



FANLESS EMBEDDED SYSTEMS

# RCO-3422EE series

Advanced Fanless System with Intel® Core™ i5/i3 Processor, 2x LAN, 2x PCIe Expansion Slot



## FEATURES

- Intel® 7<sup>th</sup> Gen (Kabylake-U) Processor Core™ i5-7300U, Core™ i3-7100U
- 1x DDR4 SODIMM. max up to 16GB
- Triple independent display supported by 1x VGA and 2x DisplayPort
- 2x Intel® GbE supporting Wake-on-LAN and PXE
- 2x 2.5" SATA HDD Bay (1x internal, 1x removable) with RAID 0, 1, 5 support, 1x mSATA (shared by 1x Mini PCIe), and 1x CFast (shared by 1x mSATA)
- 2x full-size mini PCIe for communication or expansion modules, 2x SIM socket
- 5x RS-232/422/485 (w/ 3x internal), 4x USB 3.0, 2x USB 2.0
- 2x PCIe x4 expansion
- 8x DI + 8x DO with isolation
- 9 to 50VDC wide range power input supporting AT/ATX mode
- -40°C to 70°C extended operating temperature
- TPM 2.0 Supported

## SPECIFICATIONS

### System

Processor	7 <sup>th</sup> Gen Intel® Core™ i5-7300U Processor, Dual Core, 3MB Cache, up to 3.5 GHz 7 <sup>th</sup> Gen Intel® Core™ i3-7100U Processor, Dual Core, 3MB Cache, 2.4 GHz
System Chipset	SoC integrated
LAN Chipset	GbE1: Intel® I219LM (Support Wake-on-LAN and PXE) GbE2: Intel® I210-AT (Support Wake-on-LAN and PXE) GbE3-GbE6: Intel® I210-AT (Optional)
Audio Codec	Realtek ALC888S
System Memory	1x 260-Pin DDR4 1866/2133MHz SODIMM. Max. up to 16GB
BIOS	AMI 128Mbit SPI BIOS
Watchdog	Software Programmable Supports 1-255 sec. System Reset
TPM	TPM 2.0

### Display

VGA	1x VGA
DisplayPort	2x DisplayPort
Multiple Display	Triple Display

### Storage

SSD/HDD	1x Internal 2.5" SATA HDD Bay 1x Removable 2.5" SATA HDD Bay Support RAID 0, 1, 5
mSATA	1x mSATA (shared by 1x Mini PCI Express)
CFast	1x CFast (shared by 1x mSATA)
SIM Socket	2x External SIM socket

### Expansion

Mini PCI Express	2x Full-size Mini PCIe
PCI Express	2x PCIe x4
4-Port GbE (Optional)	Up to one 4-port GbE module with Intel® I210-AT Chipset RJ-45 or M12 connector with PoE option

### I/O

COM	2x RS-232/422/485 3x RS-232/422/485 (internal)
USB	4x USB 3.0, 2x USB 2.0

LAN	2x RJ45
Audio	1x Mic-in, 1x Line-out
DIO	8 in / 8 out (Isolated)
Others	4x WiFi Antenna Holes 1x Power Switch, 1x AT/ATX Switch, 1x Remote Power On/Off

### Operating System

Windows	Windows 10
Linux	Linux kernel 4.X

### Power

Power Mode	AT, ATX
Power Supply Voltage	9-50VDC
Power Ignition Sensing	Power Ignition Management
Power Connector	3-pin Terminal Block
Power Adaptor	Optional AC/DC 12V/5A, 60W
Power Protection	OVP (Over Voltage Protection) OCP (Over Current Protection) Reverse Protection

### Environment

Operating Temp.	-40°C to 70°C
Storage Temp.	-40°C to 85°C
Relative Humidity	10% to 95% (non-condensing)
Vibration	With SSD: 5 Grms, 5 - 500 Hz, 0.5 hr/axis With HDD: 1 Grms, 5 - 500 Hz, 0.5 hr/axis
Shock	With SSD: 50G, half sine, 11ms
Standards / Certification	CE, FCC Class A

### Physical

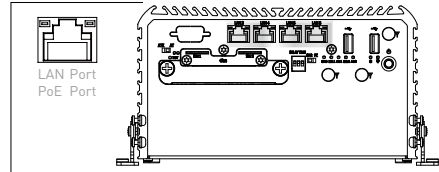
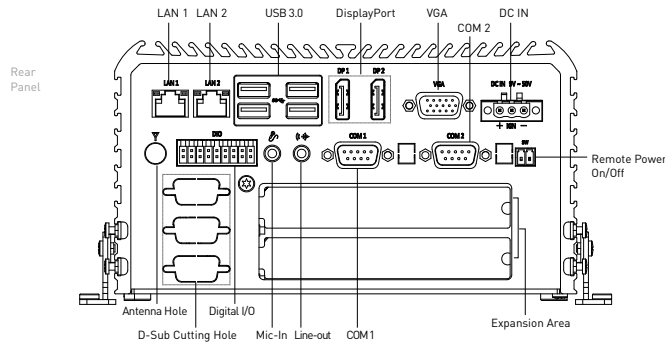
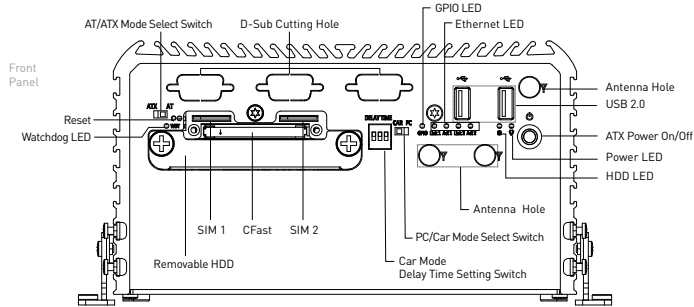
Construction	Extruded Aluminum with Heavy Duty Metal
Dimension	192 [W] x 197 [D] x 105.1 [H] mm
Weight	2.96 kg - 3.32 kg
Mounting	Wall Mounting

\* All specifications and photos are subject to change without notice.



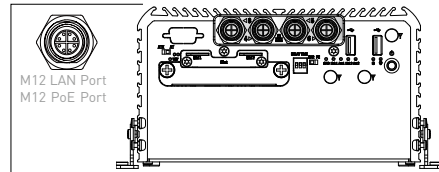
# RCO-3422EE series

## EXTERNAL I/O MECHANICAL LAYOUT



**RCO-3422EE-4L**  
Additional 4x Intel® GbE  
3x RS-232/422/485 (w/ 1x internal)

**RCO-3422EE-4P**  
Additional 4x Intel® GbE with PoE function  
3x RS-232/422/485 (w/ 1x internal)

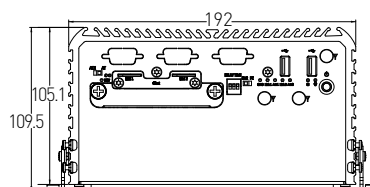
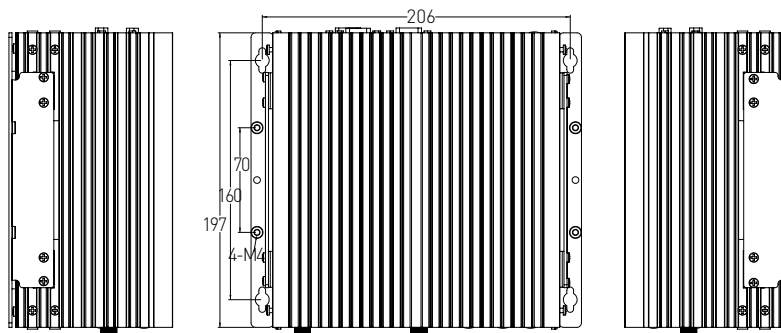
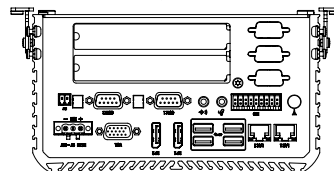


**RCO-3422EE-4L-M12**  
Additional 4x Intel® GbE with M12 connector  
3x RS-232/422/485 (w/ 1x internal)  
Optional AC/DC 24V/9.2A, 220W

**RCO-3422EE-4P-M12**  
Additional 4x Intel® GbE with M12 PoE function  
3x RS-232/422/485 (w/ 1x internal)  
Optional AC/DC 24V/9.2A, 220W

## DIMENSION

Unit: mm





# RCO-3422EE series

## ORDERING INFORMATION

MODEL NO.	DESCRIPTION
1-E09A06008	Adapter AC/DC 12V 5A 60W with 3pin Terminal Block Plug 5.0mm Pitch
1-E09A22102	Adapter AC/DC 24V 9.2A 220W with 3pin Terminal Block Plug 5.0mm Pitch
1-TPCD00005	Power Cord, 3-pin US Type, 180cm
1-TPCD00002	Power Cord, European Type
1-TPCD00001	Power Cord, 3-pin UK Type, 180cm

## PACKING LIST

- 1x RCO-3400 Series Embedded System
- 1x Wall Mount Kit
- 1x Accessory Kit

## AVAILABLE MODELS

MODEL	MODEL NO.	DESCRIPTION
RCO-3422EE	RCO-3422EE-7300U	Advanced Fanless System with Intel® Core™ i5-7300U Processor, 2x LAN, 2x PCIe Expansion Slot
	RCO-3422EE-7100U	Advanced Fanless System with Intel® Core™ i3-7100U Processor, 2x LAN, 2x PCIe Expansion Slot
	RCO-3422EE-4L-7300U	Advanced Fanless System with Intel® Core™ i5-7300U Processor, 6x LAN, 2x PCIe Expansion Slot
	RCO-3422EE-4L-7100U	Advanced Fanless System with Intel® Core™ i3-7100U Processor, 6x LAN, 2x PCIe Expansion Slot
	RCO-3422EE-4L-M12-7300U	Advanced Fanless System with Intel® Core™ i5-7300U Processor, 2x LAN, 4x M12 LAN, 2x PCIe Expansion Slot
	RCO-3422EE-4L-M12-7100U	Advanced Fanless System with Intel® Core™ i3-7100U Processor, 2x LAN, 4x M12 LAN, 2x PCIe Expansion Slot
	RCO-3422EE-4P-7300U	Advanced Fanless System with Intel® Core™ i5-7300U Processor, 2x LAN, 4x PoE, 2x PCIe Expansion Slot
	RCO-3422EE-4P-7100U	Advanced Fanless System with Intel® Core™ i3-7100U Processor, 2x LAN, 4x PoE, 2x PCIe Expansion Slot
	RCO-3422EE-4P-M12-7300U	Advanced Fanless System with Intel® Core™ i5-7300U Processor, 2x LAN, 4x M12 PoE, 2x PCIe Expansion Slot
	RCO-3422EE-4P-M12-7100U	Advanced Fanless System with Intel® Core™ i3-7100U Processor, 2x LAN, 4x M12 PoE, 2x PCIe Expansion Slot



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FANLESS EMBEDDED SYSTEMS

# RCO-3422PP series

Advanced Fanless System with Intel® Core™ i5/i3 Processor, 2x LAN, 2x PCI Expansion Slot



## FEATURES

- Intel® 7<sup>th</sup> Gen (KabyLake-U) Processor Core™ i5-7300U, Core™ i3-7100U
- 1x DDR4 SODIMM. max up to 16GB
- Triple independent display supported by 1x VGA and 2x DisplayPort
- 2x Intel® GbE supporting Wake-on-LAN and PXE
- 2x 2.5" SATA HDD Bay (1x internal, 1x removable) with RAID 0, 1, 5 support, 1x mSATA (shared by 1x Mini PCIe), and 1x CFast (shared by 1x mSATA)
- 2x full-size mini PCIe for communication or expansion modules, 2x SIM socket
- 5x RS-232/422/485 (w/ 3x internal), 4x USB 3.0, 2x USB 2.0
- 2x PCI expansion
- 8x DI + 8x DO with isolation
- 9 to 50VDC wide range power input supporting AT/ATX mode
- -40°C to 70°C extended operating temperature
- TPM 2.0 Supported

## SPECIFICATIONS

### System

Processor	7 <sup>th</sup> Gen Intel® Core™ i5-7300U Processor, Dual Core, 3MB Cache, up to 3.5 GHz 7 <sup>th</sup> Gen Intel® Core™ i3-7100U Processor, Dual Core, 3MB Cache, 2.4 GHz
System Chipset	SoC integrated
LAN Chipset	GbE1: Intel® I219LM [Support Wake-on-LAN and PXE] GbE2: Intel® I210-AT [Support Wake-on-LAN and PXE] GbE3-GbE6: Intel® I210-AT [Optional]
Audio Codec	Realtek ALC888S
System Memory	1x 260-Pin DDR4 1866/2133MHz SODIMM. Max. up to 16GB
BIOS	AMI 128Mbit SPI BIOS
Watchdog	Software Programmable Supports 1-255 sec. System Reset
TPM	TPM 2.0

### Display

VGA	1x VGA
DisplayPort	2x DisplayPort
Multiple Display	Triple Display

### Storage

SSD/HDD	1x Internal 2.5" SATA HDD Bay 1x Removable 2.5" SATA HDD Bay Support RAID 0, 1, 5
mSATA	1x mSATA (shared by 1x Mini PCI Express)
CFast	1x CFast (shared by 1x mSATA)
SIM Socket	2x External SIM socket

### Expansion

Mini PCI Express	2x Full-size Mini PCIe
PCI	2x PCI
4-Port GbE [Optional]	Up to one 4-port GbE module with Intel® I210-AT Chipset RJ-45 or M12 connector with PoE option

### I/O

COM	2x RS-232/422/485 3x RS-232/422/485 (internal)
USB	4x USB 3.0, 2x USB 2.0

LAN	2x RJ45
Audio	1x Mic-in, 1x Line-out
DIO	8 in / 8 out [Isolated]
Others	4x WiFi Antenna Holes 1x Power Switch, 1x AT/ATX Switch, 1x Remote Power On/Off

### Operating System

Windows	Windows 10
Linux	Linux kernel 4.X

### Power

Power Mode	AT, ATX
Power Supply Voltage	9-50VDC
Power Ignition Sensing	Power Ignition Management
Power Connector	3-pin Terminal Block
Power Adaptor	Optional AC/DC 12V/5A, 60W
Power Protection	OVP [Over Voltage Protection] OCP [Over Current Protection] Reverse Protection

### Environment

Operating Temp.	-40°C to 70°C
Storage Temp.	-40°C to 85°C
Relative Humidity	10% to 95% (non-condensing)
Vibration	With SSD: 5 Grms, 5 - 500 Hz, 0.5 hr/axis With HDD: 1 Grms, 5 - 500 Hz, 0.5 hr/axis
Shock	With SSD: 50G, half sine, 11ms
Standards / Certification	CE, FCC Class A

### Physical

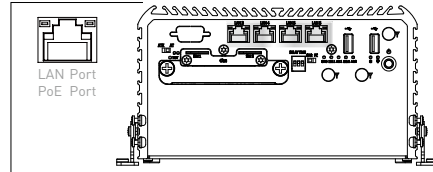
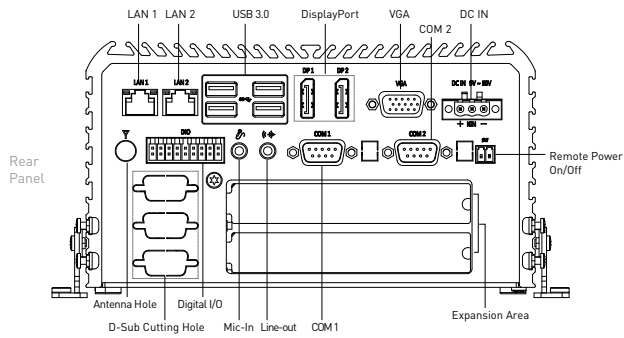
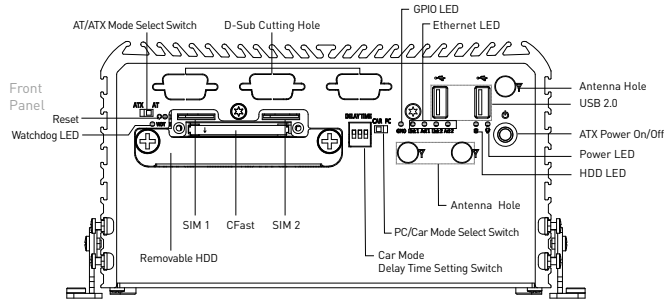
Construction	Extruded Aluminum with Heavy Duty Metal
Dimension	192 [W] x 197 [D] x 105.1 [H] mm
Weight	2.96 kg - 3.32 kg
Mounting	Wall Mounting

\* All specifications and photos are subject to change without notice.



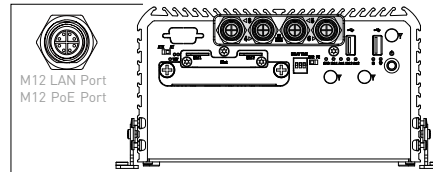
# RCO-3422PP series

## EXTERNAL I/O MECHANICAL LAYOUT



**RCO-3422PP-4L**  
Additional 4x Intel® GbE  
3x RS-232/422/485 (w/ 1x internal)

**RCO-3422PP-4P**  
Additional 4x Intel® GbE with PoE function  
3x RS-232/422/485 (w/ 1x internal)

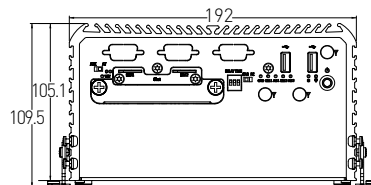
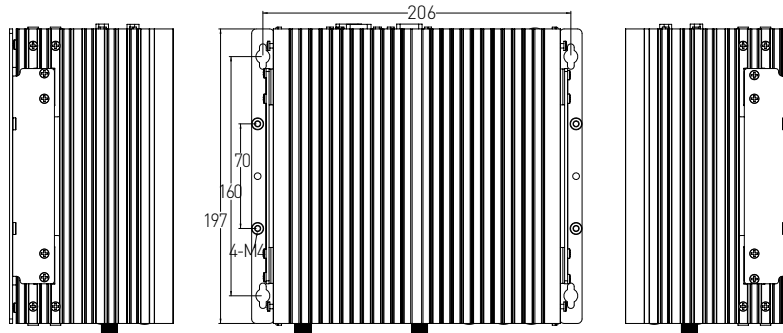
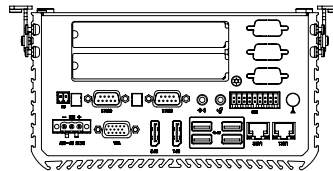


**RCO-3422PP-4L-M12**  
Additional 4x Intel® GbE with M12 connector  
3x RS-232/422/485 (w/ 1x internal)  
Optional AC/DC 24V/9.2A, 220W

**RCO-3422PP-4P-M12**  
Additional 4x Intel® GbE with M12 PoE function  
3x RS-232/422/485 (w/ 1x internal)  
Optional AC/DC 24V/9.2A, 220W

## DIMENSION

Unit: mm





# RCO-3422PP series

## ORDERING INFORMATION

MODEL NO.	DESCRIPTION
1-E09A06008	Adapter AC/DC 12V 5A 60W with 3pin Terminal Block Plug 5.0mm Pitch
1-E09A22102	Adapter AC/DC 24V 9.2A 220W with 3pin Terminal Block Plug 5.0mm Pitch
1-TPCD00005	Power Cord, 3-pin US Type, 180cm
1-TPCD00002	Power Cord, European Type
1-TPCD00001	Power Cord, 3-pin UK Type, 180cm

## PACKING LIST

- 1x RCO-3400 Series Embedded System
- 1x Wall Mount Kit
- 1x Accessory Kit

## AVAILABLE MODELS

MODEL	MODEL NO.	DESCRIPTION
RCO-3422PP	RCO-3422PP-7300U	Advanced Fanless System with Intel® Core™ i5-7300U Processor, 2x LAN, 2x PCI Expansion Slot
	RCO-3422PP-7100U	Advanced Fanless System with Intel® Core™ i3-7100U Processor, 2x LAN, 2x PCI Expansion Slot
	RCO-3422PP-4L-7300U	Advanced Fanless System with Intel® Core™ i5-7300U Processor, 6x LAN, 2x PCI Expansion Slot
	RCO-3422PP-4L-7100U	Advanced Fanless System with Intel® Core™ i3-7100U Processor, 6x LAN, 2x PCI Expansion Slot
	RCO-3422PP-4L-M12-7300U	Advanced Fanless System with Intel® Core™ i5-7300U Processor, 2x LAN, 4x M12 LAN, 2x PCI Expansion Slot
	RCO-3422PP-4L-M12-7100U	Advanced Fanless System with Intel® Core™ i3-7100U Processor, 2x LAN, 4x M12 LAN, 2x PCI Expansion Slot
	RCO-3422PP-4P-7300U	Advanced Fanless System with Intel® Core™ i5-7300U Processor, 2x LAN, 4x PoE, 2x PCI Expansion Slot
	RCO-3422PP-4P-7100U	Advanced Fanless System with Intel® Core™ i3-7100U Processor, 2x LAN, 4x PoE, 2x PCI Expansion Slot
	RCO-3422PP-4P-M12-7300U	Advanced Fanless System with Intel® Core™ i5-7300U Processor, 2x LAN, 4x M12 PoE, 2x PCI Expansion Slot
	RCO-3422PP-4P-M12-7100U	Advanced Fanless System with Intel® Core™ i3-7100U Processor, 2x LAN, 4x M12 PoE, 2x PCI Expansion Slot



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## 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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