

# ARS-2110

## EN50155 Intel® Atom™ E3845 Fanless Box PC



### Features

- Intel® Atom™ Processor E3845
- Dual Independent Display: VGA and DVI
- M12 connector for Ethernet and USB interfaces MiniPCIe Expansions, Wi-Fi, LTE, GSM-R and GPS RAID 0/1 Support (Expansion Slots)
- EN50155 Certified:
- Power Input Range Covers 24V/72V/110V (±40%)
- TX Temperature Level:-40 ~ 70 °C (85 °C for 10 minutes) with EN45545 Compliant
- EN50121 EMC Standards IEC61373 Body Mount Class B IP50 Rating

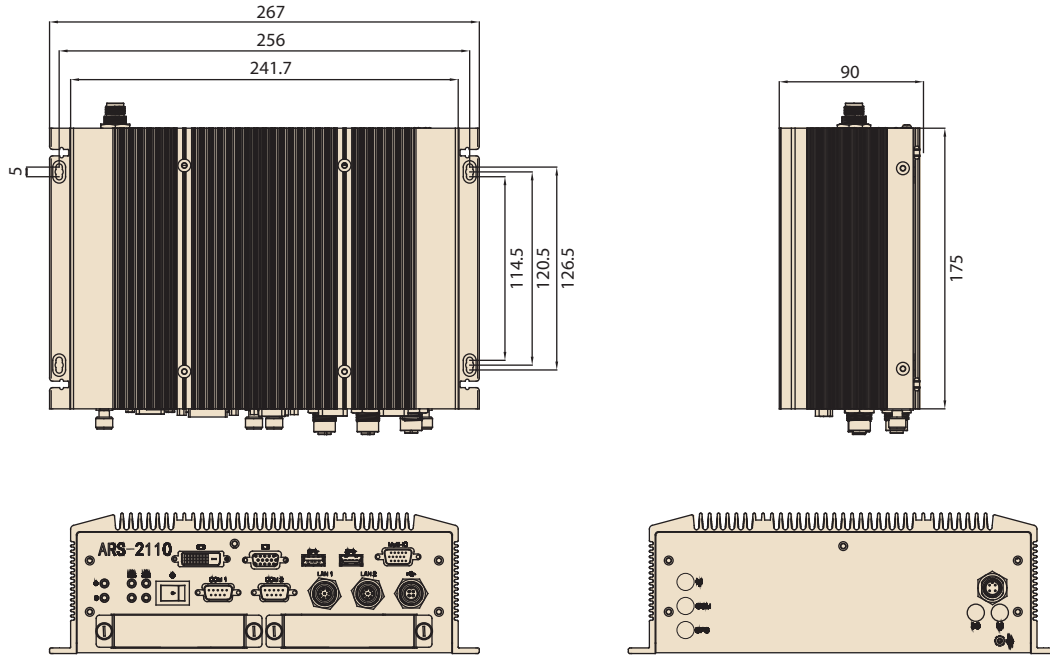
### Specifications

Computing System	CPU	Intel® Atom™ E3845
	Max. Speed	Quad Core 1.91GHz
	L3 Cache System Chipset	2 MB
	System Chipset	Intel® Valleyview-D/I SoC Integrated
	BIOS	AMI EFI 64Mbit
	Memory	DDR3L 1333MHz 204-pin SODIMM (Default 4GB up to 8GB)
Storage	Internal	mSATA Socket x 1 (Default 32GB)
Graphics	Chipset	Intel® HD Graphics
	Graphic Engine	DirectX 11, OpenGL 3.2/4.X
	Dual Display	VGA + DVI
Ethernet	LAN1/ LAN2	10/100/1000 Mbps Intel I210 Ethernet Controller (M12 A coded)
Expansion Function	GPS	50 Channels with -160 dBm Sensitivity, A-GPS and Galileo Capable (Optional)
	Wi-Fi	Advantech 802.11abgn 2T2R, Wide-Temp Module(Optional)*
	WWAN	LTE/HSPA+/GPRS module (Optional)*
	GSM-R/ GPRS-R	Quad-band, GPRS Multi-slot Class 10, GSM Pahse2/ Phase2+ (Optional)
	G-Sensor	Digital Accelerometer Ultra Low Power, 10-bit Resolution
	Gyroscope	Turn Rate Sensor for Dead Reckoning (SPEED+ and FWD+ Signals on DB15 Connector)
Audio	Interface	Realtek ALC888S, High Definition Audio, Line-out, Mic-in, Line-in
I/O Interface	Serial Port	RS-232/422/485 Ports with Auto Flow Control x 2
	USB Interface	USB 3.0 x 1 (Type A x 1), USB 2.0 x 2 (Type A x 1, M12 x 1)
Expansion I/O	Optional Module	CAN Bus, Isolated Serial Port, Isolated Digital I/Os, Expansion Module for 2 x 2.5" SSD driver bay
Software	Microsoft	Windows 7, Windows 7 Embedded, Windows 10
	Linux	Ubuntu 16.04
	API	Advantech SUSIAccess
Power	Connector	M12 with 4 Poles
	Power Input Voltage	24 V <sub>DC</sub> , 72 V <sub>DC</sub> , and 110 V <sub>DC</sub> (±40%) (Optional)
Physical Characteristics	Construction	Aluminum Housing
	Dimensions(W x H x D)	267 x 87.5 x 175 mm
	Weight	4.5Kg
Environment	Operating Temperature	EN50155 TX: -40 ~ 70 °C (85 °C for 10 Minutes)
	Storage Temperature	-40 ~ 85 °C
	Relative Humidity	95% @ 40 °C (Non-Condensing)
Certifications	Vibration/Shock	MIL-STD-810G, EN50155
	Railway Related	EN50155, EN50121, IEC61373
	EMC	CE/FCC Class A
	Safely Certification	UL
Other	Watchdog Timer	255 Levels Timer Interval (Setup by Software)

\*Any module with mini PCIe interface can be integrated if either default Wi-Fi or WWAN function is not necessary.

## Dimensions

Unit: mm



## Ordering Information

Voltages	Part Number	Processor	DDR3L 4GB	mSATA 32G	VGA	DVI	Dual LAN	Dual COM	Dual USB	Audio	GSM-R	3G	Wi-Fi	GPS
24V	ARS-2110TX-10A1E	Intel® E3845	v	v	v	v	v	v	v	v	v	v	v	v
	ARS-2111TX-10A1E	Intel® E3845	v	v	v	v	v	v	v	v	v	v	v	v
	ARS-2112TX-10A1E	Intel® E3845	v	v	v	v	v	v	v	v	v	v	v	v
72V	ARS-2110TX-30A1E	Intel® E3845	v	v	v	v	v	v	v	v	v	v	v	v
	ARS-2111TX-30A1E	Intel® E3845	v	v	v	v	v	v	v	v	v	v	v	v
	ARS-2112TX-30A1E	Intel® E3845	v	v	v	v	v	v	v	v	v	v	v	v
110V	ARS-2110TX-40A1E	Intel® E3845	v	v	v	v	v	v	v	v	v	v	v	v
	ARS-2111TX-40A1E	Intel® E3845	v	v	v	v	v	v	v	v	v	v	v	v
	ARS-2112T3-40A1E	Intel® E3845	v	v	v	v	v	v	v	v	v	v	v	v

## Optional Modules

Part Number	Product Description
AIO-SSD110-00A1E	Single SSD carrier with DIO for ARS-2510/ARS-2110
AIO-COM210-00A1E	Dual COM ports with isolation for ARS-2510/ARS-2110
AIO-CAN210-00A1E	Dual CAN ports with Isolation for ARS-2510/ARS-2110

For sales inquiries or additional information, please contact us at [Rail@advantech.com.tw](mailto:Rail@advantech.com.tw)