



# RCO-6141E-4U2C-HWR

Superior AI Edge Computing System W/ LGA 1151 for Intel 8th/9th Gen CPU & Q370 PCH, 4 Bay U.2 15mm



## FEATURES

- LGA 1151 socket for 8<sup>th</sup>/9<sup>th</sup> Gen. Intel<sup>®</sup> CFL-R S Processor  
Pentium<sup>®</sup> / Celeron<sup>®</sup> Desktop Processor
- Intel<sup>®</sup> Q370 chipset
- 2x 260-pin DDR4 SODIMM. Max. up to 64GB
- Triple Independent Display by 1x DVI-I and 2x DisplayPort
- 2x Intel<sup>®</sup> GbE supporting Wake-on-LAN and PXE
- 2x Removable 2 Bay NVMe SSD Module with Hardware RAID 0, 1, 5, 6, 10 support (Support H=15mm)
- 4x 2.5" SATA HDD Bay and 2x mSATA with RAID 0, 1, 5, 10 support
- 1x M.2 (M Key, NVMe PCIe x4, 2280);  
1x M.2 (E Key, PCIe x2, USB 2.0, 2230), 2x SIM socket
- 9 to 48VDC Wide Range Power Input Supporting AT/ATX Mode
- Wide Operating Temperature (-25°C to 60°C)
- Power ignition management

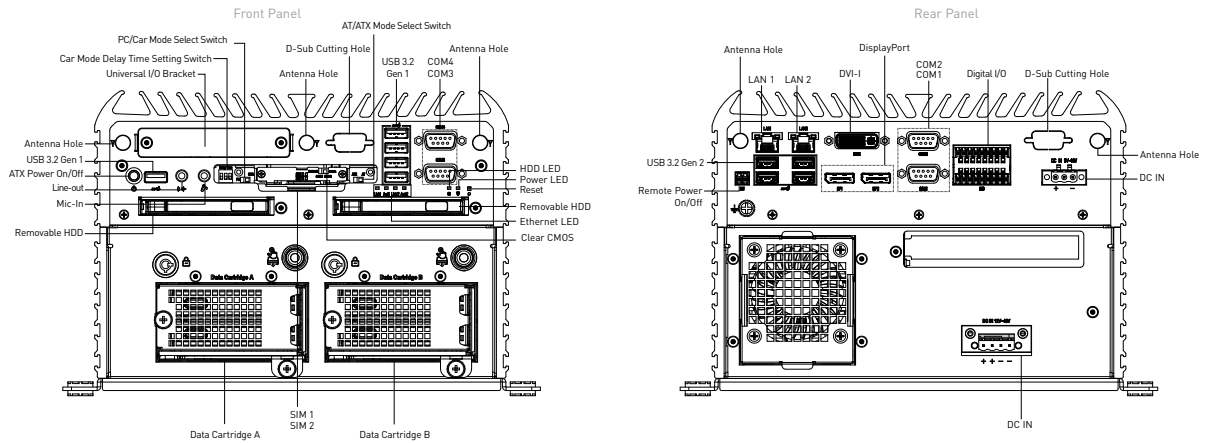
## SPECIFICATIONS

System	
Processor	Support 8 <sup>th</sup> /9 <sup>th</sup> Gen Intel <sup>®</sup> CFL-R S Processor (LGA 1151, 65W/35W TDP) <ul style="list-style-type: none"> <li>- Intel<sup>®</sup> Core™ i7-9700E, 8 Cores, 12MB cache, up to 4.4 GHz</li> <li>- Intel<sup>®</sup> Core™ i5-9500E, 6 Cores, 9MB Cache, up to 4.2 GHz</li> <li>- Intel<sup>®</sup> Core™ i3-9100E, 4 Core, 6MB Cache, 3.7 GHz</li> <li>- Intel<sup>®</sup> Core™ i7-9700TE, 8 Cores, 12MB cache, up to 3.8 GHz</li> <li>- Intel<sup>®</sup> Core™ i5-9500TE, 6 Cores, 9MB Cache, up to 3.6 GHz</li> <li>- Intel<sup>®</sup> Core™ i3-9100TE, 4 Core, 6MB Cache, 3.2 GHz</li> <li>- Intel<sup>®</sup> Core™ i7-8700T, 6 Cores, 12MB cache, up to 4.0 GHz</li> <li>- Intel<sup>®</sup> Core™ i5-8500T, 6 Cores, 9MB Cache, up to 3.5 GHz</li> <li>- Intel<sup>®</sup> Core™ i3-8100T, 4 Cores, 6MB Cache, 3.1 GHz</li> <li>- Intel<sup>®</sup> Pentium<sup>®</sup> G5400T, 2 Cores, 4MB Cache, up to 3.1 GHz</li> <li>- Intel<sup>®</sup> Celeron<sup>®</sup> G4900T, 2 Cores, 2MB Cache, up to 2.9 GHz</li> </ul>
System Chipset	Intel <sup>®</sup> Q370 Express Chipset
LAN Chipset	GbE1: Intel I219LM (Support Wake-on-LAN and PXE) GbE2: Intel I210-AT (Support Wake-on-LAN and PXE)
Audio Codec	Realtek ALC888S
System Memory	2x 260-Pin DDR4 2400/2666MHz SODIMM. Max. up to 64GB (Un-buffered and Non-ECC)
BIOS	AMI 256Mbit SPI BIOS
Watchdog	Software Programmable Supports 1~255 sec. System Reset
TPM	TPM 2.0
Display	
Graphics	Intel <sup>®</sup> UHD Graphics 610/630
DVI	1x DVI-I, support resolution 1920 x 1200
DisplayPort	2x DisplayPort, support resolution 4096 x 2304
Multiple Display	3 Display interfaces
Storage	
SSD/HDD	2x Internal 2.5" SATA HDD Bay (support H=9.5mm) 2x Removable 2.5" SATA HDD Bay (support H=7mm, hot-swappable) Support RAID 0, 1, 5, 10
NVMe	2x Removable Canner Bricks with 2.5" 4 Bay U.2 NVMe SSD (Support H=15mm) with Hardware RAID 0, 1, 5, 6, 10
mSATA	1x mSATA (Shared by 1x Mini PCI Express)
M.2	1x M.2 (M Key, NVMe PCIe x4, 2280) 1x M.2 (E Key, PCIe x2, USB 2.0, 2230)
SIM Socket	2x External SIM socket
Expansion	
Mini PCI Express	2x Full-size Mini PCI Express (1x shared by 1x mSATA)
4-Port GbE (Optional)	4-port GbE module with Intel <sup>®</sup> I350-AT4 Chipset, RJ-45 or M12 connector (PoE optional) Occupied one Universal I/O Slot
2-Port GbE (Optional)	2-Port RJ45 10GbE with Intel X710-AT2 Chipset Occupied one Universal I/O Slot

I/O	
COM	4x RS-232/422/485 ; 2x RS-232/422/485 (internal)
USB	4x USB 3.2 Gen 2 (10 Gbps) ; 5x USB 3.2 Gen 1 (5 Gbps) 2x USB 2.0 header (internal)
LAN	2x RJ45
Audio	1x Mic-in, 1x Line-out
DIO	8 in / 8 out (Isolated)
Universal I/O Bracket	1x Universal I/O Bracket (By mini PCIe interface)
Others	5x WiFi Antenna Holes 1x Power Switch, 1x AT/ATX Switch, 1x Remote Power On/Off 1x PC/Car Mode Switch, 1x Delay Time Switch 1x Removable CMOS Battery
Windows	Windows 10
Linux	Linux kernel 5.X
Power	
Power Mode	AT, ATX
Power Supply Voltage	9 ~ 48 VDC for Computer, 12 ~ 48 VDC for NVMe EDGEboost Node
Power Ignition Sensing	Power Ignition Management
Power Connector	3-pin Terminal Block for Computer, 4-pin Terminal Block for NVMe EDGEboost Node (12V requires 4-pin terminal block)
Power Adaptor	Optional AC/DC 24V/9.2A, 220W Optional AC/DC 24V/11.27A, 280W
Power Protection	OVP (Over Voltage Protection); OCP (Over Current Protection) Reverse Protection
Environment	
Operating Temp.	-25°C to 60°C (35W/65W CPU)
Storage Temp.	-30°C to 85°C
Relative Humidity	10% to 95% (Non-condensing)
Vibration	With SSD: 3 Grms, 5 - 500 Hz, 0.5 hr/axis With HDD: 1 Grms, 5 - 500 Hz, 0.5 hr/axis
Shock	With SSD: 20G, half sine, 11ms
Standards / Certification	CE, FCC Class A, E-Mark, EN 50155, EN 50121-1, EN 50121-3-2
Physical	
Construction	Extruded Aluminum with Heavy Duty Metal
Dimension	261 (D) x 240 (W) x 168 (H)
Weight	9.9 kg
Mounting	Wall Mounting

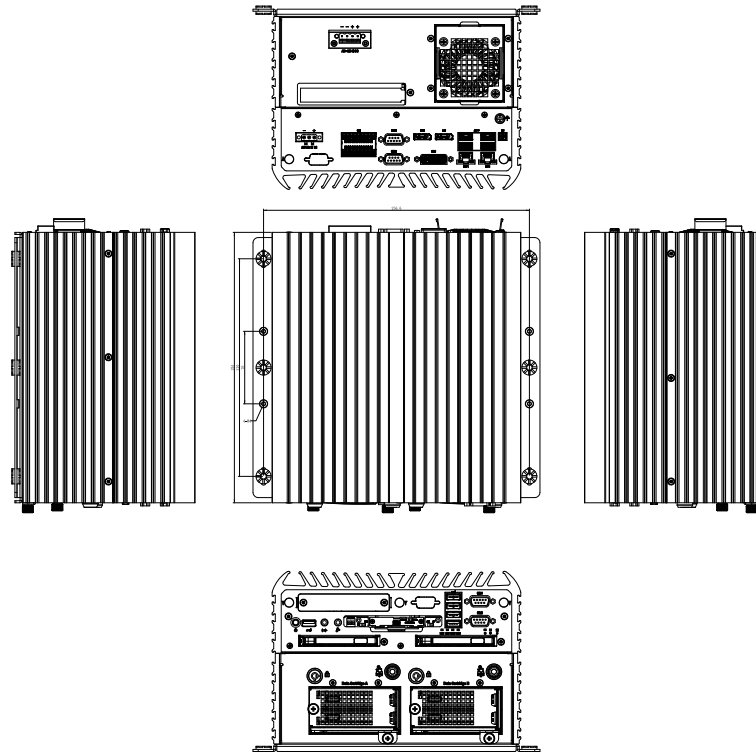
\* For 8<sup>th</sup>/9<sup>th</sup> CPUs configured to run at 65W, operating temperatures will be limited to 60°C.  
 \*\* 65W CPUS may experience thermal throttling depending on extreme application workloads; this is also due to an increase in the physical CPU cores from the Intel silicon (up to 8 cores). Please note, this does not indicate system malfunction or problems in the fanless design. Please consult our embedded engineers for the best configuration to match your application requirements.  
 \*\*\* All specifications and photos are subject to change without notice.

## EXTERNAL I/O MECHANICAL LAYOUT



## DIMENSION

Unit: mm



## ORDERING INFORMATION

MODEL NO.	DESCRIPTION
1-E09A22102	Adapter AC/DC 24V 9.2A 220W with 3pin Terminal Block Plug 5.0mm Pitch
1-E09A22801	Adapter AC/DC 24V/11.67A 280W with 3pin Terminal Block Plug 5.0mm Pitch
SFICBL022	Power Cord, 3-pin US Type, 180cm
1-TPCD00002	Power Cord, European Type, 180cm
1-TPCD00001	Power Cord, 3-pin UK Type, 180cm

## PACKING LIST

- 1x RCO-6141E-4U2C-HWR Series Embedded System
- 1x Utility DVD Driver
- 1x Wall Mount Kit
- 1x Accessory Kit
- 1x DVI to VGA Adapter

## AVAILABLE MODELS

MODEL NO.	DESCRIPTION
RCO-6141E-4U2C-HWR	Superior AI Edge Computing System W/ LGA 1151 for Intel 8th/9th Gen CPU & Q370 PCH, 4 Bay U.2 15mm