

EI-52

Compact Edge Intelligent System Intel 11th generation with EdgeX API and WISE-DeviceOn

NEW



WISE-DeviceOn ADVANTECH WISE-Marketplace Azure Certified Device

Features

- Intel 11th gen. Core i5/i3/Celeron
- Pre-integrated Edge X with data acquisition API
- Pre-integrated WISE-DeviceOn for device management and remote control
- 8/16 GB DDR4 Memory Built-in
- Compact 156 x 112 x 60mm dimensions
- 4K HDMI and DP 1.4a Dual Display
- Compatible with optional VEGA-330 AI Module
- Compatible with optional AIW-355 5G module

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, device to 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
- Acronics for system backup and recovery
- Mactee for data and device security

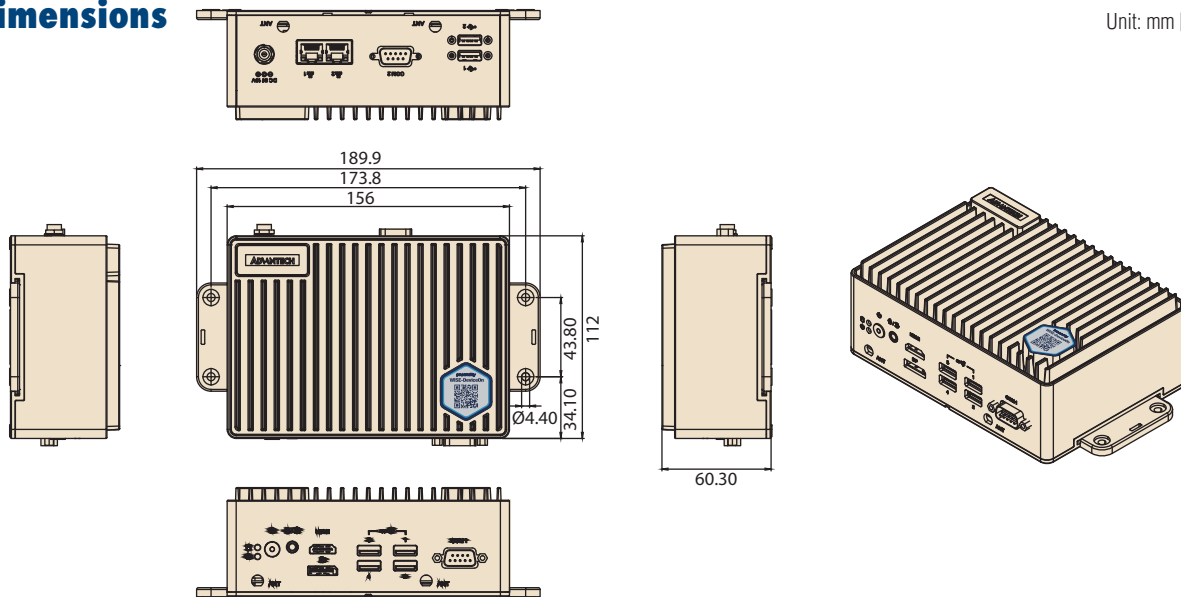
Specifications

		EI-52		
		Core i5-1145G7E	Core i3-1115G4E	Celeron 6305E
Processor System	CPU	Core i5-1145G7E		
	System Chipset	Integrated in 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 B 260-pin SO-DIMM DDR4 2666 MHz memory (-20 ~ 85 °C) built-in. Max. capacity 64GB.		
	Chipset	Intel® Iris® Xe chipset integrated by CPU		
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: 4096x2160@60Hz		
	DP	1 x DP 1.4a: 4096x2160@60Hz		
	Dual Display	HDMI + DP		
Storage	SSD	Built-in 64 GB Slim SATA SSD (-40 ~ 85 °C) on EI-52-S6A1/EI-52-S2A1/EI-52-U0A1 Optional Slim SSD on EI-52-S6A1U/EI-52-S2A1U/EI-52-U0A1U		
	I/O Interface	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		
	COM	2 x RS-232/422/485		
	Expansion	Mini PCIe	1 x Full-size Mini PCIe #1	
Trusted Platform Module	M.2	1 x 2280 M key (Signal: PCIe x4 only) #1		
	TPM 2.0	SLB9670XQ2.0		
Power Requirement	Power Input Voltage	19 V _{dc}		
	Power Type	ATX/AT, default ATX		
Power Consumption	Typical	16.5W		
	Max.	34.3W		
Physical Characteristics	Mounting	Wall/VESA/Din-Rail Mounting		
	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 air flow		
	Microsoft Windows	Windows 10 IoT 64-bit		
Software Support	Linux	Ubuntu 20.04		
	Others	Advantech Edge X pre-installed in Win10 image WISE-DeviceOn pre-installed in Win10 image		
	EMC	CE/FCC Class B, CCC, BSMI		
Certification	Safety	UL, CB, CCC, BSMI		
	RF	CE RED/FCC system RF certified with AIW-355 5G and EWM-W189 WIFI module		

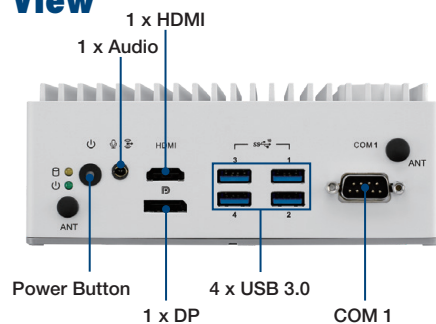
#1 Mini PCIe and M.2 slots are hardware interfaces for wireless communication integration only. System level RF certification is not available.

Dimensions

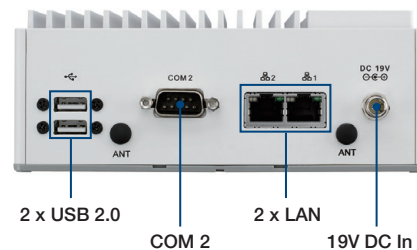
Unit: mm [inch]



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
EI-52-S6A1	Intel Core i5-1145G7E	16GB DDR4 Built-in	64GB SATA Slim SSD Built-in	1 x DP 1 x HDMI	2	4 x 3.0 2 x 2.0	2	1 x 2280 M key	1 x Full-size Mini PCIe	19 V _{DC}	-10 ~ 50 °C	Realtek ALC888S
EI-52-S2A1	Intel Core i3-1115G4E	8GB DDR4 Built-in	8GB DDR4 Built-in	1 x DP 1 x HDMI	2	4 x 3.0 2 x 2.0	2	1 x 2280 M key	1 x Full-size Mini PCIe	19 V _{DC}	-10 ~ 50 °C	Realtek ALC888S
EI-52-U0A1	Intel Celeron 6305E	8GB DDR4 Built-in	8GB DDR4 Built-in	1 x DP 1 x HDMI	2	4 x 3.0 2 x 2.0	2	1 x 2280 M key	1 x Full-size Mini PCIe	19 V _{DC}	-10 ~ 50 °C	Realtek ALC888S
EI-52-S6A1U*	Intel Core i5-1145G7E	16GB DDR4 Built-in	optional Slim SSD	1 x DP 1 x HDMI	2	4 x 3.0 2 x 2.0	2	1 x 2280 M key	1 x Full-size Mini PCIe	19 V _{DC}	-10 ~ 50 °C	Realtek ALC888S
EI-52-S2A1U*	Intel Core i3-1115G4E	8GB DDR4 Built-in	optional Slim SSD	1 x DP 1 x HDMI	2	4 x 3.0 2 x 2.0	2	1 x 2280 M key	1 x Full-size Mini PCIe	19 V _{DC}	-10 ~ 50 °C	Realtek ALC888S
EI-52-U0A1U*	Intel Celeron 6305E	8GB DDR4 Built-in	optional Slim SSD	1 x DP 1 x HDMI	2	4 x 3.0 2 x 2.0	2	1 x 2280 M key	1 x Full-size Mini PCIe	19 V _{DC}	-10 ~ 50 °C	Realtek ALC888S

* System Made in Taiwan

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 AI module and thermal kit (Including VEGA-330 module and thermal solution)
AMK-A0039	Thermal kit for AIW-355 5G module (for using AIW-355 5G module)
AMK-A0040	VESA and DIN-Rail Mounting kit for EI-52
AMO-I026A	MiniPCIe to M.2, support M.2 Key B USB signal module (for using AIW-355 5G module)

Embedded OS

Part Number	Description
20706WX9VM0021	Win 10 IoT 64 bit w/ WISE Device-On and Edge X API for Core i5 and Core i3 SKU
20706WX9EM0028	Win 10 IoT 64 bit w/ WISE Device-On and Edge X API for Celeron SKU
20706U20DS0017	Ubuntu Desktop 20.04 LTS 64bit for EI-52 Core i5, i3, Celeron SKU

WISE-DeviceOn

Edge AI OTA and Container Management

WISE-DeviceOn End-to-End Solution for Edge AI

Even if all datasets, algorithms, trainings, UI/UX, and more are functioning, how can you easily deploy an AI application to hundreds, or thousands, of inference devices in production? How can you efficiently manage AI models (software updates, CI/CD), in addition to all remote, hardware devices, such as sensors?



Solution Advantages



Performance Booster

- Inference optimization
- Open Neural Network Compiler (ONNC)
- Save over 45% DRAM consumption



Fleet Management

- Remote batch control for power management, reboot, terminal and screenshot
- Real-time monitoring, diagnostics and notification
- Over 10,000 devices around the globe



Container and OTA

- Streamlined deployment process
- Docker container management
- Software OTA (over-the-air) updates



AI Security

- AI containers deployed via Azure Container Registry and Harbor
- Secured data connection (TLS/SSL)
- Integrity protection based on digital signature

👉 Find More Information about [WISE-DeviceOn End-to-End Solution for Edge AI](#)