



# ARES-1970E-M12-NVR

In-Vehicle Box PC with Intel® Xeon® E3/6<sup>th</sup> & 7<sup>th</sup> Generation Core™ i7/i5/i3 Processors



## Features

- Fanless Design
- Wide Range DC Power Input(9~36V)
- Wide temperature range from -40°C to +70°C
- 4 x 802.3af Gigabit PoE ports by M12 connectors
- RTC Battery service windows Support
- 2 x mPCIe slots for Optional WiFi/BT/3G/4G/GPS Modules
- 1 x M.2 (NGFF) M-Key(2242) socket for storage Module
- 1 x SIM card sockets

Embedded Computing

<b>System</b>	
CPU	Intel® Xeon® E3/6 <sup>th</sup> & 7 <sup>th</sup> generation Core™ i7/i5/i3 processor in LGA1151 socket
Memory	2 x 260-pin DDR4 SO-DIMM sockets,
Chipset	Intel® C236
Graphics	Integrated Intel® HD Graphics
ATA	3 x Serial ATA port with 600MB/s HDD transfer rate
LAN Chipset	1 x Intel® i219LM GbE controller w/ iAMT 11.0 (except i3)
	1 x Intel® WGI211AT GbE controllers 4 x Intel® WGI211AT GbE controllers for PoE
Watchdog Timer	1~255 levels reset
<b>I/O</b>	
USB Port	4 x USB 3.0 ports, front side
LAN	2 x RJ-45 ports for GbE, front side
	4 x M12-male 8P connector, IP67 for PoE, A-coded, rear side (with total 30W power budget)
Video Port	1 x DB-15 female connector for Analog RGB, Max. resolution : 1920 x 1080 @ 60Hz
	1 x DVI-D female connector for digital video output, Max. resolution : 1920 x 1080 @ 60Hz
Antenna	3 x SMA-female connectors' holes for external antennas
Audio	Mic-in/Line-out
Expansion Bus	1 x mini-PCI Express Slots interconnected with SIM card sockets for optional WiFi/BT/3G/LTE/GPS (PCIex1+USB2.0, Full Size)
	1 x mini-PCI Express slot for optional WiFi/BT/GPS (PCIex1+USB2.0, Half Size)
<b>Environmental</b>	
Operating Temp.	-40 ~ 60°C, ambient w/ air flow, w/ 35W TDP Core™ i CPU
	-40 ~ 70°C, ambient w/ air flow, w/ Xeon™ E3-1268L-V5 (CPU throttling may be happened while it run full loaded)
Storage Temp.	-40 ~ 85°C (-40 ~ 185°F)

Operating Humidity	10 ~ 95% @ 70°C (non-condensing)
Vibration	IEC61373 Category 1 Class B
Shock	IEC61373 Category 1 Class B

<b>Qualification</b>	
Certification	EN-50155 certified. test with AC adapter

<b>Power Requirement</b>	
Power Input	DC 9~36V input ( w/ 5-pin M12-male A-code connector)
Power Consumption	Typ. 90W (w/o I/O card)

<b>Storage</b>	
Type	1 x M.2 M-Key socket for storage module(SATA signal only) 1 x external 2.5" SATA3 6Gb/s Drive Bay 1 x internal 2.5" SATA3 6Gb/s Drive Bay

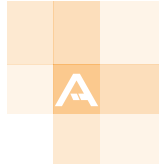
<b>Mechanical</b>	
Construction	Aluminum alloy
Mounting	Support Wall-mount
Weight	6.4kg( 14.1lb )
Dimensions	225(W) x 292 (D) x 90 (H) mm

<b>OS Support</b>	
	Windows 10 IOT (For 6 <sup>th</sup> /7 <sup>th</sup> Gen Intel CPU) Windows 7 / Windows 8.1 (For 6 <sup>th</sup> Gen Intel CPU) Linux (Kernal 4.x )

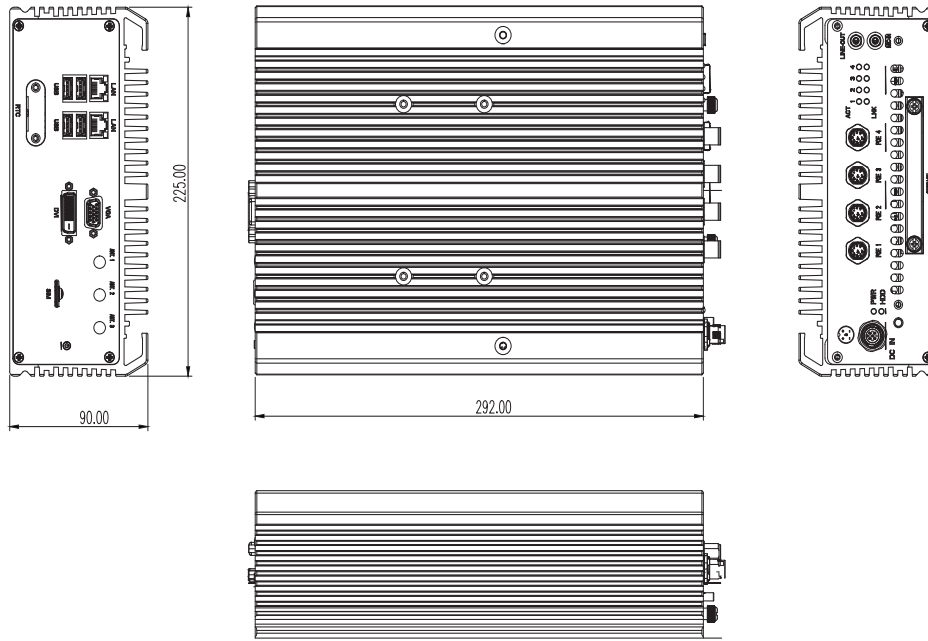
<b>Ordering Information</b>	
ARES-1970E-M12-NVR	Barebone Fanless In-Vehicle BOX PC

All specifications are subject to change without notice.





Dimensions



Unit: mm

**Optional Configuration (CTOS\* Kit)**

Xeon™ E3-1268L-V5	Intel® 6 <sup>th</sup> Gen Xeon™ E3-1268L processor, L2/8M, 2.4G	
Core™ i7-7700T	Intel® 7 <sup>th</sup> Gen. Core i7-7700T processor, L2/8M, 2.9G	
Core™ i5-7500T	Intel® 7 <sup>th</sup> Gen. Core i5-7500T processor, L2/6M, 2.7G	
Core™ i3-7101TE	Intel® 7 <sup>th</sup> Gen. Core i3-7101TE processor, L2/3M, 3.4G	
WMK-7000	Wall-mount kit for FPC-7XXX Series	
MK-4I-4G	Industrial-grade DDR4-2400 4GB SDRAM	
MK-4I-8G	Industrial-grade DDR4-2400 8GB SDRAM	
MK-4I-16G	Industrial-grade DDR4-2400 16GB SDRAM	
64/128/256GB SSD	2.5" WT 64/128/256GB SATAIII SSD	
WiFi-AT4550	Atheros, QCNFA324 WiFi module w/ 2 x 30cm internal wiring Kit	
LTE-1450	LTE Quectel EC25-E Cat 4 Mini-PCle Wireless Kit(EMEA) w/ GPS	
ANT-D11	1 x Wi-Fi Dual-band 2.4G/5G antenna Kit	
ANT-H11	1 x 2dBi HSUPA antenna	
ANT-G11	1 x 3000mm 27dB SMA Remote GPS Antenna	

\*CTOS means Configure-to-Order Service.

## Assured Systems

Assured Systems is a leading technology company with over 1,500 regular clients in 80 countries, deploying over 85,000 systems to a diverse customer base in 12 years of business. We offer high-quality and innovative rugged computing, display, networking and data collection solutions to the embedded, industrial, and digital-out-of-home market sectors.

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