# DRPC-230-ULT5

Fanless DIN-Rail Embedded System with Intel® Core™ CPU

## Features

» Fanless DIN-rail system with Intel® Whiskey Lake-U processor

» Triple GbE LAN Ports

» Multiple USB 3.2 Gen 2 (10Gb/s)

» Six COM Ports

» PCIe x4 expansion capability (For DRPC-230-ULT5-i5/8G-R11)

» Buy IoT Devices & IoT Hardware | Azure Certified Device Catalog

## Specifications

| | |
|---|---|
| Form factor | |
| SBC Form Factor | » CPU: |
| | Intel® Whiskey Lake Core™ i5-8365UE |
| | Intel® Whiskey Lake Celeron™ 4305UE |
| | » Chipset: |
| | SoC |
| | » System Memory: |
| | 2 x DDR4 2400Hz SO-DIMM (up to 32GB) |
| | » Power: |
| | Input : 3-pin terminal block: 12 V ~ 24 V DC |
| | Consumption: 12V @ 4.98 A (Intel® Core™ i5-8365UE CPU with 8GB 2400 MHz DDR4 memory) |
| | » Reliability: |
| | Operating Shock: Half-sine wave shock 5G, 11ms, 100 shocks per axis, IEC68-2-27 |
| | Operating Vibration: MIL-STD-810G 514.6C-1 (SSD) |
| | Safety/EMC - CE/FCC |
| I/O Interface | |
| I/O Ports | » 6 x USB 3.2 Gen2 (DRPC-230-ULT5-C/8G/S-R10 has 4 x USB 3.2 Gen2 & 2 x USB 2.0) |
| | » Ethernet: |
| | 3 x RJ-45 |
| | 2 x PCIe GbE by Intel® I211 controller |
| | 1 x PCIe GbE by Intel® I219 controller |
| | » COM Port: |
| | 4 x RS-232/422/485 with AFC (DB-9) |
| | 2 x RS-232 (RJ45) |
| | » Digital I/O: |
| | 8-bit digital I/O , 4-bit input / 4-bit |
| | » Display: |
| | 1 x HDMI™ 1.4b (lockable) |
| | 1 x DP |

| | |
|---|---|
| | » TPM: |
| | 1 x TPM 2.0 (optional) |
| Expansion Slots | |
| Expansion Slots | » M.2: |
| | 1 x 2230 A key (PCIe/ USB2.0) |
| | Celeron SKU: 1 x 2230 A key (PCIe) |
| | » PCIe Mini: |
| | 1 x Full-size (PCIe/ USB 3.0/ SATA) |
| | » Backplane: |
| | 1 x PCIe by 4 |
| | (Expansion SKU only) |
| System | |
| Cooling method / System Fan | Fanless |
| Drive Bays | 1 x 2.5” SATA 6Gb/s HDD/SSD bay |
| Indicator&Buttons | |
| Buttons | 1 x Power button |
| | 1 x Reset button |
| | 1 x AT/ATX switch |
| Indicators | 1 x Power LED |
| | 1 x HDD LED |
| Physical Characteristics | |
| Construction | Extruded aluminum alloy |
| Color | |
| Color | Black + Silver |
| Dimensions | |
| Dimensions | 190 x 150 x 81 mm |
| | 190 x 150 x 127 mm (Expansion SKU) |
| Weight | |
| Weight | 2.9KG/ 3.2KG |
| | 3.2KG/ 3.5KG (Expansion SKU) |
| Environment | |
| Operating Temperature | -20 ~ 70°C with air flow (SSD) |
| Humidity | 10 ~ 95% non condensing |
| OS Support | |
| OS Support | Microsoft Windows 10 / Windows 11, Linux |

## Ordering Information

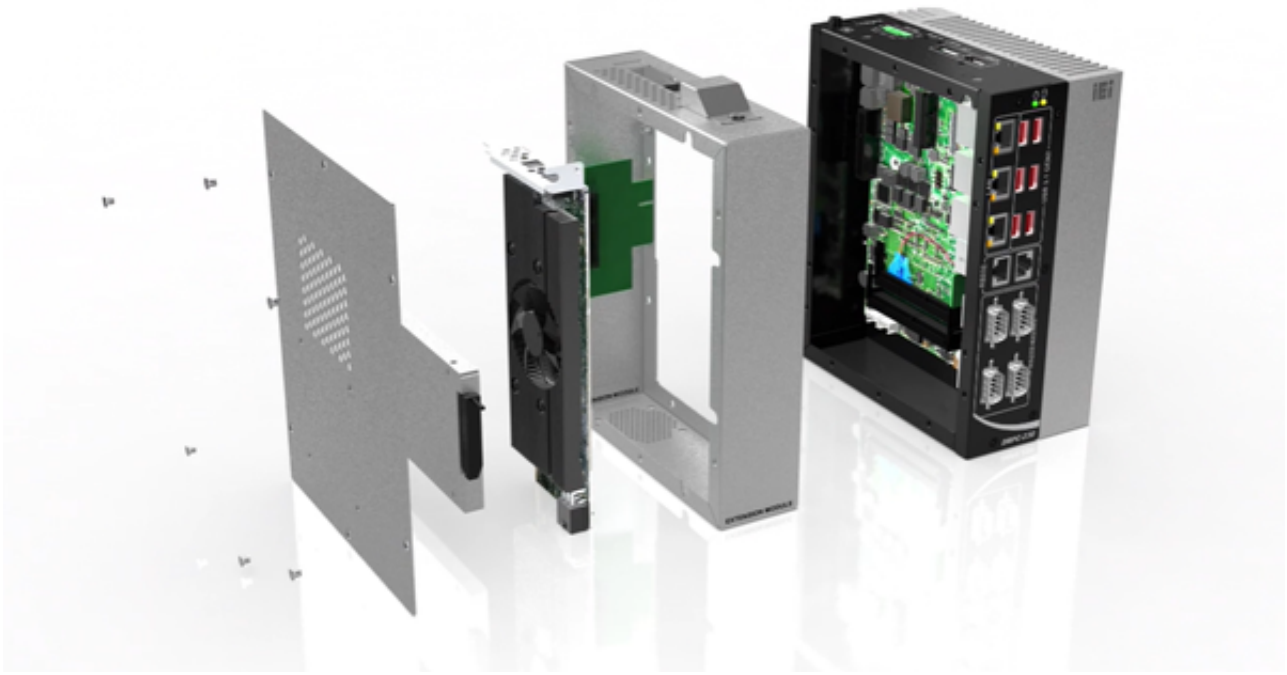
| | |
|---|---|
| DRPC-230-ULT5-i5/8G/S-R11 | Fanless embedded system, Intel®Whiskey Lake i5-8365UE 1.6GHz (quad core, TDP 15W), 8GB DDR4 pre-installed memory, HDMI™/DP, 3 PCIe GbE LAN, 6 COM, 12~24V DC and RoHS |

## Packing List

| | |
|---|---|
| 1 x Din-rail mounting kit | 1 x Screw kit |
| 1 x SATA cable | |

## Ultimate Fanless Box PC with Intel® Whiskey Lake

equipped with high-performance Intel® Whiskey Lake Core™ CPU. It is the first DIN-rail box PC to provide SKU-selectable choices based on budget concern. And it is the first DIN-rail box PC with modularable design that could extend one layer for functional expansion.
There are many firsts about the DRPC-230-ULT5 compared to its DRPC predecessors. It is the first DIN-rail box PC



## Optional Item Selection

With flexibility and convenience – various options await! Build your iconic DRPC-230-ULT5 by choosing functional expasions!.

Mustang-V100-MX8

AI accelerator card

Mustang-V100-MX4

AI accelerator card

GPOE-2P

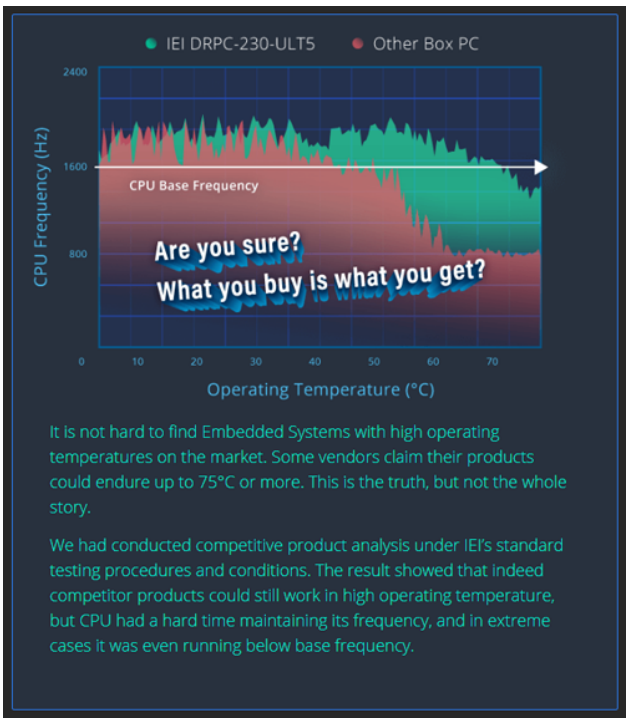
PoE add-on card

## Pursuing Impeccable Operational Performance

to deliver constant performance with CPU running steadily above its base frequency.

Humidity Resistance: In extreme use cases, humidity could be a key factor that impacts product functionality. DRPC-230-ULT5 was tested under strict conditions to ensure the design could couple with humid environments.

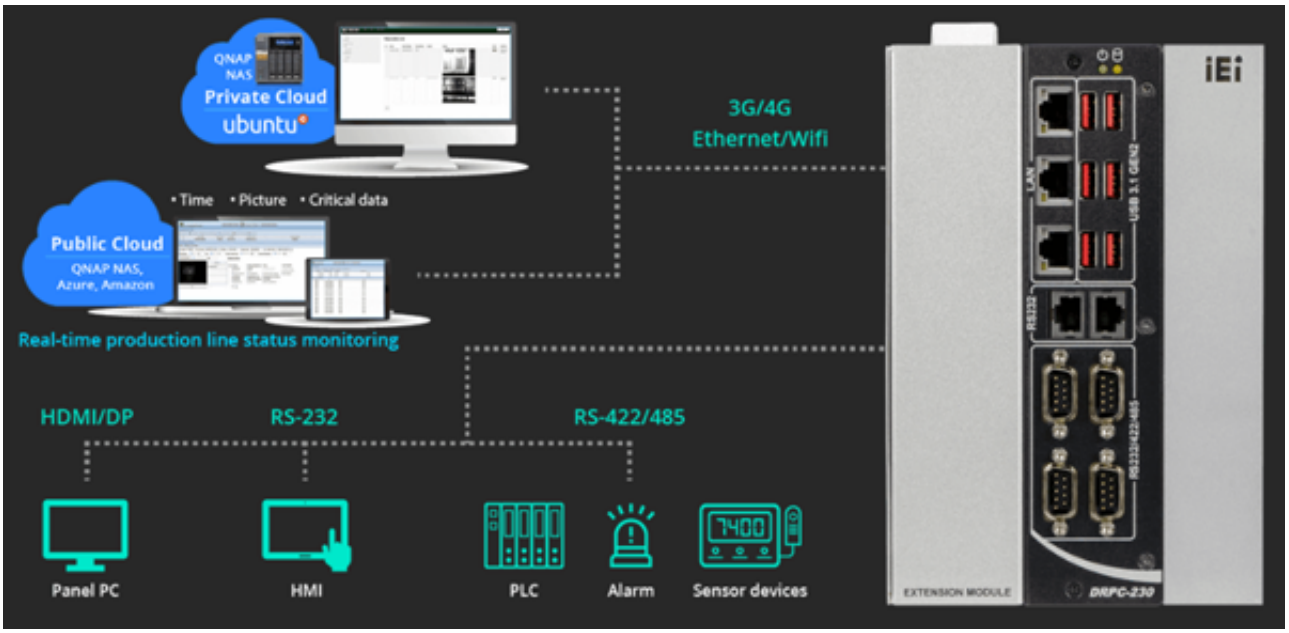
Durable and Silence: DRPC-230-ULT5 adopts a fanless system that integrates passive cooling fins. On one hand, it can reduce the use of consumables. On the other hand, it can boost product reliability and extend life cycle. Also, no need to worry for fan noises and fan maintenance.



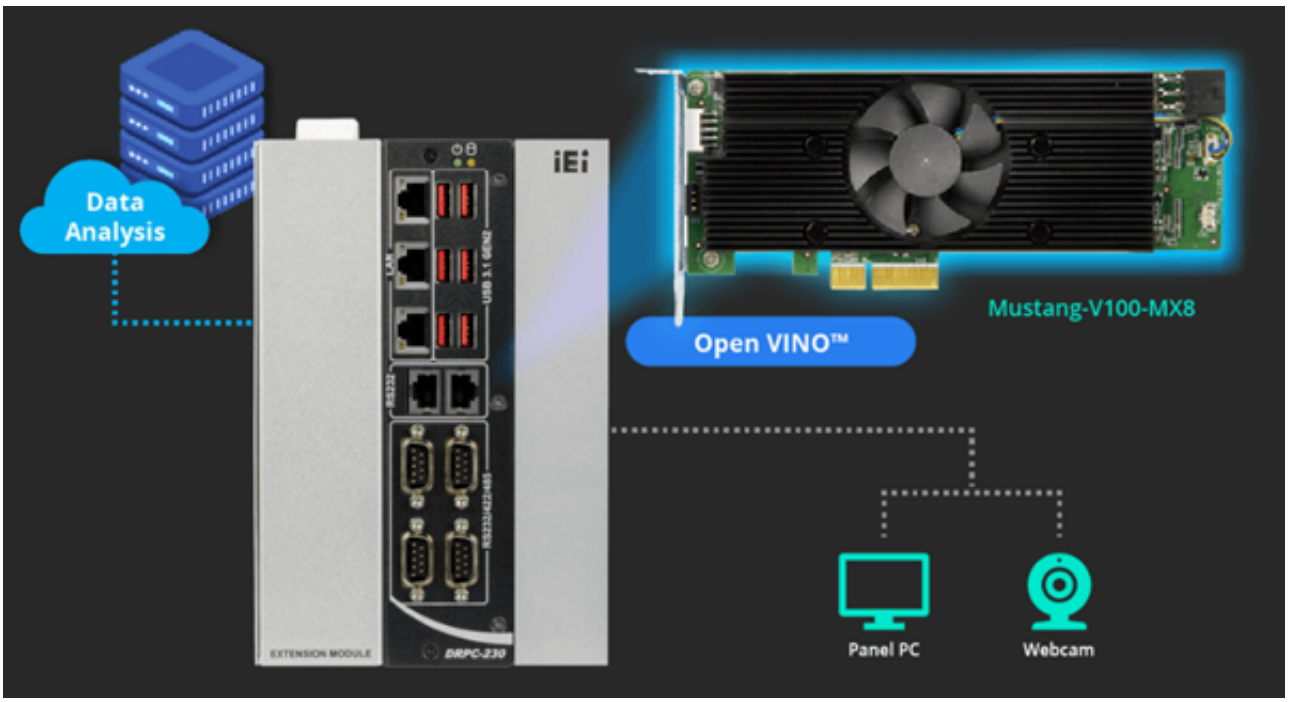

Wide Operating Temperature: Strictly tested in IEI's product quality validation lab: The operating temperature stated in the product datasheet/webpage guarantee NO CPU THROTTLING. DRPC-230-ULT5 could endure up to 70°C not only without system crashing, but also continue

## Applications

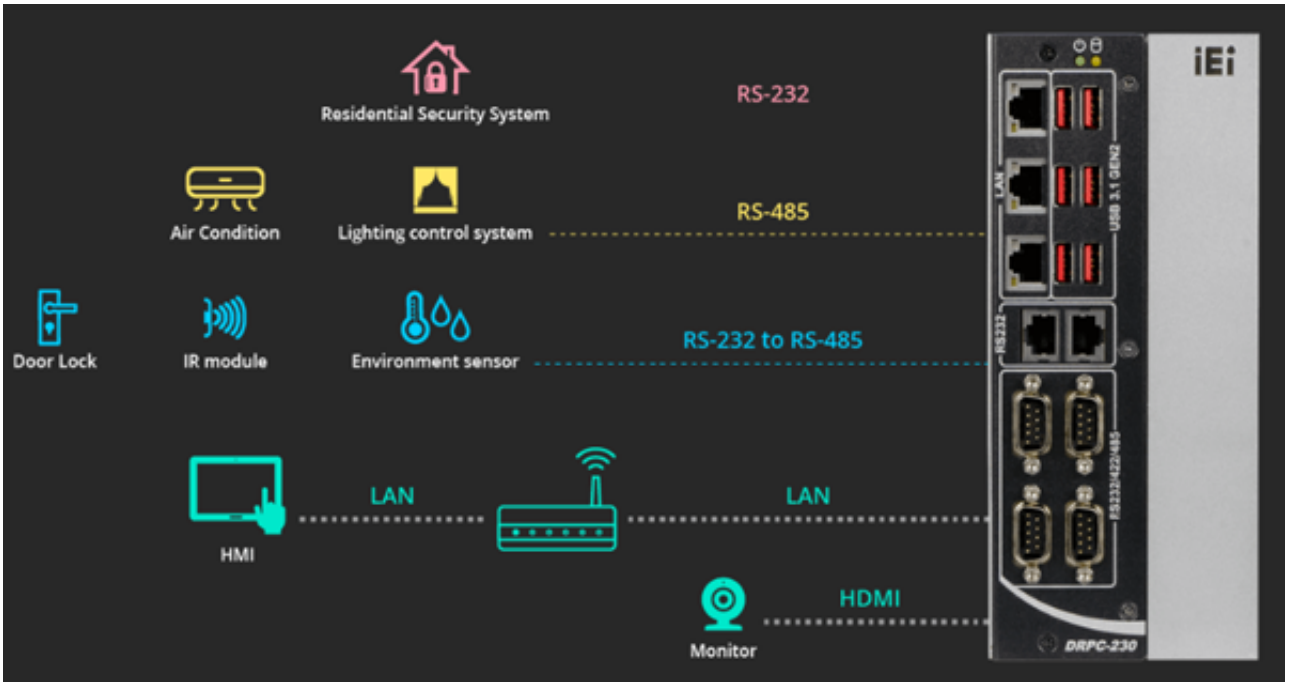
Industrial IoT: The DRPC-230-ULT5 has sufficient serial ports for devices that require low-speed signal, such as alarm, sensors. For devices requiring high-speed signal, six USB 3.2 Gen 2 ports are available to deliver up to 10Gb/s transmission speed. Equipping multiple LAN ports is also a key feature of the DRPC-230-ULT5. Its advantages include low cost, highly reliability and easy installation/maintenance. Not only does multi-LAN support high speed communication between devices, it is also easy to be segmented into intranet and extranet for security.



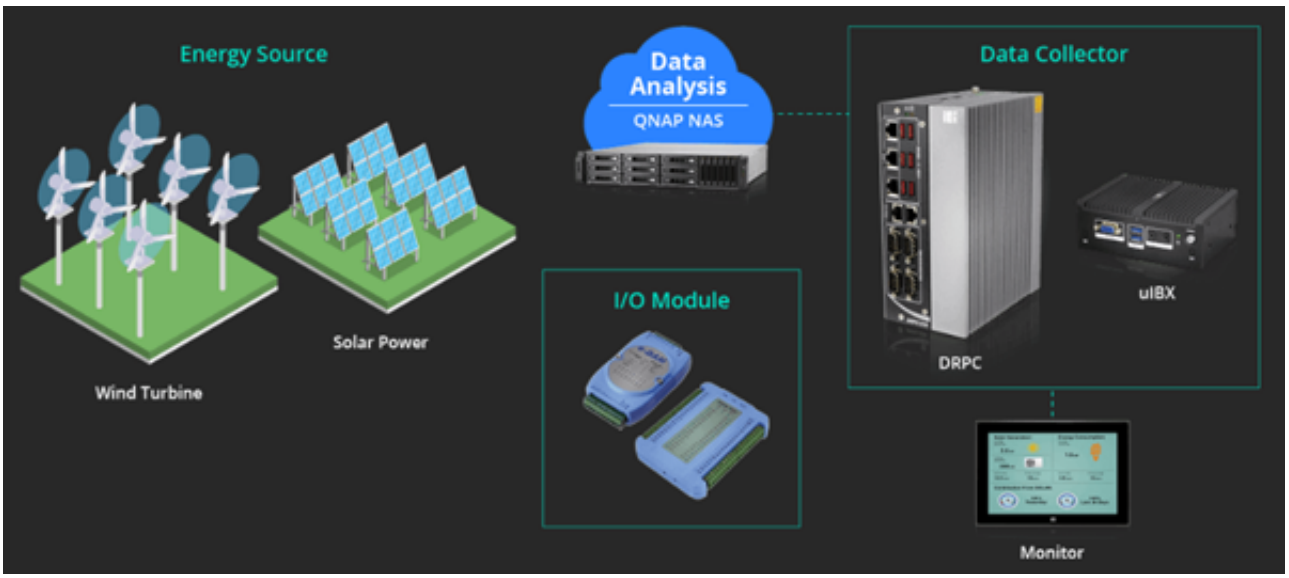

AI Edge Computing: The DRPC-230-ULT5 model with expansion layer provides rich I/O and PCIe x4 signal to support add-ons such as IEI acceleration cards (Mustang-V100-MX8 or Mustang-V100-MX4), opening the door to faster deployments of AI inference systems. It enables machine learning by using a variety of training models to simulate and infer the status or appearance of objects. For example, the inference system with the video analysis model can perform face and vehicle license plate analysis for safety and security purposes.




Smart Building: The demands on the intelligence of buildings have increased constantly in recent years, such that the energy efficiency as well as a good “return on investment” is the priority. The idea of a “green building” based on sustainable, energy-efficient construction and building use can be realized with intelligent, integral building automation. The DRPC-230-ULT5 provides six sets of serial ports which can fulfill user's demands for connecting a large number of peripherals through serial ports. By utilizing Ethernet connections to communicate with other control system, users could monitor building and control devices to achieve easy remote management.




Energy Management: Information technology adds intelligence to factories from design to the end of the process. Today’s technologies automate the collection, storage and retrieval of data from across multiple factories and factory sub-systems to make that data available for decision makers, from facility managers to supervisors. The DRPC-230-ULT5 can be used as a data collector gateway for connecting end devices with the database. It could also connect with data dashboards to display information like load profile analysis, energy usage benchmarking, utility rate benchmarking, and energy budget tracking. To best fit the need to run under harsh outdoor environments, the DRPC-230-ULT5 supports wide operating temperature from -20°C to 70°C.

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