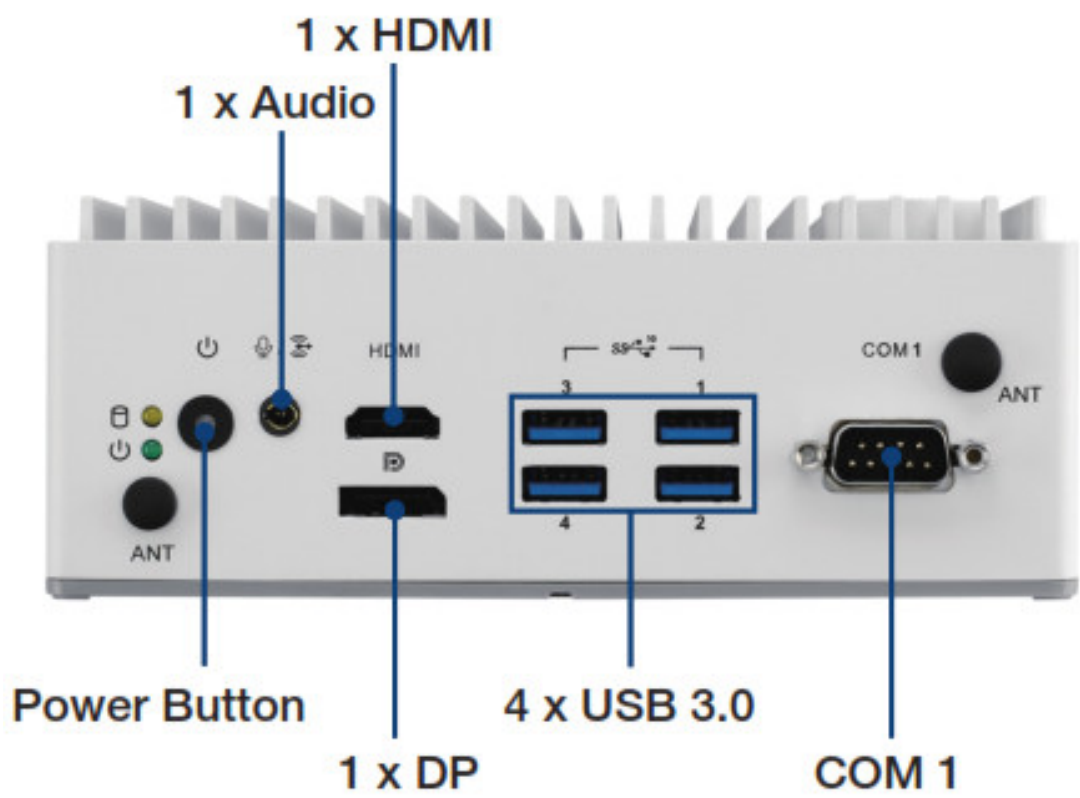
All product specifications are subject to change without notice.

Dimensions

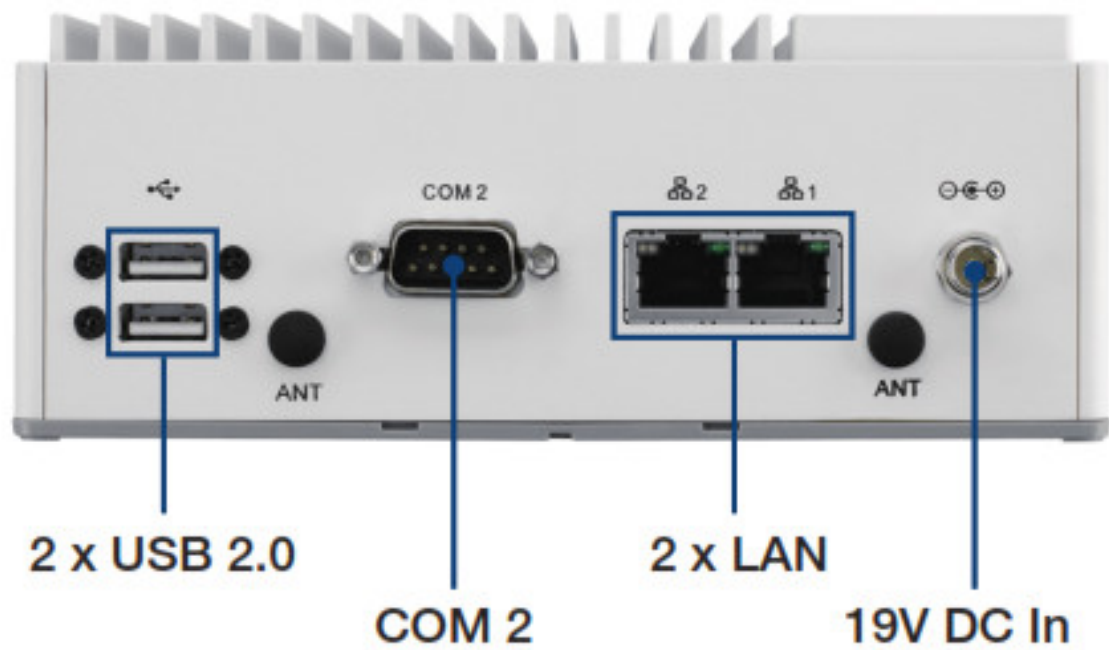
Unit: mm [inch]



Front View



Rear View



Ordering Information

Part No.	CPU	Memory	Storage	Display	LAN	USB	RS-232 / 422/485	M.2	Mini PCIe	Power Input	Operating Temp.	Audio
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	Intel Core i 5-114 5G7E	16GB DDR4 Built-i n										
EI-52- S6A1	Intel Core i 5-114 5G7E	16GB DDR4 Built-i n										Realte k ALC 888S
EI-52- S6A1 NA	Intel Core i 3-111 5G4E	8GB DDR4 Built-i n	64GB SATA	1 x D P		4 x 3. 0		1 x	1 x Ful lsize Mini			No Au dio
EI-52- S2A1	Intel Core i 3-111 5G4E	8GB DDR4 Built-i n	Slim SSD	1 x H DMI	2	2 x 2. 0	2	2280 M key	PCle	19 VD C	-10 ~ 50 °C	Realte k ALC 888S
EI-52- S2A1 NA	Intel Core i 3-111 5G4E	8GB DDR4 Built-i n	Built-i n									No Au dio
EI-52- U0A1	Intel Celer on 63 05E	8GB DDR4 Built-i n										Realte k ALC 888S
EI-52- U0A1 NA	Intel Celer on 63 05E	8GB DDR4 Built-i n										No Au dio

Packing List

Part Number	Description
—	1 x EI-52 unit
—	1 x Power adapter (DC 19V, 90W)
—	1 x User manual (Simplified Chinese)
—	Edge X Package
—	WISE-DeviceOn Package

Optional Items

Part Number	Description
1700001524	Power Cable 3-pin 180cm, USA type
170203183C	Power Cable 3-pin 180cm, Europe type
170203180A	Power Cable 3-pin 180cm, UK type
1700008921	Power Cable 3-pin PSE Mark 183cm
AMK-A0038	VEGA-330 and thermal kit for EI-52
AMK-A0039	AIW-355 5G module thermal solution for EI-52
AMK-A0040	VESA and DIN-Rail Mounting kit for EI-52
AMK-A0041	EWM-W189H02E WIFI module accessory kit for EI-52
AMO-I026A	MiniPCle to M.2, support M.2 Key B USB signal module (for using AIW-355 5G module on EI-52)

Embedded OS

Part Number	Description
20706WX9VM0021	Win 10 IoT 64-bit w/ WISE Device-On and Edge X API

Online Download

www.advantech.com/products

Documents / Resources

	WISE DeviceOn Edge intelligence system [pdf] User Guide Edge intelligence system
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References

- [A Advantech Co-Creating the Future of the IoT World](#)