



GPU COMPUTING SYSTEM

# VCO-6133E-2PWR

GPU Computing System with LGA 1151 for Intel 8th/9th Gen CPU & Q370 PCH,  
1x PCIe x16, 2x PCIe x4, 2x Power input



**FEATURES**

- Support 8<sup>th</sup>/9<sup>th</sup> Gen Intel® CFL-R S Processor (LGA 1151, 65W/35W TDP)
- Intel® Q370 Chipset
- Triple Independent Display by 1x DVI-I and 2x DisplayPort
- 2x Intel® GbE supporting Wake-on-LAN and PXE
- 2x Full-size mini PCIe (shared by 1x mSATA), and 2x SIM socket
- 4x 2.5" SATA HDD Bay with RAID 0, 1, 5, 10 support,  
1x mSATA (Shared by 1x Mini PCIe)
- 1x M.2 (M Key, PCIe x4, 2280, Support NVMe),  
1x M.2 (E Key, PCIe x2, 2230, USB 2.0, Support CNVi)
- 6x RS-232/422/485 (4x internal)
- 4x USB 3.2 Gen 2 (10 Gbps), 4x USB 3.2 Gen 1 (5 Gbps, internal)
- 8x DI + 8x DO with isolation
- 9 to 48V DC Wide Range Power Input Supporting AT/ATX Mode
- Wide Operating Temperature (-25°C to 70°C)
- TPM 2.0 Supported

**SPECIFICATIONS**

**System**

|   |   |
|---|---|
| Processor   |   |
| Support 8 <sup>th</sup> /9 <sup>th</sup> Gen Intel® CFL-R S Processor (LGA 1151, 65W/35W TDP) |   |
| - Intel® Core™ i7-9700E, 8 Cores, 12MB cache, up to 4.4 GHz                                   |   |
| - Intel® Core™ i5-9500E, 6 Cores, 9MB Cache, up to 4.2 GHz                                    |   |
| - Intel® Core™ i3-9100E, 4 Core, 6MB Cache, 3.7 GHz   |   |
| - Intel® Core™ i7-9700TE, 8 Cores, 12MB cache, up to 3.8 GHz                                  |   |
| - Intel® Core™ i5-9500TE, 6 Cores, 9MB Cache, up to 3.6 GHz                                   |   |
| - Intel® Core™ i3-9100TE, 4 Core, 6MB Cache, 3.2 GHz  |   |
| - Intel® Core™ i7-8700T, 6 Cores, 12MB cache, up to 4.0 GHz                                   |   |
| - Intel® Core™ i5-8500T, 6 Cores, 9MB Cache, up to 3.5 GHz                                    |   |
| - Intel® Core™ i3-8100T, 4 Cores, 6MB Cache, 3.1 GHz  |   |
| - Intel® Pentium® G5400T, 2 Cores, 4MB Cache, up to 3.1 GHz                                   |   |
| - Intel® Celeron® G4900T, 2 Cores, 2MB Cache, up to 2.9 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 (Un-buffered and Non-ECC)   |
| BIOS  | AMI 256Mbit SPI BIOS  |
| Watchdog  | Software Programmable Supports 1-255 sec. System Reset  |
| TPM   | TPM 2.0   |
| <b>Display</b>  |   |
| Graphics  | Intel® UHD Graphics 610/630   |
| VGA   | Yes (by optional split cable)   |
| DVI   | 1x DVI-I, support resolution 1920 x 1200  |
| DisplayPort   | 2x DisplayPort, support resolution 4096 x 2304  |
| Multiple Display  | Triple Display  |
| <b>Storage</b>  |   |
| SSD/HDD   | 2x Internal 2.5" SATA HDD Bay (support H=9mm)<br>2x Removable 2.5" SATA HDD Bay<br>(support H=7mm, hot-swappable), Support RAID 0, 1, 5, 10 |
| mSATA   | 1x mSATA (Shared by 1x Mini PCI Express)  |
| M.2   | 1x M.2 (M Key, PCIe x4, 2280, Support NVMe),<br>1x M.2 (E Key, PCIe x2, 2230, USB 2.0, Support CNVi)  |
| SIM Socket  | 2x Internal SIM socket  |
| <b>Expansion</b>  |   |
| Mini PCI Express  | 2x Full-size Mini PCIe (1x shared by 1x mSATA)  |
| PCI Express   | 1x PCIe x16, 2x PCIe x4 (1-Lane)  |
| Card Dimension  | 310 (L) x 112 (H) mm  |

**Operating System**

|                       |  |
|-----------------------|--|
| Windows               | Windows 10   |
| Linux                 | Linux kernel 5.X   |
| <b>I/O</b>            |  |
| COM                   | 2x RS-232/422/485<br>4x RS-232/422/485 (internal)                  |
| USB                   | 4x USB 3.2 Gen 2 (10 Gbps)<br>4x USB 3.2 Gen 1 (5 Gbps, internal)  |
| LAN                   | 2x RJ45  |
| DIO                   | 8 in / 8 out (Isolated)  |
| Universal I/O Bracket | 2x Universal I/O Bracket (By mini PCIe interface)                  |
| Others                | 4x WiFi Antenna Holes<br>1x Power Switch<br>1x Remote Power On/Off |

**Power**

|                        |   |
|------------------------|---|
| Power Mode             | AT, ATX   |
| Power Supply Voltage   | 9-48V DC  |
| Power Ignition Sensing | Power Ignition Management   |
| Power Connector        | 3-pin Terminal Block<br>4-pin Terminal Block  |
| Power Adaptor          | Optional AC/DC 24V/9.2A, 220W<br>Optional AC/DC 24V/11.67A, 280W<br>(12V requires 4-pin terminal block) |
| Power Protection       | OVP (Over Voltage Protection);<br>OCP (Over Current Protection)<br>Reverse Protection                   |

**Environment**

|                           |  |
|---------------------------|--|
| Operating Temp.           | -25°C to 70°C (35W CPU)<br>-25°C to 60°C (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<br>With HDD: 1 Grms, 5 - 500 Hz, 0.5 hr/axis |
| Shock                     | With SSD: 20G, half sine, 11ms   |
| Standards / Certification | CE, FCC Class A  |

**Physical**

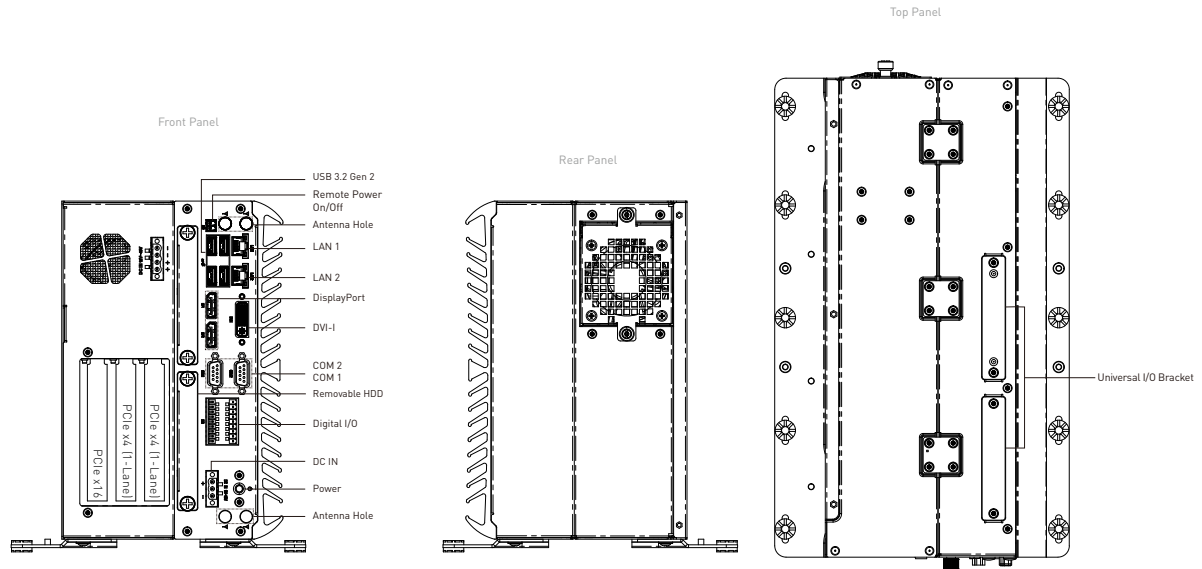
|              |  |
|--------------|--|
| Construction | Extruded Aluminum with Heavy Duty Metal  |
| Dimension    | 157 (W) x 340 (D) x 240 (H) mm           |
| Weight       | 9.4 kg                                   |
| Mounting     | Wall Mounting / Book mounting (Optional) |

\* 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.



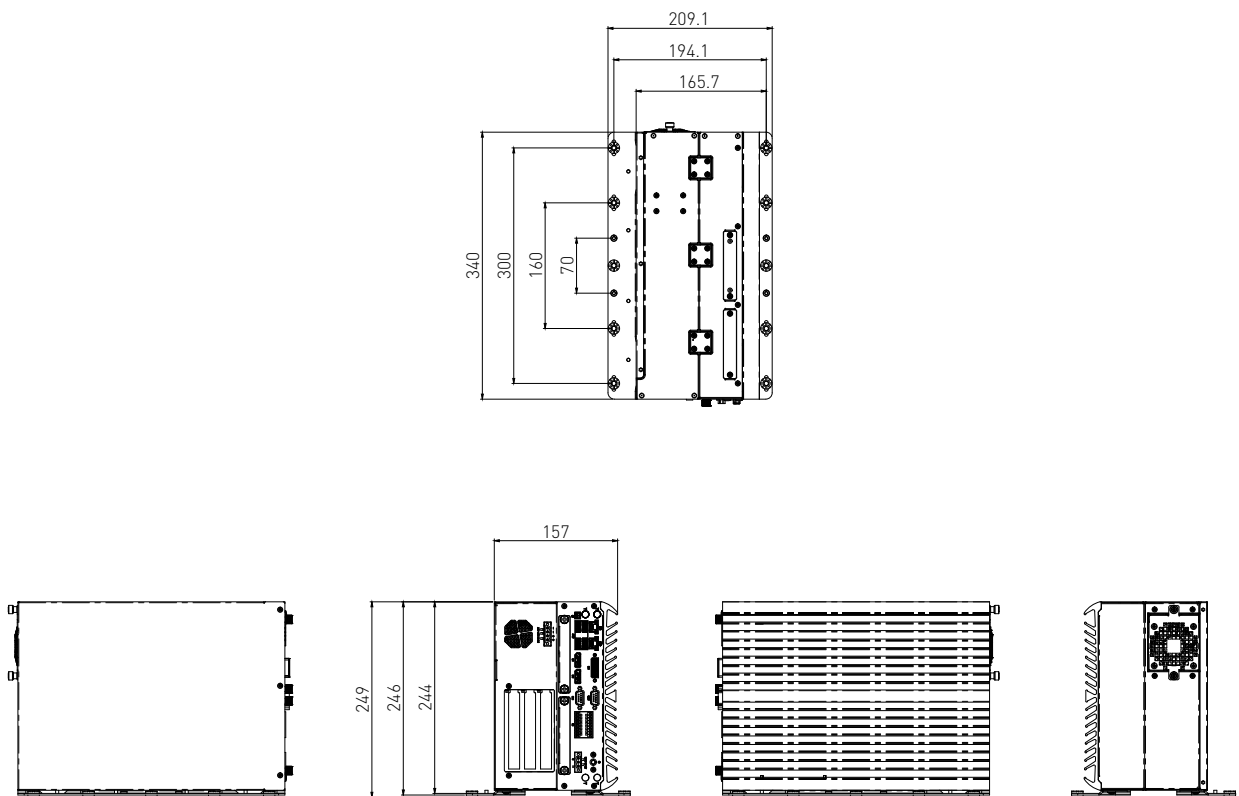
# VCO-6133E-2PWR

## EXTERNAL I/O MECHANICAL LAYOUT



## DIMENSION

Unit: mm





# VCO-6133E-2PWR

## ORDERING INFORMATION

| 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   |
| 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 VCO-6100 Series Embedded System
- 1x Wall Mount Kit
- 1x Accessory Kit
- 1x DVI to VGA Adapter

## AVAILABLE MODELS

| MODEL NO.      | DESCRIPTION  |
|----------------|--|
| VCO-6133E-2PWR | GPU Computing System with LGA 1151 for Intel 8th/9th Gen CPU & Q370 PCH, 1x PCIe x16, 2x PCIe x4, 2x Power input |



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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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