

# ARS-2010M

Intel® Core™ i7/i5/i3 U-series Processor (Kaby Lake) Compact Embedded Box PC, 3 GigE LAN with 2 M12 PoE<sup>+</sup>, Isolated COM, 1 PCIe x4, 1 SIM, 4 USB 3.0, 32 Isolated DIO, Rugged, Expandable, DIN Rail Mount, Fanless -40°C to 85°C Extended Temperature



## Features

- Intel® Core™ i7/i5/i3 U-series SoC (Kaby Lake/Skylake)
- 3 Independent GigE LAN with 2 M12 IEEE 802.3at PoE<sup>+</sup>
- Rugged, Fanless -40°C to 85°C Operating Temperature
- 4 USB 3.0, 2 SATA III, 2 Mini PCIe, 1 PCIe x4
- 4 COM RS-232/422/485 with 1 Isolated COM
- 32 Isolated DIO, Ignition Power Control
- Mounting : DIN Rail, Wallmount
- Supports DVI-I and DVI-D dual HD displays
- 6V to 36V DC-in with 80V Surge Protection
- External SIM Socket for WiFi/4G/3G/LTE/GPRS/UMTS



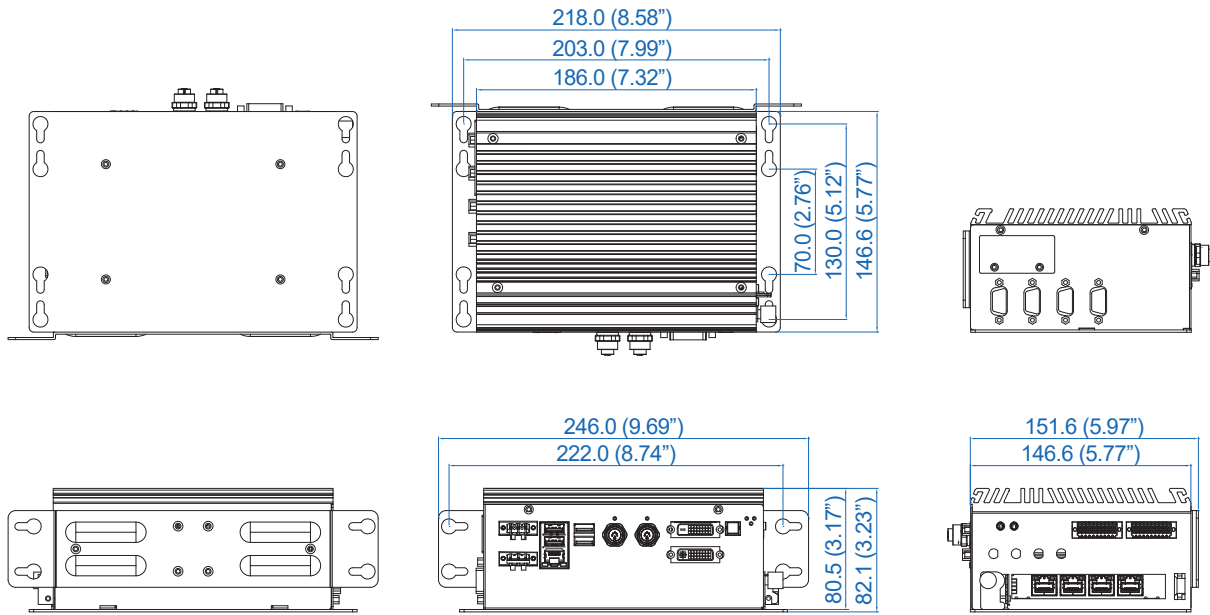
## Specifications

System	
Processor	Intel® Core™ i7-7600U/i7-6600U/i5-6300U/Celeron® 3955U Processor (Kaby Lake-U/Skylake-U)
Chipset	Intel® SoC
BIOS	AMI
SIO	IT8786E
Memory	2 DDR4 2133MHz SO-DIMM, up to 32GB
I/O Interface	
Serial	<ul style="list-style-type: none"> <li>▪ 1 Isolated COM RS-232/422/485 (2.5kV Isolation)</li> <li>▪ 3 COM RS-232/422/485</li> </ul>
USB	4 USB 3.0 (External)
Isolated DIO	32 Isolated DIO : 16 DI, 16 DO
LED	Power, HDD, PoE, Wireless
SIM Card	1 SIM Card Socket (External)
Expansion	
Mini PCIe	2 Mini PCIe Socket : <ul style="list-style-type: none"> <li>▪ 1 Full-size for PCIe/USB/External SIM Card/mSATA</li> <li>▪ 1 Full-size for PCIe/USB/mSATA</li> </ul>
PCIe	1 PCIe x16 Slot supports PCIe x4 Signal
Graphics	
Graphics Processor	<ul style="list-style-type: none"> <li>▪ Intel® HD Graphics 620/520</li> </ul>
Interface	<ul style="list-style-type: none"> <li>▪ DVI-I : Up to 1920 x1200 @ 60Hz</li> <li>▪ DVI-D : Up to 1920 x 1200 @ 60Hz</li> </ul>
Storage	
SATA	2 SATA III support SW RAID 0, 1 : <ul style="list-style-type: none"> <li>▪ 1 SATA III (6Gbps)</li> <li>▪ 1 SATA III co-lay with Mini PCIe (6Gbps)</li> </ul>
mSATA	1 SATA III co-lay with SATA (Mini PCIe Type, 6Gbps)
Storage Device	<ul style="list-style-type: none"> <li>▪ 1 CFast Socket, Push-in/Push-out Ejector</li> <li>▪ 2 2.5" SSD/HDD Bracket (Internal)</li> </ul>
Audio	
Audio Codec	Realtek ALC892, 5.1 Channel HD Audio
Audio Interface	1 Mic-in, 1 Line-out
Ethernet	
LAN 1	Intel® I219LM GigE LAN supports iAMT 11.0
PoE	
LAN 2	GigE IEEE 802.3at (25.5W/48V) PoE <sup>+</sup> by Intel® I210 with Power On/Off Control, M12 Connector
LAN 3	GigE IEEE 802.3at (25.5W/48V) PoE <sup>+</sup> by Intel® I210 with Power On/Off Control, M12 Connector

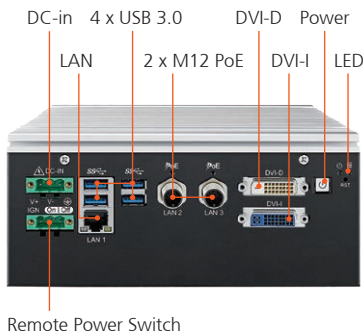
Power	
Power Input	6V to 36V, DC-in
Power Interface	3-pin Terminal Block : V+, V-, Frame Ground
Ignition Control	16 Mode (Internal)
Remote Switch	3-pin terminal block : On, Off, IGN
Surge Protection	Up to 80V/1ms Transient Power
Others	
TPM	Optional Infineon SLB9665 supports TPM 2.0, LPC Interface
Watchdog Timer	Reset : 1 to 255 sec./min. per step
Smart Management	Wake on LAN, PXE supported
HW Monitor	Monitoring temperature, voltages. Auto throttling control when CPU overheats.
Software Support	
OS	Windows 10, Windows 8.1, Windows 7, Linux
Mechanical	
Dimensions (W x L x H)	186mm x 147mm x 82mm (7.3" x 5.8" x 3.2")
Weight	2.2 kg (4.85 lb)
Mounting	<ul style="list-style-type: none"> <li>▪ Wallmount by mounting bracket</li> <li>▪ DIN Rail Mount (optional)</li> </ul>
Environment	
Operating Temperature	-40°C to 85°C (-40°F to 185°F)
Storage Temperature	-40°C to 85°C (-40°F to 185°F)
Humidity	5% to 95% Humidity, non-condensing
Relative Humidity	95% @ 85°C
Shock	<ul style="list-style-type: none"> <li>▪ IEC 60068-2-27</li> <li>▪ SSD : 50G @ wallmount, Half-sine, 11ms</li> </ul>
Vibration	<ul style="list-style-type: none"> <li>▪ IEC 60068-2-64</li> <li>▪ SSD : 5Grms, 5Hz to 500Hz, 3 Axis</li> </ul>
EMC	CE, FCC, EN50155, EN50121-3-2

## Dimensions

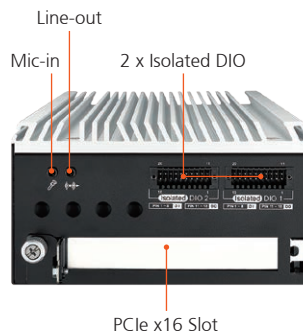
Unit : mm/ inch



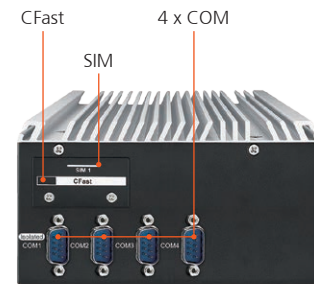
## Front I/O



## Top I/O



## Bottom I/O



## Order Information

<b>ARS-2010M-7600U</b>	ARS-2000, Intel® Core™ i7-7600U, 3 GigE LAN w/2 M12 PoE+, 1 PCIe x4, 4 COM, 4 USB 3.0, 32 Isolated DIO
<b>ARS-2010M-600U</b>	ARS-2000, Intel® Core™ i7-6600U, 3 GigE LAN w/2 M12 PoE+, 1 PCIe x4, 4 COM, 4 USB 3.0, 32 Isolated DIO
<b>ARS-2010M-300U</b>	ARS-2000, Intel® Core™ i5-6300U, 3 GigE LAN w/2 M12 PoE+, 1 PCIe x4, 4 COM, 4 USB 3.0, 32 Isolated DIO
<b>ARS-2010M-955U</b>	ARS-2000, Intel® Celeron® 3955U, 3 GigE LAN w/2 M12 PoE+, 1 PCIe x4, 4 COM, 4 USB 3.0, 32 Isolated DIO

## Accessories

<b>DDR4 16G</b>	Certified DDR4 16GB 2133MHz RAM
<b>DDR4 8G</b>	Certified DDR4 8GB 2133MHz RAM
<b>DDR4 4G</b>	Certified DDR4 4GB 2133MHz RAM
<b>PWA-280W-WT</b>	280W, 24V, 85V AC to 264V AC Power Adapter with 3-pin Terminal Block, Wide Temperature -30°C to +70°C
<b>PWA-160W-WT</b>	160W, 24V, 85V AC to 264V AC Power Adapter with 3-pin Terminal Block, Wide Temperature -30°C to +70°C
<b>PWA-120W</b>	120W, 24V, 90V AC to 264V AC Power Adapter with 3-pin Terminal Block
<b>DIN-RAIL</b>	DIN Rail Kit
<b>TMK2-20P-100</b>	Terminal Block 20-pin to Terminal Block 20-pin Cable, 100cm
<b>TMK2-20P-500</b>	Terminal Block 20-pin to Terminal Block 20-pin Cable, 500cm
<b>TMB-TMBK-20P</b>	Terminal Board with One 20-pin Terminal Block Connector and DIN-Rail Mounting
<b>4G Module</b>	Mini PCIe 4G/GPS Module with Antenna
<b>WiFi &amp; Bluetooth</b>	WiFi & Bluetooth Module with Antenna