



AI EDGE INFERENCE COMPUTER

## RCO-6000-CFL

Industrial Computer with 9th Gen Intel® Core™ CFL-R S Processor



## Features

- LGA 1151 socket for 9th Gen. Intel® CFL-R S Processor (35W TDP)
- Intel® Q370 chipset
- 2x DDR4 2400/2666Hz SODIMM. Max. up to 64GB
- Triple Independent Display by 1x DVI-I and 2x DisplayPort
- 2x Intel® GbE supporting Wake-on-LAN and PXE
- 2x Full-size mini PCIe for communication or expansion modules, 2x SIM socket
- 4x 2.5" SATA HDD Bay and 1x mSATA with RAID 0, 1, 5, 10 support
- 1x M.2 (M Key, NVMe PCIe x4, 2280); 1x M.2 (E Key, PCIe x2, 2230, USB 2.0, Support CNVi)
- 6x RS-232/422/485 (w/ 2x internal), 4x USB 3.2 Gen 2, 5x USB 3.2 Gen 1
- 8x DI + 8x DO with isolation
- 9 to 48VDC Wide Range Power Input Supporting AT/ATX Mode
- Wide Operating Temperature -25°C to 70°C (35W CPU)
- TPM 2.0 Supported
- Supports Hailo-8™ Module m.2 M-Key PCIe x4

## Specifications

| System                |                                                                                                                                                                                                                                                                                                                                                                        |
|-----------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Processor             | Support 9th Gen Intel® Core™ CFL-R S Processor (LGA 1151, 35W TDP)<br>- Intel® Core™ i7-9700TE, 8 Cores, 12MB cache, up to 3.8 GHz<br>- Intel® Core™ i5-9500TE, 6 Cores, 9MB Cache, up to 3.6 GHz<br>- Intel® Core™ i3-9100TE, 4 Core, 6MB Cache, 3.2 GHz                                                                                                              |
| System Chipset        | Intel® Q370 Express Chipset                                                                                                                                                                                                                                                                                                                                            |
| LAN Chipset           | GbE1: Intel I219LM (Support Wake-on-LAN and PXE)<br>GbE2: Intel I210-AT (Support Wake-on-LAN and PXE)                                                                                                                                                                                                                                                                  |
| Audio Codec           | Realtek ALC888S                                                                                                                                                                                                                                                                                                                                                        |
| System Memory         | 2x 260-Pin DDR4 2400/2666MHz SODIMM.<br>Max. up to 64GB                                                                                                                                                                                                                                                                                                                |
| Graphics              | Intel® UHD Graphics 610/630                                                                                                                                                                                                                                                                                                                                            |
| BIOS                  | AMI 256Mbit SPI BIOS                                                                                                                                                                                                                                                                                                                                                   |
| Watchdog              | Software Programmable Supports 1~255 sec.<br>System Reset                                                                                                                                                                                                                                                                                                              |
| AI Accelerator        | Hailo-8™ Module m.2 M-Key PCIe x4 (Optional)                                                                                                                                                                                                                                                                                                                           |
| TPM                   | TPM 2.0                                                                                                                                                                                                                                                                                                                                                                |
| Display               |                                                                                                                                                                                                                                                                                                                                                                        |
| Display Port          | 2x DP                                                                                                                                                                                                                                                                                                                                                                  |
| DVI                   | 1x DVI-I                                                                                                                                                                                                                                                                                                                                                               |
| Multiple Display      | Triple Display                                                                                                                                                                                                                                                                                                                                                         |
| VGA                   | Yes (by optional split cable)                                                                                                                                                                                                                                                                                                                                          |
| Storage               |                                                                                                                                                                                                                                                                                                                                                                        |
| M.2                   | 1x M.2 (M Key, NVMe PCIe x4, 2280)<br>1x M.2 (E Key, PCIe x2, 2230, USB 2.0, Support CNVi)                                                                                                                                                                                                                                                                             |
| mSATA                 | 1x mSATA (shared by 1x Mini PCIe)                                                                                                                                                                                                                                                                                                                                      |
| SIM Socket            | 2x External SIM socket                                                                                                                                                                                                                                                                                                                                                 |
| SSD/HDD               | 2x Internal 2.5" SATA HDD Bay (support H=9mm)<br>2x Hotswap 2.5" SATA HDD Bay (support H=7mm)<br>Support RAID 0, 1, 5, 10                                                                                                                                                                                                                                              |
| Expansion             |                                                                                                                                                                                                                                                                                                                                                                        |
| Mini PCIe             | 2x Full-size Mini PCIe (1x Shared with mSATA)                                                                                                                                                                                                                                                                                                                          |
| Expansion Modules     | <ul style="list-style-type: none"> <li>• 4-port GbE module with Intel® I350-AT4 Chipset, RJ-45 or M12 connector (PoE optional)</li> <li>• 2-Port RJ45 10GbE with Intel X710-AT2 Chipset</li> <li>• 4-Port USB with Renesas uPD720201K8 host controller</li> <li>• 1x M.2 for 5G (B Key, PCIe x4, USB 3.0, 3042/3052) Including 2x SIM socket, 1x SIM switch</li> </ul> |
| I/O                   |                                                                                                                                                                                                                                                                                                                                                                        |
| Audio                 | 1x Mic-in, 1x Line-out                                                                                                                                                                                                                                                                                                                                                 |
| COM                   | 4x RS-232/422/485 ; 2x RS-232/422/485 (internal)                                                                                                                                                                                                                                                                                                                       |
| DIO                   | 8 in / 8 out (Isolated)                                                                                                                                                                                                                                                                                                                                                |
| LAN                   | 2x RJ45                                                                                                                                                                                                                                                                                                                                                                |
| Universal I/O Bracket | 1x Universal I/O Bracket                                                                                                                                                                                                                                                                                                                                               |
| USB                   | 4x USB 3.2 Gen 2 (10Gbps)<br>5x USB 3.2 Gen 1 (5 Gbps)<br>1x USB 3.2 Gen 1 header (5 Gbps, internal)                                                                                                                                                                                                                                                                   |
| Others                | 5x WiFi Antenna Holes<br>1x Power Switch, 1x AT/ATX Switch, 1x Remote Power On/Off<br>1x PC/Car Mode Switch, 1x Delay Time Switch<br>1x Removable CMOS Battery                                                                                                                                                                                                         |
| Operating System      |                                                                                                                                                                                                                                                                                                                                                                        |
| Windows               | Windows 10                                                                                                                                                                                                                                                                                                                                                             |
| Linux                 | Linux kernel 5.X                                                                                                                                                                                                                                                                                                                                                       |

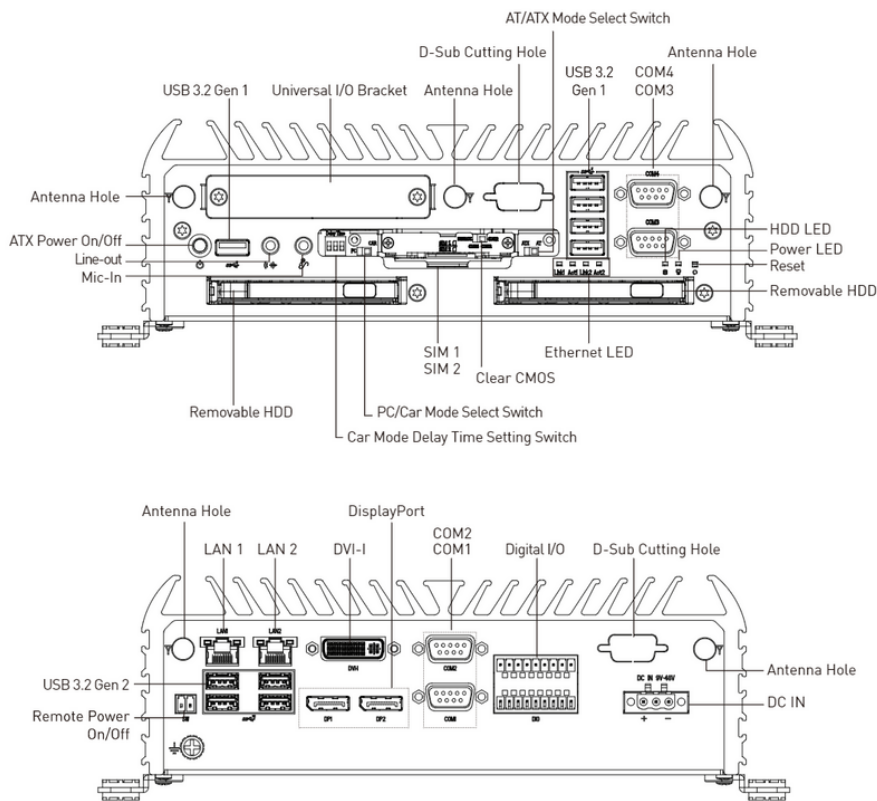
| Power                  |                                                                                                     |
|------------------------|-----------------------------------------------------------------------------------------------------|
| Power Adapter          | Optional AC/DC 24V/9.2A, 220W<br>Optional AC/DC 24V/5A, 120W                                        |
| Power Mode             | AT, ATX                                                                                             |
| Power Ignition Sensing | Power Ignition Management                                                                           |
| Power Supply Voltage   | 9 ~ 48 VDC                                                                                          |
| Power Connector        | 3-pin Terminal Block                                                                                |
| Power Protection       | Over-Voltage Protection (OVP)<br>Over-Current Protection (OCP)<br>Reverse Polarity Protection (RPP) |
| Environment            |                                                                                                     |
| Operating Temperature  | -25°C to 70°C (35W CPU)                                                                             |
| Storage Temperature    | -30°C ~ 85°C                                                                                        |
| Relative Humidity      | 10% to 95% (non-condensing)                                                                         |
| Certification          | CE, FCC Class A, E-Mark, EMC Conformity with EN 50155, EN 50121-3-2                                 |
| Vibration              | 5 Grms, 5 ~ 500 Hz, 0.5 hr/axis (SSD) 1 Grms, 5 ~ 500 Hz, 0.5 hr/axis (HDD)                         |
| Shock                  | 50G, half-sine, 11 ms (SSD)                                                                         |
| Physical               |                                                                                                     |
| Dimensions             | 240 (W) x 261 (D) x 79.2 (H) mm                                                                     |
| Weights                | 7.5 - 8.25 kg                                                                                       |
| Construction           | Extruded aluminum with heavy duty metal                                                             |
| Mounting Options       | Wall Mounting                                                                                       |

\* For 8th/9th CPUs configured to run at 65W, operating temperatures will be limited to 60°C.

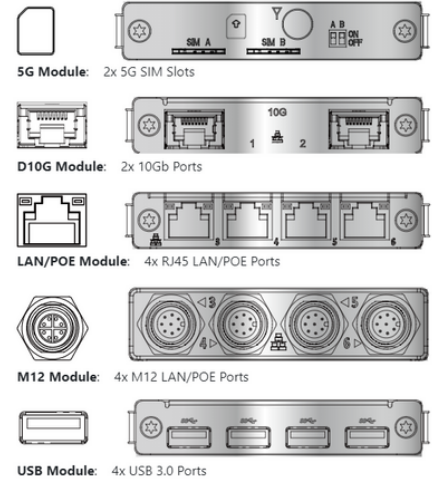
\*\* 65W CPUS may experience thermal throttling depending on extreme application workloads; this is also due to an increase in the physical CPU cores from the Intel silicon (up to 8 cores). Please note, this does not indicate system malfunction or problems in the fanless design. Please consult our embedded 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

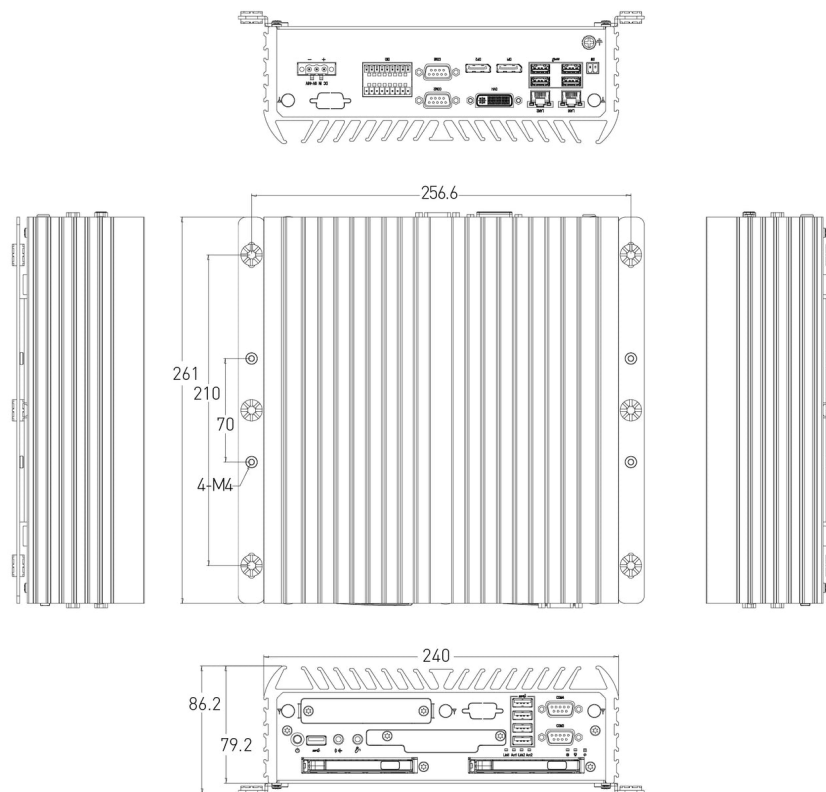


### Available Modules



## Dimension

Unit: mm



## Compliances and Standards

|                       |                                                                                                                                                                                                                                               |
|-----------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Shock                 | 50G, half-sine, 11 ms (SSD)<br>IEC60068-2-27:2008<br>Designed to comply with MIL-STD-810H Method 516.8 Procedure I                                                                                                                            |
| Vibration             | 5 Grms, 5 ~ 500 Hz, 0.5 hr/axis (SSD) 1 Grms, 5 ~ 500 Hz, 0.5 hr/axis (HDD)<br>IEC60068-2-64:2008<br>Designed to comply with MIL-STD-810H Method 514.8 Procedure I                                                                            |
| Operating Temperature | -25°C to 70°C (35W CPU)<br>IEC60068-2-1:2007 (Cold test procedure)<br>IEC60068-2-2:2007 (Dry heat test procedure)<br>IEC60068-2-3:2007 (Damp heat, steady state, test procedure)<br>IEC60068-2-14:2009 (Wide temperature range thermal shock) |
| EMI                   | <ul style="list-style-type: none"> <li>FCC Class A (47 CFR part 15.109 and part 15.107)</li> <li>CE</li> <li>ICES-003</li> <li>UKCA</li> </ul>                                                                                                |

## Available Models

| Model No.      | Description                                                                         |
|----------------|-------------------------------------------------------------------------------------|
| RCO-6000-CFL-P | Industrial Computer with 9th Gen Intel® Core™ Processor, Q370 PCH, w/ Power Adapter |

## Optional Accessories

| Model No.         | Description                                                             |
|-------------------|-------------------------------------------------------------------------|
| 1-E09A22801       | Adapter AC/DC 24V/11.67A 280W 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   |
| 999930            | Power Cord, 3-pin US Type, 180cm                                        |
| 1-TPCD00002       | Power Cord, European Type, 180cm                                        |
| 1-TPCD00001       | Power Cord, 3-pin UK Type, 180cm                                        |
| PETPUHAILOCFL-KIT | Hailo-8™ AI Accelerator Module, M.2 M-Key Kit                           |

## Packing List

- 1x RCO-6000-CFL
- 1x Utility DVD Driver
- 1x Wall Mount Kit
- 1x DVI to VGA Adapter

## US Exports And Tariff Codes

|           |              |
|-----------|--------------|
| ECCN      | 5A992.c      |
| HTS       | 8471.50.0150 |
| ScheduleB | 84.71        |

## Premio Inc.

918 Radecki Ct., City of Industry  
CA 91748, United States  
Toll Free: 800.977.3646

## Premio Taiwan Inc.

18F, No.176, Jianyi Road, Zhonghe District,  
New Taipei City 235603, Taiwan  
Toll Free: 886.2.7731.7888

Email: [sales@premioinc.com](mailto:sales@premioinc.com)  
Website: <https://premioinc.com>