

ARS-2000 ULTRA-COMPACT COMPUTER

7th Generation Intel® Core™ i7/i5/i3 U-series SoC (Kaby Lake/Skylake) Compact Embedded Box PC



- 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



Factory Automation



Smart Manufacturing



Smart Manufacturing



Intelligent Control



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

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
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PoE

LAN 2 to LAN 3	GigE IEEE 802.3at (25.5W/48V) PoE ⁺ by Intel® I210 with Power On/Off Control, M12 Connector
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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	ARS-2000M, ARS-2000 : 186mm x 147mm x 82mm (7.3" x 5.8" x 3.2")
	ARS-2000ML, ARS-2000L : 186mm x 147mm 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 (8.6" x 5.8")
	- Wallmount Kit (optional, 9.7" x 2.0")
	- DIN Rail Mount (optional)

Environment

Operating Tem.	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 Tem.	-40°C to 85°C (-40°F to 185°F)
Humidity	5% to 95% Humidity, non-condensing
Relative Humidity	95% @ 85°C
Vibration	- IEC 60068-2-27
	- SSD : 50G @ wallmount, Half-sine, 11ms
	- IEC 60068-2-64
EMC	- SSD : 5Grms, 5Hz to 500Hz, 3 Axis
	CE, FCC, EN50155, EN50121-3-2

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Order Information

ARS Series	CPU	LAN	PoE ⁺	COM (Isolated)	USB 3.0	Isolated DIO	GPIO	PCI/PCIe
2010M -7600U	Intel® Core™ i7-7600U	3		2M12	4	32	-	1 PCIe x4
2010 -7600U				2R45				
2001M -7600U				2M12				
2001 -7600U				2R45				
2000ML-7600U				2M12				
2000L -7600U	2R45	2 (1)	-	32	-			
2010M - 600U	Intel® Core™ i7-6600U	3		2M12	4	32	-	1 PCIe x4
2010 - 600U				2R45				
2001M - 600U				2M12				
2001 - 600U				2R45				
2000ML- 600U				2M12				
2000L - 600U	2R45	2 (1)	-	32	-			
2010M - 300U	Intel® Core™ i5-6300U	3		2M12	4	32	-	1 PCIe x4
2010 - 300U				2R45				
2001M - 300U				2M12				
2001 - 300U				2R45				
2000ML- 300U				2M12				
2000L - 300U	2R45	2 (1)	-	32	-			
2010M - 955U	Intel® Celeron™ 3955U	3		2M12	4	32	-	1 PCIe x4
2010 - 955U				2R45				
2001M - 955U				2M12				
2001 - 955U				2R45				
2000ML- 955U				2M12				
2000L - 955U	2R45	2 (1)	-	32	-			

Accessories

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
WALL-MOUNT	Wallmount Kit (9.7" x 2.0")
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	Mini PCIe WiFi & Bluetooth Module with Antenna

Dimensions & Drawing

Unit : mm (inch)

