



GPU COMPUTING SYSTEM

RCO-6000-CML-20-2060S

GPU Computing System with LGA 1200 for Intel 10th Gen Processor and W480E PCH, RTX 2060 Super integrated



Features

- LGA 1200 socket for 10th Gen. Intel® CML S Processor
- Intel® W480E chipset
- NVIDIA GeForce® RTX 2060 Super Graphics engine based on NVIDIA Turing™ GPU architecture
- 2x 260-pin DDR4 SODIMM. Max. up to 64GB
- 2x Intel® GbE supporting Wake-on-LAN and PXE
- 3x 2.5" SATA HDD Bay (1x Internal) with RAID 0, 1, 5 support
- 1x M.2 (E Key, PCIe x1, 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 (35W/65W CPU)
- Power ignition management
- TPM 2.0 Supported
- UL Listed



Specifications

System

Processor

Support 10th Gen Intel® CML S Processor (LGA 1200, 65W/35W TDP)

- Intel® Xeon® W-1290TE, 10 Cores, 20MB Cache, up to 4.5 GHz
- Intel® Xeon® W-1270TE, 8 Cores, 16MB Cache, up to 4.4 GHz
- Intel® Xeon® W-1250TE, 6 Cores, 12MB Cache, up to 3.8 GHz
- Intel® Core™ i9-10900E, 10 Cores, 20MB Cache, up to 4.7 GHz
- Intel® Core™ i9-10900TE, 10 Cores, 20MB Cache, up to 4.5 GHz
- Intel® Core™ i7-10700E, 8 Cores, 16MB Cache, up to 4.5 GHz
- Intel® Core™ i7-10700TE, 8 Cores, 16MB cache, up to 4.4 GHz
- Intel® Core™ i5-10500T, 6 Cores, 12MB Cache, up to 4.2 GHz
- Intel® Core™ i5-10500TE, 6 Core, 12MB Cache, 3.7 GHz
- Intel® Core™ i3-10100T, 4 Cores, 6MB cache, up to 3.8 GHz
- Intel® Core™ i3-10100TE, 4 Cores, 9MB Cache, up to 3.6 GHz

System Chipset	Intel® W480E Chipset
LAN Chipset	GbE1: Intel I219 (Support Wake-on-LAN and PXE) GbE2: Intel I210 (Support Wake-on-LAN and PXE)
Audio Codec	Realtek ALC888S
System Memory	2x 260-Pin DDR4 2666 /2933MHz SODIMM. Max. up to 64GB (ECC and Non-ECC)
Graphics	Intel® UHD Graphics 610/630 or NVIDIA GeForce® RTX 2060 Super
BIOS	AMI 256Mbit SPI BIOS
Watchdog	Software Programmable Supports 1~255 sec. System Reset
TPM	TPM 2.0

Display

Display Port	3x DisplayPort
DVI	1x DVI-I, 1x DVI-D
HDMI	1x HDMI
Multiple Display	6 Display interfaces

Storage

SIM Socket	2x External SIM socket (Mini PCIE attached)
SSD/HDD	1x Internal 2.5" SATA/SSD HDD Bay (support H=9mm) 2x Removable 2.5" SATA HDD Bay (support H=7mm, Hot-swappable) Support RAID 0, 1, 5

Expansion

M.2	1x M.2 (E Key, PCIe x1, USB 2.0, 2230)
Mini PCIe	2x Full-size Mini PCIe
PCIe	1x PCIe x16 (occupied by GPU)

Expansion Modules

Occupied One Universal I/O Slot:

- 4-port GbE module with Intel® I350 Chipset, RJ-45 or M12 connector (PoE optional)
- 2-Port RJ45 10GbE with Intel X710 Chipset
- 4-Port USB with Renesas uPD720201K8 host controller (share PCIe Gen2 x1 bandwidth)
- 1x M.2 for 5G (B Key, PCIe x1, USB 3.0, 3042/3052), Including 2x SIM socket, 1x SIM switch (1x Universal Slot Only)

I/O

Audio	1x Mic-in, 1x Line-out
CAN	2x CAN 2.0 A/B 2-pin Internal header
COM	2x RS-232/422/485 ; 6x RS-232/422/485 (internal)
DIO	8 in / 8 out (Isolated)
LAN	2x RJ45
Universal I/O Bracket	2x Universal I/O Bracket (By mini PCIe interface)

USB	6x USB 3.2 Gen 2 (10 Gbps) 3x USB 3.2 Gen 1 (5 Gbps, 1x Internal) 2x USB 2.0 header (internal)
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 4x 4-Pin Power Connector, 1x 4-PIN FAN Connector

Operating System

Windows	Windows 10
Linux	Linux kernel

Power

Power Adapter	Optional AC/DC 24V/5A, 120W Optional AC/DC 24V/9.2A, 220W Optional AC/DC 24V/11.67A, 280W (For GPU Expansion)
Power Mode	AT, ATX
Power Ignition Sensing	Power Ignition Management
Power Supply Voltage	2x Power Input 9~48VDC 12~48VDC for GPU/Card Expansion
Power Connector	5-pin Terminal Block 4-pin Terminal Block for GPU Expansion
Power Protection	OVP (Over Voltage Protection) OCP (Over Current Protection) Reverse Protection

Environment

Operating Temperature	-25°C to 60°C (35W/65W CPU)
Storage Temperature	-30°C to 85°C
Relative Humidity	10% to 95% (non-condensing)
Certification	UL, CE, FCC Class A
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

Physical

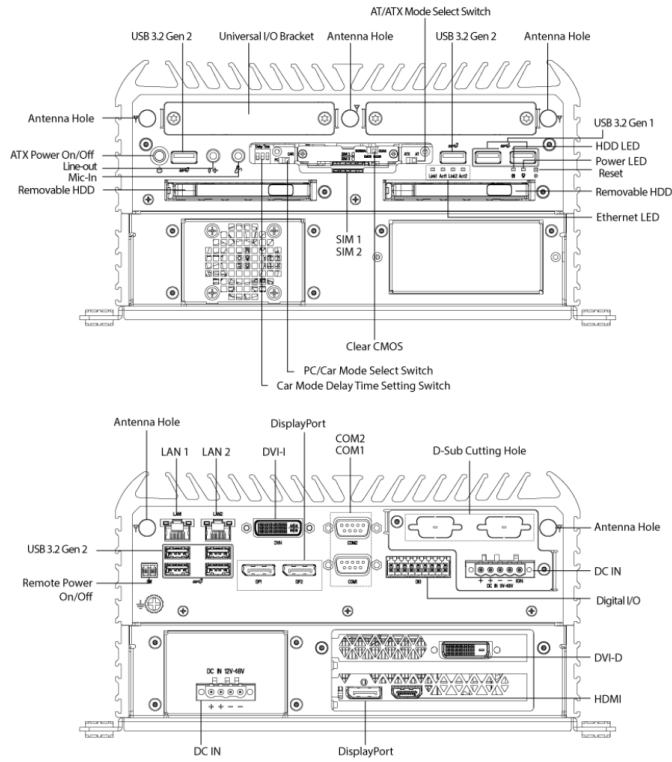
Dimensions	240 (W) x 261 (D) x 126.8 (H) mm
Weights	6.2 kg
Construction	Extruded Aluminum with Heavy Duty Metal
Mounting Options	Wall Mounting

• For 10th Gen Intel 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 10 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.








RCO-6000-CML-20-2060S

External I/O Mechanical Layout

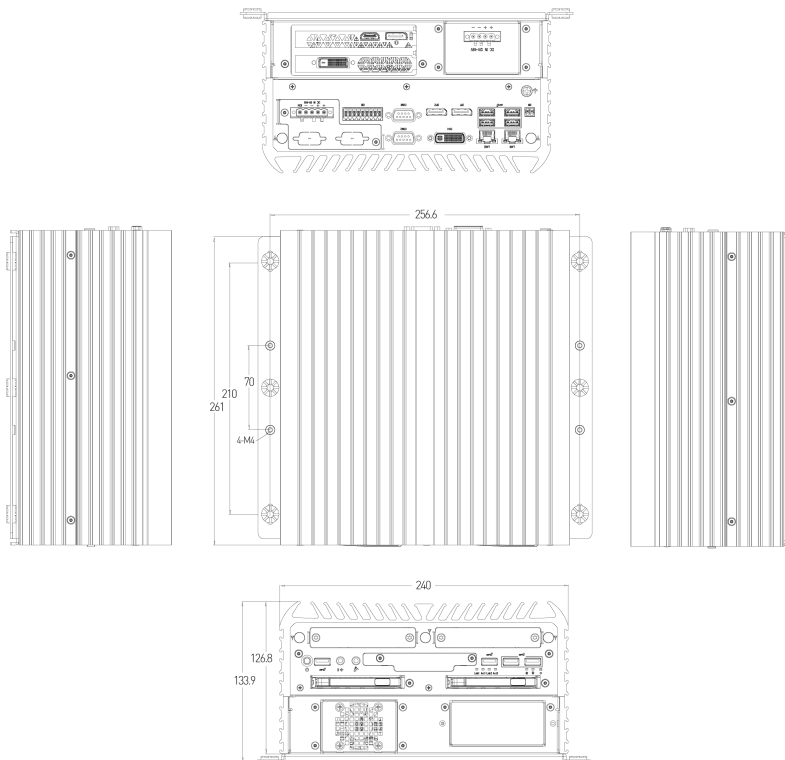


Available Modules

-  **5G Module:** 2x 5G SIM Slots
-  **D10G Module:** 2x 10Gb Ports
-  **LAN/POE Module:** 4x RJ45 LAN/POE Ports
-  **M12 Module:** 4x M12 LAN/POE Ports
-  **USB Module:** 4x USB 3.0 Ports

Dimension

Unit: mm





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Available Models

Model No.	Description
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Optional Accessories

Model No.	Description
1-E09A12002	Adapter AC/DC 24V 5A 120W 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-E09A22801	Adapter AC/DC 24V/11.67A 280W with 3pin Terminal Block Plug 5.0mm Pitch
1-TPCD00005	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-6000-CML Series Embedded System
 1x Wall Mount Kit
 1x Accessory Kit
 1x DVI to VGA Adapter



C&T Solution Inc.

18F, No.176, Jianyi Road, Zhonghe Dist., New Taipei City 235603, Taiwan (R.O.C.)

Toll Free: +886-2-7731-7888 Fax: +886-2-7731-7855

Email: info@candtsolution.com

<https://www.candtsolution.com>

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US

sales@assured-systems.com

Sales: +1 347 719 4508
Support: +1 347 719 4508

1309 Coffeen Ave
Ste 1200
Sheridan
WY 82801
USA

EMEA

sales@assured-systems.com

Sales: +44 (0)1785 879 050
Support: +44 (0)1785 879 050

Unit A5 Douglas Park
Stone Business Park
Stone
ST15 0YJ
United Kingdom

VAT Number: 120 9546 28
Business Registration Number: 07699660