ARS-2000 Series

7th Generation Intel® Core™ i7/i5/i3 U-series SoC (Kaby Lake/Skylake) Compact Embedded Box PC, 3 GigE LAN with 2 M12 PoE+, Isolated COM, 1 PCI/PCIe x4, 1 SIM, 4 USB 3.0, 32 Isolated DIO, Rugged, Expandable, DIN Rail Mount, Fanless -40°C to 85°C Extended Temperature

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

Machine Vision	Smart Manufacturing	Intelligent Surveillance	Factory Automation	Intelligent Control

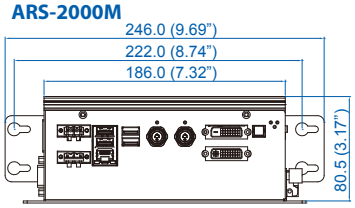
M12 PoE Isolated DIO Isolated COM SIM SS TPM 6V~36V 80V -40° 85°

EN50155 CE FC RoHS

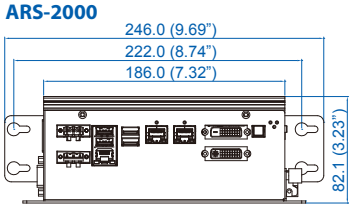
Vecow

Dimensions & Drawing Unit: mm (inch)

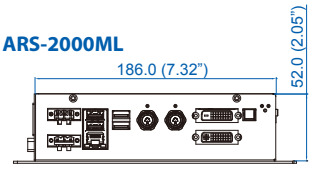
ARS-2000M



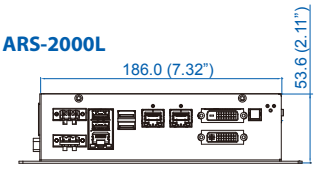
ARS-2000



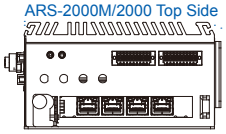
ARS-2000ML



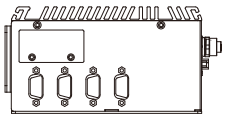
ARS-2000L

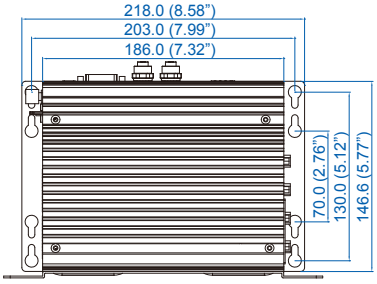


ARS-2000M/2000 Top Side

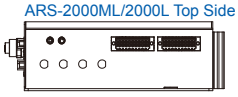


ARS-2000M/2000 Bottom Side

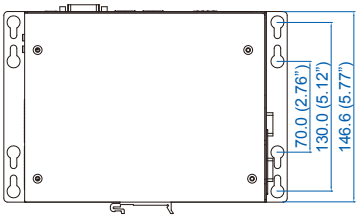




ARS-2000ML/2000L Top Side



ARS-2000ML/2000L Bottom Side



Specifications

System

Processor	Intel® Core™ i7/i5/i3 U-series Processor (Kaby Lake-U/Skylake-U)
Chipset	Intel® SoC
BIOS	AMI
SIO	IT8786E
Memory	2 DDR4 2133MHz SO-DIMM, up to 32GB
OS	Windows 10, Windows 8.1, Windows 7, Linux (Windows 8.1 & 7 are not available for Kaby Lake)

I/O Interface

Serial	• 1 Isolated COM RS-232/422/485 (2.5kV Isolation) • 3 COM RS-232/422/485
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 : • 1 Full-size for PCIe/USB/External SIM Card/mSATA • 1 Full-size for PCIe/USB/mSATA
PCI/PCIe	1 PCI/PCIe x16 Slot supports x4 Signal

Graphics

Processor	Intel® HD Graphics 620/520
Interface	• DVI-I : Up to 1920 x 1200 @ 60Hz • DVI-D : Up to 1920 x 1200 @ 60Hz

Storage

SATA	2 SATA III support S/W RAID 0, 1 : • 1 SATA III (6Gbps) • 1 SATA III co-lay with Mini PCIe (6Gbps)
mSATA	1 SATA III co-lay with SATA (Mini PCIe Type, 6Gbps)
Storage Device	• 1 CFast Socket, Push-in/Push-out Ejector • 2 2.5" SSD/HDD Bracket (Internal)

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 to LAN 3	GigE IEEE 802.3at (25.5W/48V) PoE+ 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.

Mechanical

Dimensions (WxLxH)	**ARS-2000M, ARS-2000 :** 186 x 147 x 82mm (7.3" x 5.8" x 3.2") **ARS-2000ML, ARS-2000L :** 186 x 147 x 54mm (7.3" x 5.8" x 2.1")
Weight	**ARS-2000M, ARS-2000 :** 2.2 kg (4.85 lb) **ARS-2000ML, ARS-2000L :** 1.8 kg (3.97 lb)
Mounting	• Wallmount by mounting bracket • DIN Rail Mount (optional)

Environment

Operating Temp.	**ARS-2000M, ARS-2000 :** -40°C to 85°C (-40°F to 185°F) **ARS-2000ML, ARS-2000L :** -40°C to 70°C (-40°F to 158°F)
Storage Temp.	-40°C to 85°C (-40°F to 185°F)
Humidity	5% to 95% Humidity, non-condensing
Relative Humidity	95% @ 85°C
Shock	• IEC 60068-2-27 • SSD : 50G @ wallmount, Half-sine, 11ms
Vibration	• IEC 60068-2-64 • SSD : 5Grms, 5Hz to 500Hz, 3 Axis
EMC	CE, FCC, EN50155, EN50121-3-2

Order Information

Part No.	CPU	LAN	PoE+	COM (Isolated)	USB 3.0	Isolated DIO	GPIO	PCI/PCIe
ARS-2010M -7600U/600U/300U/955U	Intel® Core™ i7-7600U/i7-6600U/ i5-6300U/Celeron® 3955U	3	2 M12	4 (1)	4	32	NA	1 PCIe x4
ARS-2010 -7600U/600U/300U/955U	Intel® Core™ i7-7600U/i7-6600U/ i5-6300U/Celeron® 3955U	3	2 RJ45	4 (1)	4	32	NA	1 PCIe x4
ARS-2001M -7600U/600U/300U/955U	Intel® Core™ i7-7600U/i7-6600U/ i5-6300U/Celeron® 3955U	3	2 M12	4 (1)	4	32	NA	1 PCI
ARS-2001 -7600U/600U/300U/955U	Intel® Core™ i7-7600U/i7-6600U/ i5-6300U/Celeron® 3955U	3	2 RJ45	4 (1)	4	32	NA	1 PCI
ARS-2000ML -7600U/600U/300U/955U	Intel® Core™ i7-7600U/i7-6600U/ i5-6300U/Celeron® 3955U	3	2 M12	2 (1)	4	NA	32	NA
ARS-2000L -7600U/600U/300U/955U	Intel® Core™ i7-7600U/i7-6600U/ i5-6300U/Celeron® 3955U	3	2 RJ45	2 (1)	4	NA	32	NA

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

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ARS-2000-20171201

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