

# Embedded System Platform Solutions

As the leading Industrial System provider, IEI continues to extend the product footprint from component level to system integration service. Our strong knowledge of market and technology innovation offers reliability, flexibility and interoperability for all of our industrial products with choices of size, performance and features.

## 1. Transportation System

| Model Name   | Processor  |
|--------------|--|
| IVS-200-ULT2 | Intel® Core™ i5-5350U 1.8 GHz, Intel® Celeron® 3765U 1.9 GHz |
| IVS-110-AL   | Intel® Atom® E3950 2.0 GHz                                   |



## 2. Embedded Edge Computing System

| Model Name      | Processor  |
|-----------------|--|
| FLEX-BX210-Q470 | Intel® Core™ i9-10900TE 1.8 GHz (up to 4.5 GHz)<br>Intel® Core™ i5-10500TE 2.3 GHz (up to 3.7 GHz) |



## 3. Industrial Automation System

| Model Name     | Processor   |
|----------------|---|
| TANK-XM811     | Intel® Core™ i5-12500TE 1.9 GHz (up to 4.3 GHz)<br>Intel® Core™ i7-12700TE 1.4 GHz (up to 4.6 GHz)  |
| TANK-XM810     | Intel® Core™ i3-10320 3.8 GHz (up to 4.6 GHz)<br>Intel® Core™ i5-10500TE 2.3 GHz (up to 3.7 GHz)<br>Intel® Core™ i7-10700TE 2.0 GHz (up to 4.4 GHz) |
| TANK-880-Q370  | Intel® Core™ i7-9700TE 1.8 GHz (up to 3.8 GHz)<br>Intel® Core™ i5-9500TE 2.2 GHz (up to 3.6 GHz)  |
| TANK-871-Q170  | Intel® Core™ i7-6700TE 2.4 GHz (up to 3.4 GHz)<br>Intel® Core™ i5-6500TE 2.3 GHz (up to 3.3 GHz)  |
| TANK-870-Q170  | Intel® Core™ i7-6700TE 2.4 GHz (up to 3.4 GHz)<br>Intel® Core™ i5-6500TE 2.3 GHz (up to 3.3 GHz)  |
| TANK-870e-H110 | Intel® Core™ i7-6700TE 2.4 GHz (up to 3.4 GHz)<br>Intel® Core™ i5-6500TE 2.3 GHz (up to 3.3 GHz)  |
| TANK-610-BW    | Intel® Celeron® N3160 1.6 GHz   |



## 4. DIN-Rail Embedded System

| Model Name    | Processor   |
|---------------|---|
| DRPC-W-TGL-U  | Intel® Core™ i7-1185G7E 1.8 GHz (up to 4.4 GHz)<br>Intel® Core™ i5-1145G7E 1.5 GHz (up to 4.1 GHz)<br>Intel® Core™ i3-1115G4E 2.2 GHz (up to 3.9 GHz)<br>Intel® Celeron® 6305 1.8 GHz |
| DRPC-W-JL     | Intel® Celeron™ N5105 2.0 GHz (up to 2.9 GHz)   |
| DRPC-W-EHL    | Intel® Celeron™ J6412 2.0 GHz (up to 2.6 GHz)   |
| DRPC-240-TGL  | Intel® Core™ i5-1145G7E 1.5 GHz (up to 4.1 GHz)<br>Intel® Celeron® 6305 1.8 GHz   |
| DRPC-230-ULT5 | Intel® Core™ i5-8265U 1.6 GHz (up to 3.9 GHz)   |
| DRPC-130-AL   | Intel® Atom® x5-E3930 1.3 GHz (up to 1.8 GHz)   |
| DRPC-120-BT   | Intel® Atom® E3845 1.91 GHz   |



## 5. Compact Size Embedded System

| Model Name  | Processor                                     |
|-------------|---|
| ITG-100-AL  | Intel® Atom® x5-E3930 1.3 GHz (up to 1.8 GHz) |
| uIBX-250-BW | Intel® Celeron® N3160 1.6 GHz                 |



## 6. Digital Signage Embedded System

| Model Name | Processor  |
|------------|--|
| IDS-310-AL | Intel® Celeron® J3455 1.5 GHz (up to 2.3 GHz)<br>Intel® Celeron® N3350 1.1 GHz (up to 2.4 GHz) |



# Transportation Solution

IEI transportation series is divided into three categories for different markets: in-vehicle, railway and marine. All these products have passed harsh vibration and shock test and can withstand in extreme temperature. This series allows wide voltage input and features multiple communication options. In addition, our products are in fanless design suitable for various markets and with rich I/O for different applications.

## Ruggedized Solution



### ■ IVS & In-Vehicle PPC Series

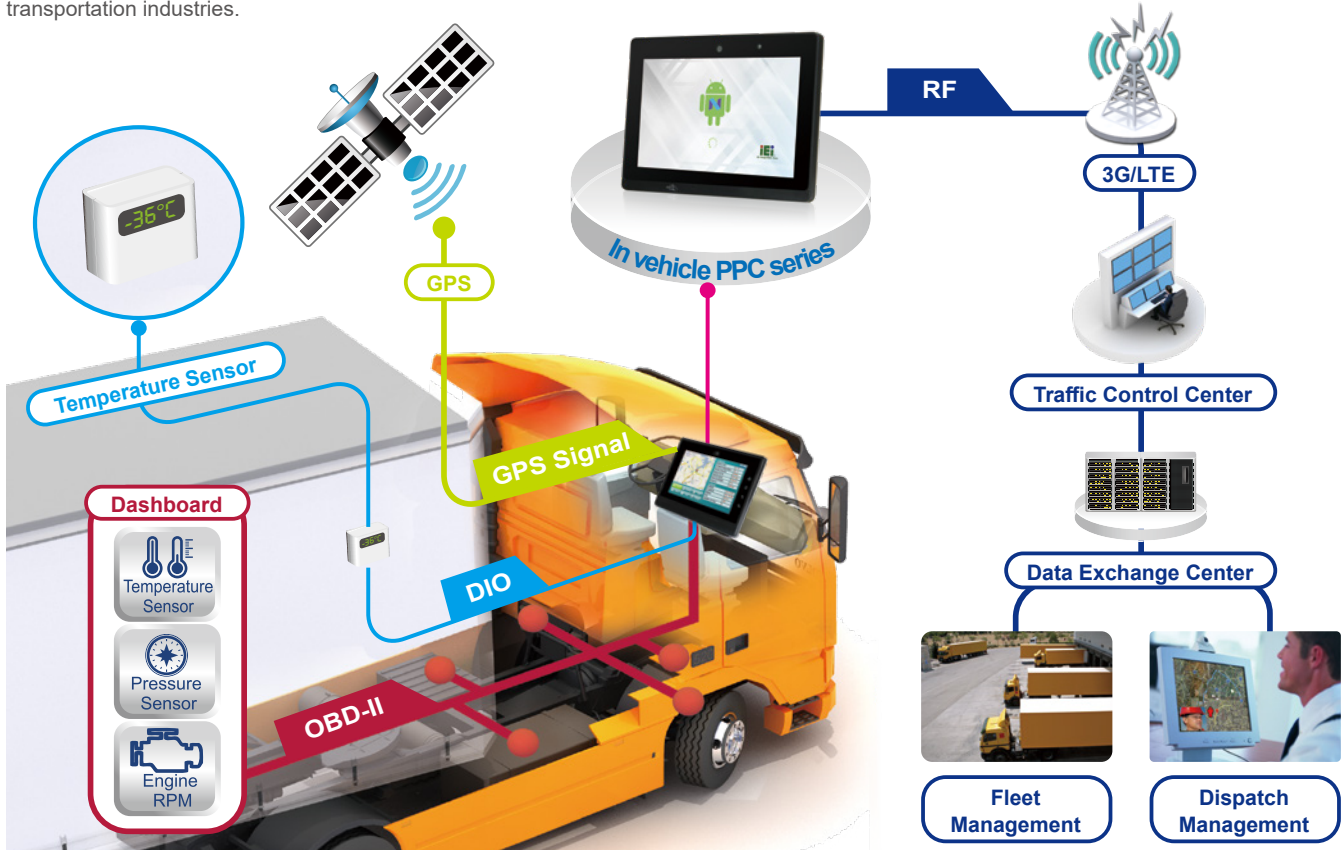
#### In-Vehicle Features

- Wide working temperature
- Wide DC input range
- E-mark certification
- OBD-II function
- Multi wireless communication
- IP 4X protection



# In-Vehicle PPC Series

Logistics industry's commonly used satellite positioning systems, electronic maps, Internet access, mobile communication systems with 3.75G/LTE/Wi-Fi/Bluetooth/GPS/RFID are all combined together in our solutions for fleet management, logistics, manufacturing and passenger transportation industries.



## Key Features

### ■ High Brightness Screen



The in-vehicle panel PC series is equipped with an ultra-high brightness LCD panel to help drivers avoid low visibility caused by direct sunlight.

### ■ Communication

The transportation series reserves multiple PCIe Mini slots for different network communication. Users can use CDMA/GPRS/HSUPA+/LTE to transmit and receive real-time data, use Wi-Fi for data acquisition, or use GPS to get accurate location data.

### ■ CAN Bus/OBD-II (Optional)

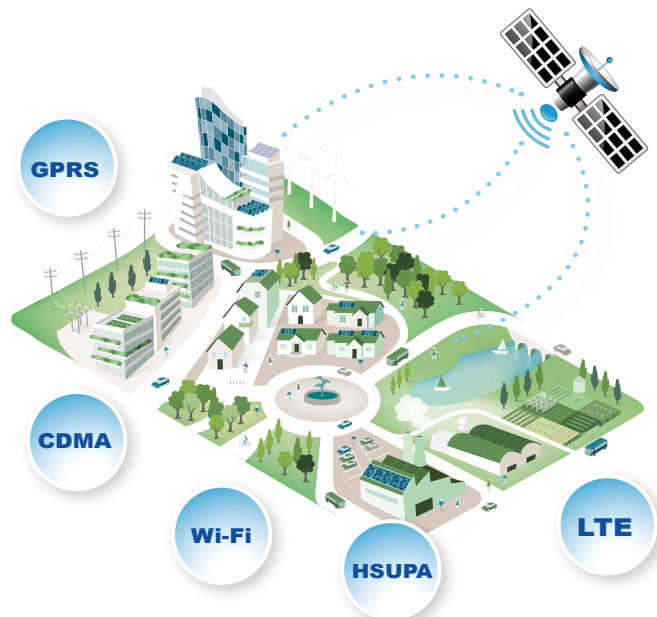


The in-vehicle panel PC series supports On-board Diagnostics (OBD) and Controller Area Network (CAN bus) and is built-in with OBD-II and CAN bus for real time vehicle diagnostic. CAN has a high degree of flexibility to adjust capacity which can be added in the existing network of nodes.

### ■ X86/ARM Solution



The in-vehicle panel PC series has two solutions, Intel and ARM architecture for customers. You can choose Intel solution which supports Windows OS, or you can choose ARM solution which supports Android OS.

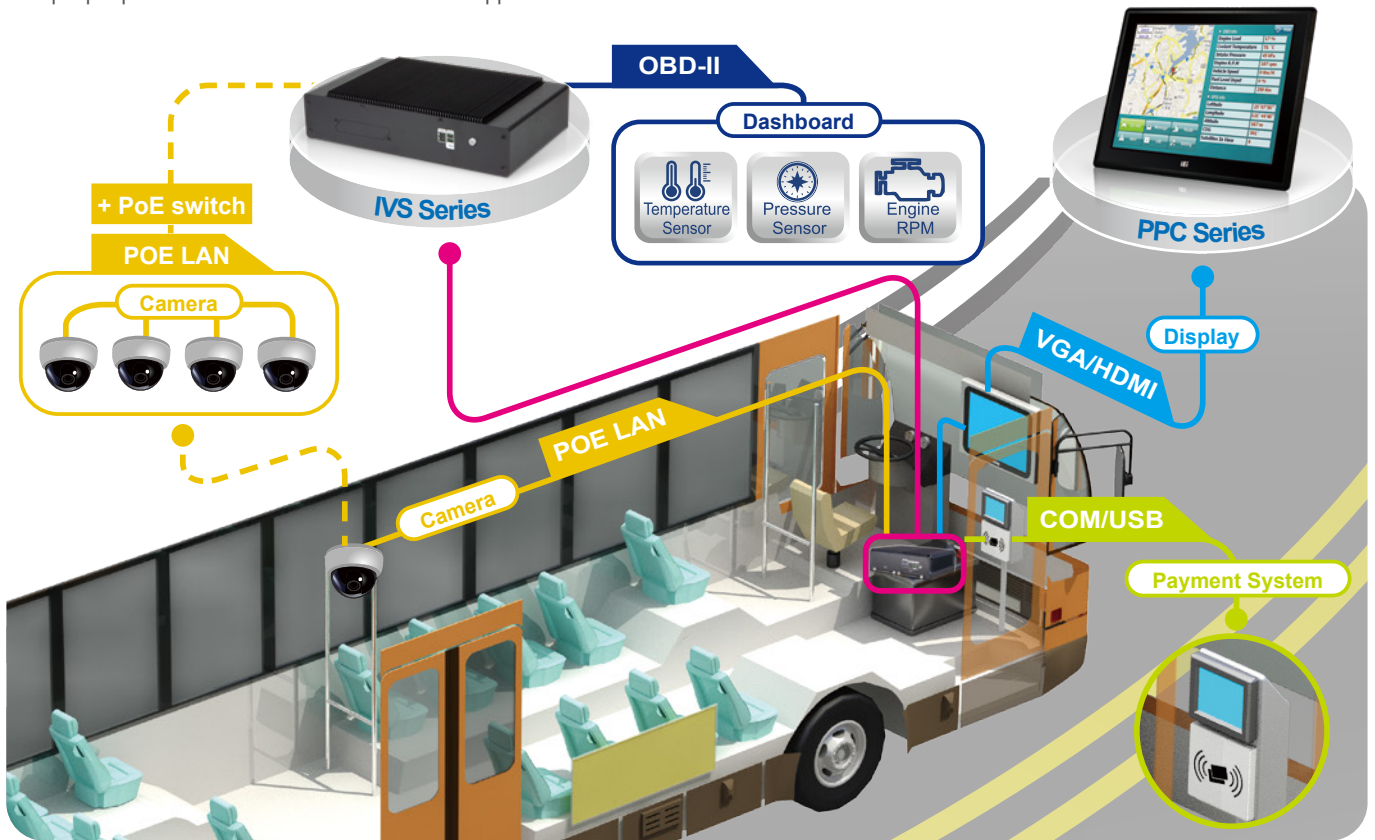






## In-Vehicle: IVS Series

The IVS series vehicle box PC is designed with reliable performance for harsh environments. Rich I/O ports are provided to connect with multiple peripheral devices in vehicle for different applications.



## Key Features

### ■ Wide Range Temperature



IEI fanless product series has leading-edge thermal design and has been tested under extreme temperature conditions in order to ensure that IEI fanless products can work in any harsh environment.

### ■ E-mark Certification



All vehicles, vehicle parts, and electronic products for the car must be enforced EMC testing. All of IEI IVS and in-vehicle panel PC series products have passed E-Mark certification which are required for the European market.

### ■ Vibration and Shock Resistance



In-vehicle systems must be able to withstand the shock and vibration that comes with driving a vehicle. IEI transportation series meets the requirement for different environments and has passed particular verification dependent on MIL-STD-810G 514.5 standard, EN61373 for railway market, EN60721 for in-vehicle market.

### ■ Particular Power Solution



We design wide power input to prevent surge when starting engine. We develop power management for users. For in-vehicle market, we design wide DC input and ACC power to ensure users can operate the system well.





# E-Window Tool Kit

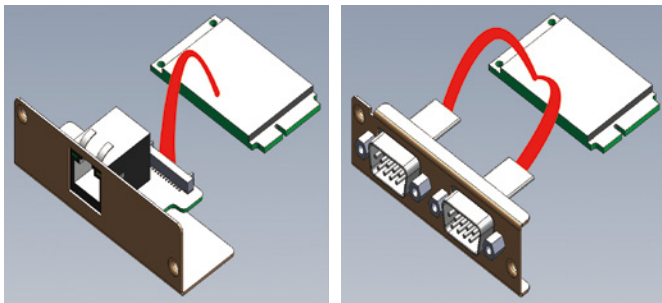


Innovative E-windows technology is a new modular way of adding flexible functionality to a wide range of device. Using standardized component helps system integrators easily add more features without any costly efforts.

## E-Window

### Features

- Easy maintenance
- Various module & I/O plate with flexible customization
- Integration of multiple functions
- Easy for replacement with different modules



### E-Window I/O Plate with PCIe Mini Card

An E-Window module uses a PCIe Mini slot embedded on the motherboard.

### Supported Model

|                              |                |
|------------------------------|----------------|
| Transportation System        |                |
| IVS-110-AL                   |                |
| Industrial Automation System |                |
| TANK-871-Q170                | TANK-870e-H110 |



E-MPCIE-LAN-R10



E-MPCIE-DLAN-R10

### Ordering Information

| Part No.               | Description  |
|------------------------|--|
| E-MPCIE-DLAN-R10       | PCIe Mini card supports 2-port GbE with Intel I211 controller, with PMS 194C I/O bracket and 250mm cable       |
| E-MPCIE-LAN-R10        | PCIe Mini card supports 1-port GbE with Realtek RTL8111E controller, with PMS 194C I/O bracket and 250mm cable |
| E-MPCIE-UART-KIT01-R10 | PCI Express Mini supports quad RS-232/422/485 port module  |
| E-MPCIE-CAN-R10        | PCI Express Mini Dual CAN Bus module, Full size, RoHs  |

# Transportation System



| Model Name     |  | IVS-200-ULT2   | IVS-110-AL  |
|----------------|--|--|---|
| Chassis        | Color  | Blue C   | Black   |
|                | Dimensions (WxDxH) (mm)  | 290 x 225 x 69   | 261 x 170 x 60  |
|                | System Fan   | Fanless  | Fanless   |
|                | Chassis Construction   | Extruded aluminum alloy  | Extruded aluminum alloy   |
| Motherboard    | CPU  | Intel® Core™ i5-5350U 1.8 GHz (up to 2.9 GHz, dual-core, TDP 15W)<br>Intel® Celeron® 3765U 1.9 GHz (dual-core, TDP 15W)                      | Intel® Atom™ x7-E3950 1.6 GHz (up to 2.0 GHz, quad-core, TDP 12W)     |
|                | Chipset  | SoC  | SoC   |
|                | System Memory  | 2 x SO-DIMM DDR3L 1600/1866 (4GB pre-installed)(up to 16GB)  | 1 x SO-DIMM DDR3L 1600/1866 (4GB pre-installed)(up to 8GB)            |
| Storage        | Hard Drive   | 1 x 2.5" SATA 6Gb/s HDD/SSD removable bay  | 1 x 2.5" SATA 6Gb/s HDD/SSD bay                                       |
|                | eMMC   | N/A  | 1 x eMMC5.0 (optional)  |
| Communication  | WLAN   | 802.11 a/b/g/n/ac (optional)   | 802.11 a/b/g/n/ac (optional)  |
|                | Bluetooth  | Bluetooth 2.1 (optional)   | BT 4.0/3.0+HS (optional)  |
|                | WWAN   | WCDMA/HSDPA/HSUPA (optional)   | WCDMA/HSDPA/HSUPA (optional)  |
|                | GPS  | N/A  | On-board GPS  |
| I/O Interfaces | USB  | 2 x USB 3.2 Gen1<br>2 x USB 2.0  | 4 x USB 3.2 Gen1  |
|                | Ethernet   | 4 x RJ-45:<br>1 x GbE by Intel® I218<br>3 x GbE by Intel® I211   | 1 x RJ-45:<br>1 x GbE by Intel® I210                                  |
|                | COM Port   | 2 x RS232/422/485 with AFC (DB9)<br>4 x RS232 (DB9)  | 1 x RS232/422/485 with AFC (DB9)                                      |
|                | Digital I/O  | 8-bit Digital I/O (4-in/ 4-out)(pin header)  | 16-bit Digital I/O (8-in/ 8-out)                                      |
|                | OBD-II   | N/A  | 1 x OBD-II/J1939 (DB9)  |
|                | Display  | 1 x HDMI (up to 3840 x 2160@30Hz)<br>1 x VGA (up to 1920 x 1600@60Hz)  | 1 x HDMI (up to 3840 x 2160@30Hz)<br>1 x VGA (up to 1920 x 1600@60Hz) |
|                | Audio  | 1 x Line-out, 1 x Mic-in   | 1 x Line-out  |
|                | Antenna  | 1 x 3G, 1 x BT, 1 x Wi-Fi  | 1 x 3G, 1 x GPS, 1 x BT, 1 x Wi-Fi                                    |
| Other          | 1 x Power button, 1 x Reset button, 1 x AT/ATX Switch, 1 x ACC Switch, 1 x LED for Power (Red),<br>1 x LED for Storage (Green) | 1 x Power Button, 1 x LED for HDD, 1 x LED for Wi-Fi, 2 x LED for SIM  |   |
| Expansions     | 1 x Full-size with SIM card slot (PCIe/USB2.0)<br>1 x Full-size (PCIe/USB 2.0/SATA)  | 1 x Full/Half-size with SIM card slot (PCIe/USB 2.0)<br>1 x Full/Half-size with SIM card slot (PCIe/USB 2.0)<br>1 x Half-size (PCIe/USB 2.0) |   |
| Power          | Power Input  | DC Jack: 9 ~ 36V DC  | Cigarette lighter power cable: 9 ~ 36V DC                             |
|                | Power Consumption  | 12V @ 2.1A<br>(Intel® i5-5350U with 4GB memory)  | 12V @ 5A<br>(Intel® x7-E3950 with 8GB memory)                         |
| Reliability    | Mounting   | VESA 100   | Wall-mount/ VESA 100  |
|                | Operating Temperature  | -20 ~ 60°C with air flow, 10% ~ 95% non-condensing   | -30 ~ 70°C with air flow (SSD), 10% ~ 95% non-condensing              |
|                | Storage Temperature  | -40 ~ 80°C with air flow, 10% ~ 95% non-condensing   | -40 ~ 80°C with air flow (SSD), 10% ~ 95% non-condensing              |
|                | Operating Shock  | Half-sine wave shock 5G, 11ms, 100 shocks per axis (SSD)   | Half-sine wave shock 5G, 11ms, 100 shocks per axis (SSD)              |
|                | Operating Vibration  | MIL-STD-810G 514.6C-1 (SSD)  | MIL-STD-810F 514.5C-2 (SSD)   |
|                | Weight (Net/ Gross)  | 1.3KG/ 1.45KG  | 2.4KG/ 3.8KG  |
|                | Safety/EMC   | CE/ FCC/ E-Mark  | CE/ FCC/ E-Mark   |
| IP Rating      | N/A  | IP 4X compliant  |   |
| Watchdog Timer | Programmable 1 ~ 255 sec/min   | Programmable 1 ~ 255 sec/min   |   |
| OS             | Supported OS   | Microsoft® Windows Embedded 8,<br>Microsoft® Windows Embedded Standard 7 E   | Microsoft® Windows 10   |

# IVS-200-ULT2

## Vehicle Surveillance System



### Features

- Intel® i5-5350U dual-core 1.8 GHz CPU or Intel® Celeron® 3755U dual-core 1.7 GHz CPU
- Four Intel® GbE LAN ports
- 9 V ~ 36 V DC input
- Two RS-232/422/485
- E-Mark certification



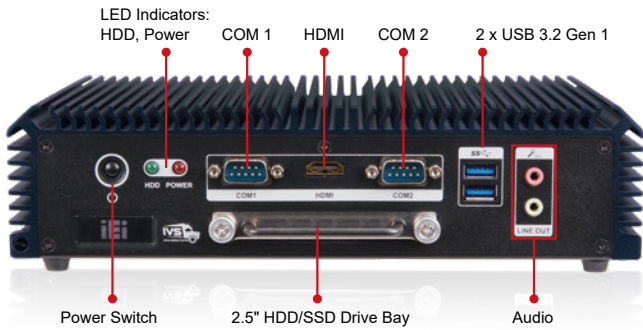
### Specifications

| Model Name     |                         | IVS-200-ULT2  |  |
|----------------|-------------------------|---|--|
| Chassis        | Color                   | Blue C  |  |
|                | Dimensions (WxHxD) (mm) | 255 x 63 x 150  |  |
|                | System Fan              | Fanless   |  |
|                | Chassis Construction    | Extruded aluminum alloy   |  |
| Motherboard    | CPU                     | Intel® Core™ i5-5350U 1.8 GHz (up to 2.9 GHz, dual-core, TDP 15W)<br>Intel® Celeron® 3765U 1.9 GHz (dual-core, TDP 15W) |  |
|                | Chipset                 | SoC   |  |
|                | System Memory           | 2 x SO-DIMM DDR3L 1600/1866 (4GB pre-installed)(up to 16GB)   |  |
| Storage        | Hard Drive              | 1 x 2.5" SATA 6Gb/s HDD/SSD removable bay   |  |
| Communication  | WLAN                    | 802.11 a/b/g/n/ac (optional)  |  |
|                | Bluetooth               | Bluetooth 2.1 (optional)  |  |
|                | WWAN                    | WCDMA/HSDPA/HSUPA (optional)  |  |
| I/O Interfaces | USB                     | 2 x USB 3.2 Gen1<br>2 x USB 2.0   |  |
|                | Ethernet                | 4 x RJ-45:<br>1 x GbE by Intel® I218<br>3 x GbE by Intel® I211  |  |
|                | COM Port                | 2 x RS232/422/485 with AFC (DB9)<br>4 x RS232 (DB9)   |  |
|                | Digital I/O             | 8-bit Digital I/O (4-in/ 4-out)(pin header)   |  |
|                | Display                 | 1 x HDMI (up to 3840 x 2160@30Hz)<br>1 x VGA (up to 1920 x 1600@60Hz)   |  |
|                | Audio                   | 1 x Line-out, 1 x Mic-in  |  |
|                | Antenna                 | 1 x 3G, 1 x BT, 1 x Wi-Fi   |  |
|                | Other                   | 1 x Power button, 1 x Reset button, 1 x AT/ATX Switch, 1 x ACC Switch, 1 x LED for Power (Red), 1 x LED for HDD (Green) |  |
|                | Expansions              | PCIe Mini   | 1 x Full-size with SIM card slot (PCIe/USB 2.0)<br>1 x Full-size (PCIe/USB 2.0/SATA) |
|                |                         | Power   | Power Input<br>DC Jack: 9 ~ 36V DC   |
| Power          | Power Consumption       | 12V @ 2.1A<br>(Intel® i5-5350U with 4GB memory)   |  |
|                | Reliability             | Mounting<br>VESA 100  |  |
| Reliability    | Operating Temperature   | -20°C ~ 60°C with air flow, 10% ~ 95% non-condensing  |  |
|                | Storage Temperature     | -30°C ~ 70°C with air flow, 10% ~ 95% non-condensing  |  |
|                | Operating Shock         | Half-sine wave shock 5G, 11ms, 100 shocks per axis (SSD)  |  |
|                | Operating Vibration     | MIL-STD-810F 514.5C-2 (SSD)   |  |
|                | Weight (Net/Gross)      | 2.2KG/ 3.0KG  |  |
|                | Safety/EMC              | CE/ FCC/ E-Mark   |  |
|                | Watchdog Timer          | Programmable 1 ~ 255 sec/min  |  |
|                | OS                      | Supported OS  | Microsoft® Windows Embedded 8, Microsoft® Windows Embedded, Standard 7 E             |

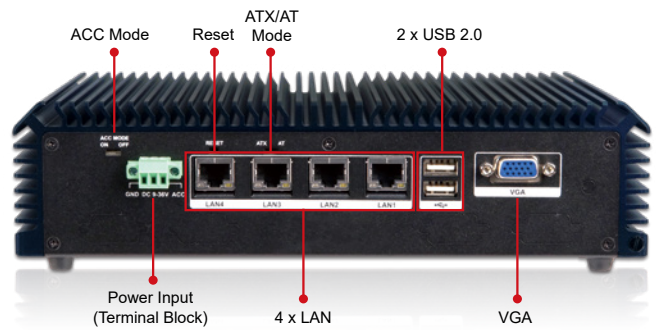


## Fully Integrated I/O

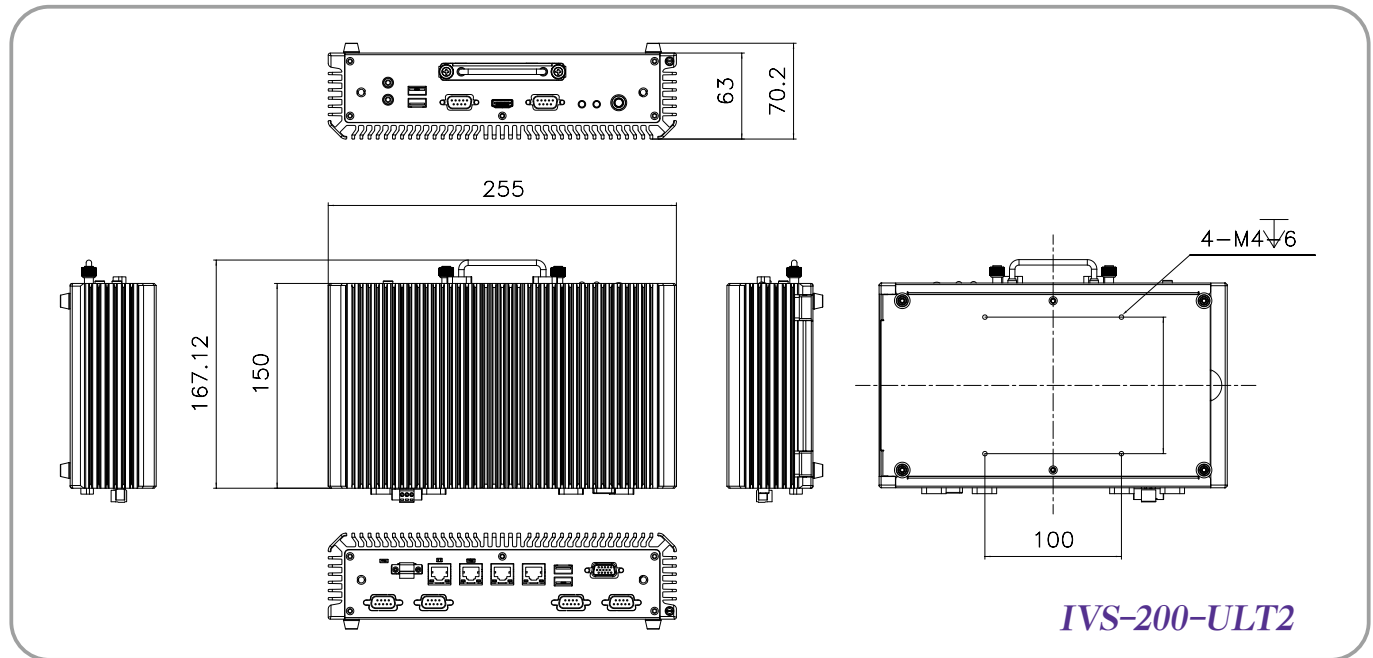
### Front view



### Rear view



### Dimensions (Unit: mm)



### Ordering Information

| Part No.               | Description   |
|------------------------|---|
| IVS-200-ULT2-i5/4G-R11 | Fanless system with Intel® Core™ i5-5350U CPU, up to 2.9 GHz, TDP 15W, four GbE LAN ports, one HDMI, one VGA, two RS-232/422/485, one 2.5" removable SATA HDD bay, 4 GB memory pre-installed, 9 V~36 V DC, RoHS |
| IVS-200-ULT2-C/4G-R11  | Fanless system with Intel® Celeron® 3765U 1.7 GHz CPU, TDP 15W, four GbE LAN ports, one HDMI, one VGA, two RS-232/422/485, one 2.5" removable SATA HDD bay, 4 GB memory pre-installed, 9 V~36 V DC, RoHS        |

### Options

| Item         | Part No.                 | Description   |
|--------------|--------------------------|---|
| OS           | IVS-200-ULT2-WES7E64-R10 | OS image with Windows® Embedded Standard 7 E 64-bit for IVS-200-ULT2, DVD-ROM, RoHS   |
| Serial cable | 32205-005400-100-RS      | RS-232 cable, 150 mm, 2x5 pin   |
| DIO cable    | 32231-000100-200-RS      | DIO cable, 150 mm, 2x5 pin  |
| Wireless kit | EMB-WIFI-KIT01-R20       | 1T1R wifi module kit for embedded system, IEEE802.11a/b/g/n/ac WiFi with Bluetooth 4.0/3.0+HS, 1 x wifi module, 2 x 250mm RF cable, 2 x Antenna, RoHS |

### Packing List

| Item           | Part No.           | Qty | Description        |
|----------------|--------------------|-----|--------------------|
| Screw pack     | 44013-030041-RS    | 4   | Screw pack         |
|                | 44005-030083-RS    | 4   | Screw pack         |
| Wall mount kit | 41020-0433C2-00-RS | 2   | Wall mount bracket |

# IVS-110-AL

## Vehicle Fleet Management System



### Features

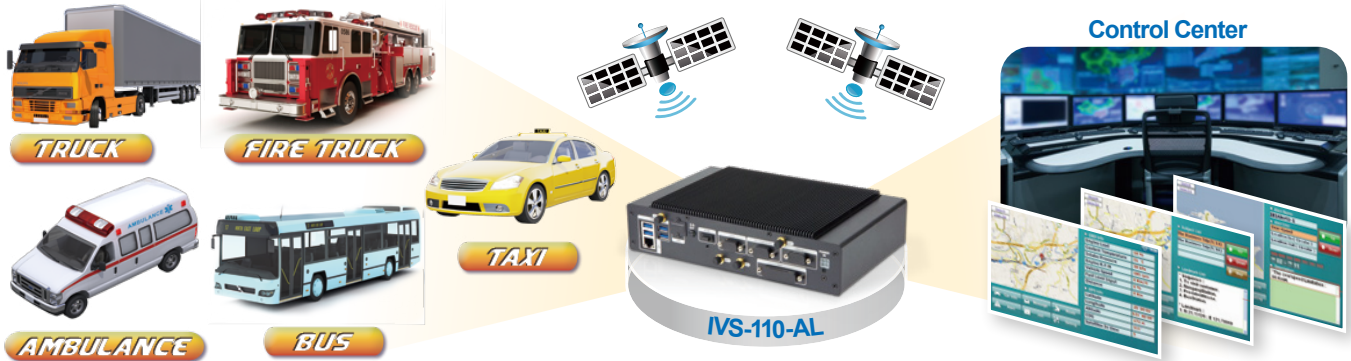
- Intel® Apollo Lake processor
- Dual SIM slot
- 16 x DI/DO
- 1 x HDMI (lockable), 1 x VGA
- Built-in GPS function
- E-Mark certification
- Built-in OBD-II/J1939
- IP4X protection



### Specifications

| Model          | IVS-110-AL                   |  |
|----------------|------------------------------|--|
| Chassis        | Color                        | Black  |
|                | Dimensions (WxDxH) (mm)      | 261 x 170 x 60   |
|                | System Fan                   | Fanless  |
|                | Chassis Construction         | Extruded aluminum alloy  |
| Motherboard    | CPU                          | Intel® Atom™ x7-E3950 1.6 GHz (up to 2.0 GHz, quad-core, TDP 12W)  |
|                | Chipset                      | SoC  |
|                | System Memory                | 1 x SO-DIMM DDR3L 1600/1866 (4GB pre-installed)(up to 8GB)   |
| Storage        | Hard Drive                   | 1 x 2.5" SATA 6Gb/s HDD/SSD bay  |
|                | eMMC                         | 1 x eMMC5.0 (optional)   |
| Communication  | WLAN                         | 802.11 a/b/g/n/ac (optional)   |
|                | Bluetooth                    | BT 4.0/3.0+HS (optional)   |
|                | WWAN                         | WCDMA/HSDPA/HSUPA (optional)   |
|                | GPS                          | On-board GPS   |
| I/O Interfaces | USB                          | 4 x USB 3.2 Gen1   |
|                | Ethernet                     | 1 x RJ-45:<br>1 x GbE by Intel® I210   |
|                | COM Port                     | 1 x RS232/422/485 with AFC (DB9)   |
|                | Digital I/O                  | 16-bit Digital I/O (8-in/ 8-out)   |
|                | OBD-II                       | 1 x OBD-II/J1939 (DB9)   |
|                | Display                      | 1 x HDMI (up to 3840 x 2160@30Hz)<br>1 x VGA (up to 1920 x 1600@60Hz)  |
|                | Audio                        | 1 x Line-out   |
|                | Antenna                      | 1 x 3G, 1 x GPS, 1 x BT, 1 x Wi-Fi   |
|                | Other                        | 1 x Power Button, 1 x LED for HDD, 1 x LED for Wi-Fi, 2 x LED for SIM  |
| Expansions     | PCIe Mini                    | 1 x Full/Half-size with SIM card slot (PCIe/USB 2.0)<br>1 x Full/Half-size with SIM card slot (PCIe/USB 2.0)<br>1 x Half-size (PCIe/USB 2.0) |
| Power          | Power Input                  | Cigarette lighter power cable: 9 ~ 36V DC  |
|                | Power Consumption            | 12V @ 5A<br>(Intel® x7-E3950 with 8GB memory)  |
| Reliability    | Mounting                     | Wall-mount/ VESA 100   |
|                | Operating Temperature        | -30 ~ 70°C with air flow (SSD), 10% ~ 95% non-condensing   |
|                | Storage Temperature          | -40 ~ 80°C with air flow (SSD), 10% ~ 95% non-condensing   |
|                | Operating Shock              | Half-sine wave shock 5G, 11ms, 100 shocks per axis (SSD)   |
|                | Operating Vibration          | MIL-STD-810F 514.5C-2 (SSD)  |
|                | Weight (Net/Gross)           | 2.4KG/ 3.8KG   |
|                | Safety/EMC                   | CE/ FCC/ E-Mark  |
|                | IP Rating                    | IP 4X compliant  |
| Watchdog Timer | Programmable 1 ~ 255 sec/min |  |
| OS             | Supported OS                 | Microsoft® Windows 10  |

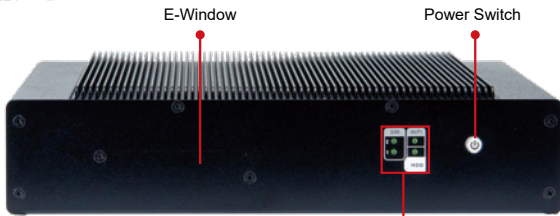
## Fleet Management Tracking System



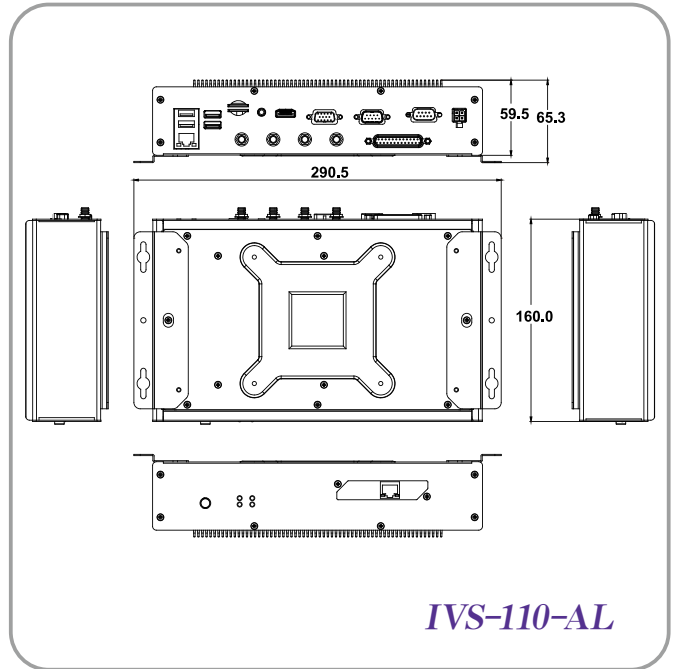
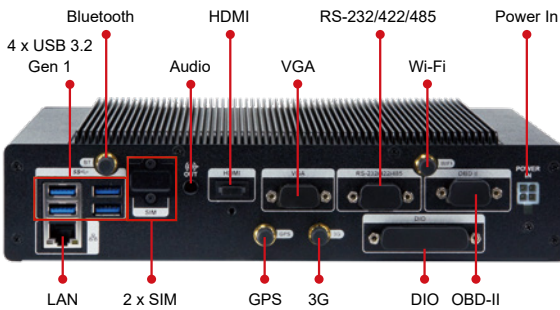
### Fully Integrated I/O

### Dimensions (Unit: mm)

#### Front view



#### Side view



IVS-110-AL

### Ordering Information

| Part No.             | Description  |
|----------------------|--|
| IVS-110-AL-E3/4G-R10 | Fanless embedded system with Intel® Atom™ x7-E3950 (12W) Processor with 4GB DDR3L pre-installed memory, on-board GPS, HDMI, VGA, one GbE LAN, one 2.5" SATA HDD bay, two SIM slots, RoHS |

### Options

| Item                          | Part No.            | Description   |
|-------------------------------|---------------------|---|
| GPS/LTE antenna               | 32506-000400-100-RS | Integration Antenna, Magnetic Antenna Base+GPS/4G LTE ANTENNA, RG 174, 5000MM, AU-4S-LTE, GPS Gain:27dB, LTE, Gain:0dBi, 50Ω, SANAV, 1575.42MHz/704-960MHz/1710-2766MHz, VSWR ≤ 2.0, SMA PLUG, REVERSE SMA PLUG, RoHS |
| Power adapter                 | IVIPOWER-4PIN-R20   | Power adapter with 4-pin transfer cable, RoHS   |
| OBD-II cable                  | 32025-003400-100-RS | Round cable, OBD-II cable, 2000 mm, 24 AWG, (A) OBD-II 16P male, (B) D-sub 9P female, one piece package with label, RoHS  |
| Cigarette lighter power cable | 32002-004000-100-RS | Round cable, power cable, car cigarette lighter cable, 2000 mm, 18 AWG, (A) cigarette lighter (5 A 250 V)+ ψ3 green LED, (B) MOLEX 5557-0400 P=4.2, SHANGHAI YING YU, RoHS  |
| ACC power cable               | 32002-001900-100-RS | Round cable, power cable, 3000 mm, 16 AWG, (A) MOLEX 5557-04P P=4.2, SHANGHAI YING YU, RoHS   |

### Packing List

| Item           | Part No.            | Qty | Description   |
|----------------|---------------------|-----|---|
| Screw pack     | 44005-030083-RS     | 4   | Screw pack  |
|                | 42005-000603-RS     | 4   | Screw pack  |
|                | 44003-030052-RS     | 4   | Screw pack  |
|                | 44045-020031-RS     | 5   | Screw pack  |
| SATA cable     | 32801-003608-100-RS | 1   | Sata cable, 3, 150mm/150mm, 26AWG, SATA 7+15P female 180°, SATA 7P female 90°+lock, JST PHR-2 P=2.0, One pcs PKG W/ label, RoHS |
| Wall mount kit | 41020-0482C2-00-RS  | 2   | Wall mount bracket  |

### E-Window (for ATO assembly) E-Window

| Part No.               | Description   |
|------------------------|---|
| E-MPCIE-LAN-R10        | PCIe Mini card supports 1-port GbE with Realtek RTL8111E controller, with PMS 194C I/O bracket and 250mm cable, R10 |
| E-MPCIE-DLAN-R10       | PCIe Mini card supports 2-port GbE with Intel I211 controller, with PMS 194C I/O bracket and 250mm cable, R10       |
| E-MPCIE-UART-KIT02-R10 | PCI Express Mini supports Dual RS-232/422/485, 16-bit GPIO module, full-size, RoHS                                  |



# FLEX System



| Model Name     |                         | FLEX-BX210-Q470  |
|----------------|-------------------------|--|
| Chassis        | Color                   | Black  |
|                | Dimensions (WxDxH) (mm) | 357 x 230 x 88   |
|                | System Fan              | System Fan x3, CPU Cooler x1   |
|                | Chassis Construction    | Metal Housing  |
| Motherboard    | CPU                     | 10 <sup>th</sup> /11 <sup>th</sup> Generation Intel® Core™ processor (65W TDP up to 125W)<br>Intel® Core™ i3-10320 3.8 GHz (up to 4.6 GHz, quad-core, 65W TDP)<br>Intel® Core™ i5-10500TE 2.3 GHz (up to 3.7 GHz, 6-core, 35W TDP)<br>Intel® Core™ i7-10700TE 2.0 GHz (up to 4.4 GHz, 8-core, 35W TDP) |
|                | Chipset                 | Q470/Q470E   |
|                | System Memory           | 2 x 288-pin 2933/2666 MHz dual-channel DDR4 unbuffered DIMM supporting up to 64GB  |
| Storage        | Hard Drive              | 4 x 2.5" SATA 6Gb/s HDD/SSD bay  |
| I/O Interfaces | USB                     | 6 x USB 3.2 Gen.1  |
|                | Ethernet                | 3 x RJ-45:<br>1 x GbE by Intel® I225LM<br>2 x GbE by Intel® I225V  |
|                | COM Port                | 2 x RS-232   |
|                | Display                 | 1 x HDMI (up to 3840 x 2160@30Hz)<br>1 x DP (up to 4096 x 2304@60Hz)   |
|                | Audio                   | 1 x Line-out, 1 x Mic-in   |
|                | Wireless                | 1 x 802.11a/b/g/n/ac (optional)  |
|                | TPM                     | Intel PTT from CPU   |
|                | Other                   | 1 x Power switch w/LED<br>1 x AT/ATX switch<br>1 x Reset button<br>1 x HDD LED   |
| Power          | M.2                     | 1 x M.2 A-Key (2230 for Wi-Fi) Optional<br>1 x M.2 B-Key 3042/52 socket (with SIM card slot, supporting 5G/LTE; supports PCIe 3.0 x1 & USB 3.2 Gen 1)<br>1 x M.2 M-Key 2280 socket (supports PCIe 3.0 x4)  |
|                | Backplane               | 2 x PCIe 3.0 x8 (x16 Slot)<br>2 x PCIe 3.0 x4  |
|                | Power Input             | 100 ~ 240V AC  |
| Reliability    | Power Consumption       | 100 ~ 240V AC @ 6 ~ 3A   |
|                | Mounting                | Wall mount / Rack mount  |
|                | Operating Temperature   | -10°C ~ 50°C (with air flow), 10% ~ 95% (non-condensing)   |
|                | Storage Temperature     | -20°C ~ 60°C, 10% ~ 95% (non-condensing)   |
|                | Operating Shock         | Half-sine wave shock 5G, 11ms, 100 shocks per axis (SSD)   |
|                | Operating Vibration     | MIL-STD-810G 514.6C-1 (SSD)  |
|                | Weight (Net/Gross)      | 4.1KG/7.2KG  |
|                | Safety/EMC              | CE/ FCC  |
| OS             | Watchdog Timer          | Programmable 1 ~ 255 sec/min   |
|                | Supported OS            | Microsoft® Windows 10 / 11, Linux  |

# FLEX-BX210-Q470

■ 2U Modular PC with 10/11<sup>th</sup> Generation LGA1200 Intel® Core™ i7/i5/i3, Pentium® Processor



## Features

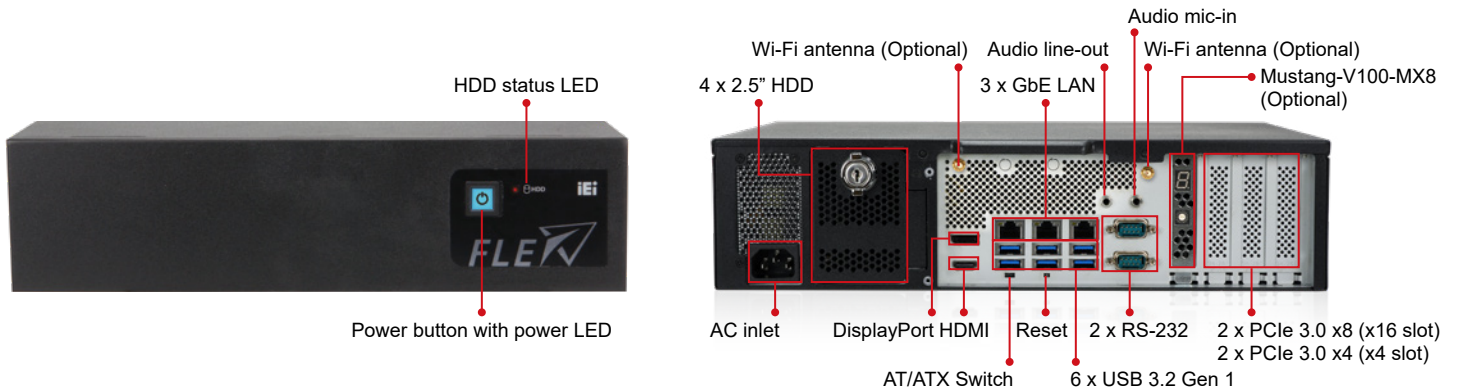
- Supported CPUs:
  - Intel® Core™ i3-10320 3.8 GHz (up to 4.6 GHz, quad-core, 65W TDP)
  - Intel® Core™ i5-10500TE 2.3 GHz (up to 3.7 GHz, 6-core, 35W TDP)
  - Intel® Core™ i7-10700TE 2.0 GHz (up to 4.4 GHz, 8-core, 35W TDP)
- Four hot-swappable HDD/SSD bays with RAID 0/1/5/10 support
- Equipped with PCIe 3.0 x4 slots and PCIe 3.0 x8 slots
- M.2 2280 PCIe Gen 3 x4 supporting NVMe
- Support IEI Mustang accelerator cards



## Specifications

| Model Name              |                         | FLEX-BX210-Q470  |
|-------------------------|-------------------------|--|
| System                  | CPU                     | 10 <sup>th</sup> /11 <sup>th</sup> Generation Intel® Core™ processor (65W TDP up to 125W)<br>Intel® Core™ i3-10320 3.8 GHz (up to 4.6 GHz, quad-core, 65W TDP)<br>Intel® Core™ i5-10500TE 2.3 GHz (up to 3.7 GHz, 6-core, 35W TDP)<br>Intel® Core™ i7-10700TE 2.0 GHz (up to 4.4 GHz, 8-core, 35W TDP) |
|                         | Chipset                 | Q470/Q470E   |
|                         | Memory                  | 2 x 288-pin 2933/2666 MHz dual-channel DDR4 unbuffered DIMM supporting up to 64GB  |
|                         | Graphics Engine         | Intel® HD Graphics Gen 9 Engines with Low power 16 execution unit, supports DX2015, OpenGL 5.X and OpenCL2.x, ES 2.0   |
|                         | Ethernet                | LAN1: Intel® I225LM<br>LAN2/LAN3: Intel® I225V   |
|                         | Storage                 | 4 hot-swappable 2.5" HDD/SSD SATA 6Gb/s bays (support RAID 0/1/5/10), with LED indicators<br>1 x NGFF M.2 (2280) M Key slot (supports NVMe SSD)  |
| Wireless Communication  | WLAN                    | 802.11ac, 2.4/5 GHz (by M.2 2230 optional)   |
|                         | Bluetooth               | Bluetooth v5.1 (optional)  |
|                         | WWAN and GNSS           | M.23052 LTE (by M.2 3052 optional)   |
| I/O Interface & Buttons | I/O Interface & Buttons | 1 x DP<br>1 x HDMI<br>3 x 2.5GbE LAN<br>6 x USB 3.2 Gen 1 Type-A<br>2 x RS-232 DB-9<br>1 x Mic in<br>1 x Line out<br>1 x AC inlet<br>4 x SMA<br>Power button with power LED (power on = blue)<br>AT/ATX mode switch<br>Reset button  |
|                         | TPM                     | Intel PTT from CPU   |
| Expansions              | Expansion Slots         | 2 x PCIe 3.0 x8<br>2 x PCIe 3.0 x4<br>1 x M.2 B-Key 3042/52 socket<br>(with SIM card slot, supporting 5G/LTE; supports PCIe 3.0 x1 & USB 3.2 Gen 1)<br>1 x M.2 M-Key 2280 socket (supports PCIe 3.0 x4)  |
| Thermal                 | Thermal Solution        | 3 x System fan, 1 x CPU fan  |
| Power                   | Power Supply            | ATX power supply, AC input<br>- 350W power input<br>- Input: 90VAC ~ 264VAC, 50/60Hz<br>- Output (max.): 3.3V@14A, 5V@16A, 12V@29A, -12V@0.3A  |
| Watchdog Timer          |                         | Software programmable 1 ~ 255 sec/min, system reset  |
| Construction            | Chassis Construction    | Metal  |
|                         | Mounting                | Wall mount / Rack mount  |
|                         | Color                   | Black  |
|                         | Dimensions (LxWxH) (mm) | 357 x 230 x 88   |
|                         | Weight                  | 4.1 kg/7.2 kg  |
| Environmental           | Operating Temperature   | -10°C ~ 50°C   |
|                         | Storage Temperature     | -20°C ~ 60°C   |
|                         | Operating Humidity      | 5% ~ 95%, non-condensing   |
|                         | Operating Vibration     | 5~17Hz, 0.1 double amplitude displacement 17 ~ 640Hz 1.5G acceleration peak to peak  |
|                         | Operating Shock         | 10G acceleration part to part (11ms)   |
|                         | Safety/EMC              | CE/FCC   |

Fully Integrated I/O

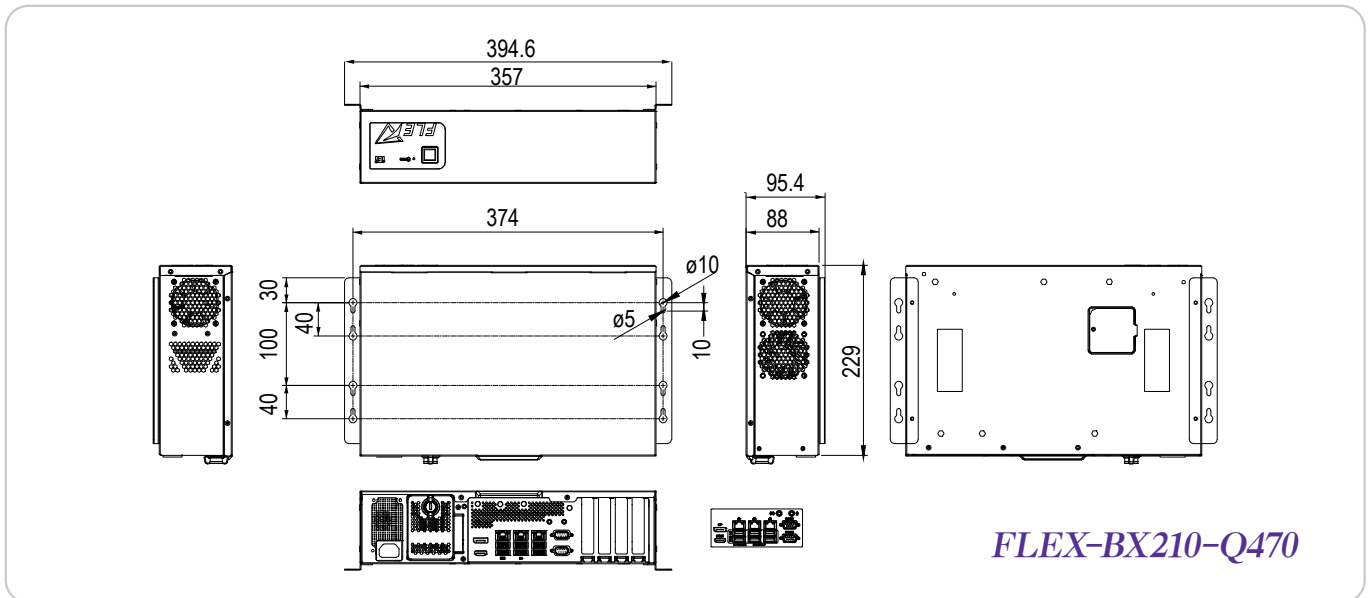


Four hot-swappable HDD/SSD bays with RAID 0/1/5/10 support



Four expansion slots:  
 • 2 x PCIe x4 slots  
 • 2 x PCIe x8 slots  
 • Support IEI Mustang gaccelerator cards

Dimensions (Unit: mm)



Ordering Information

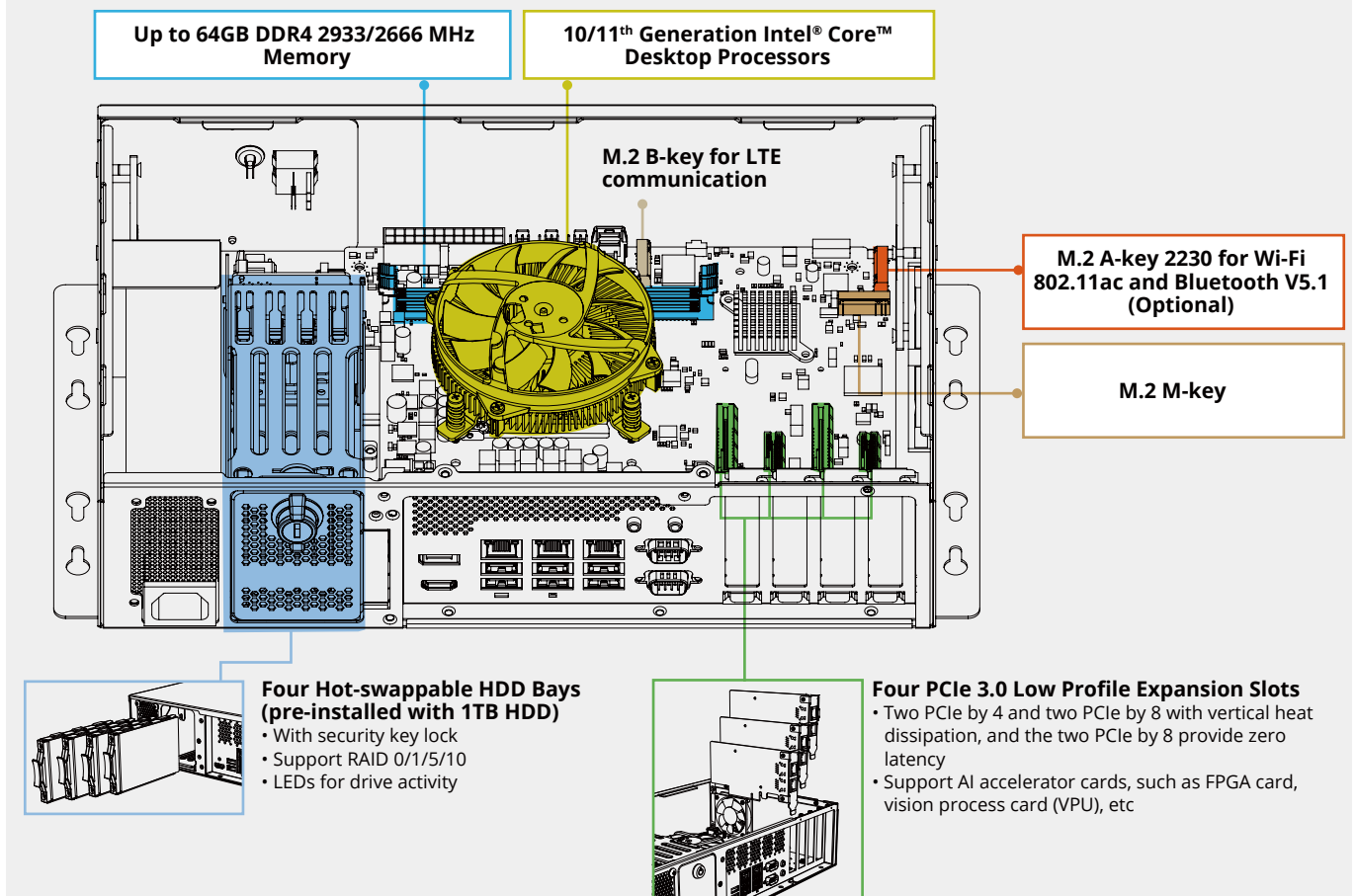
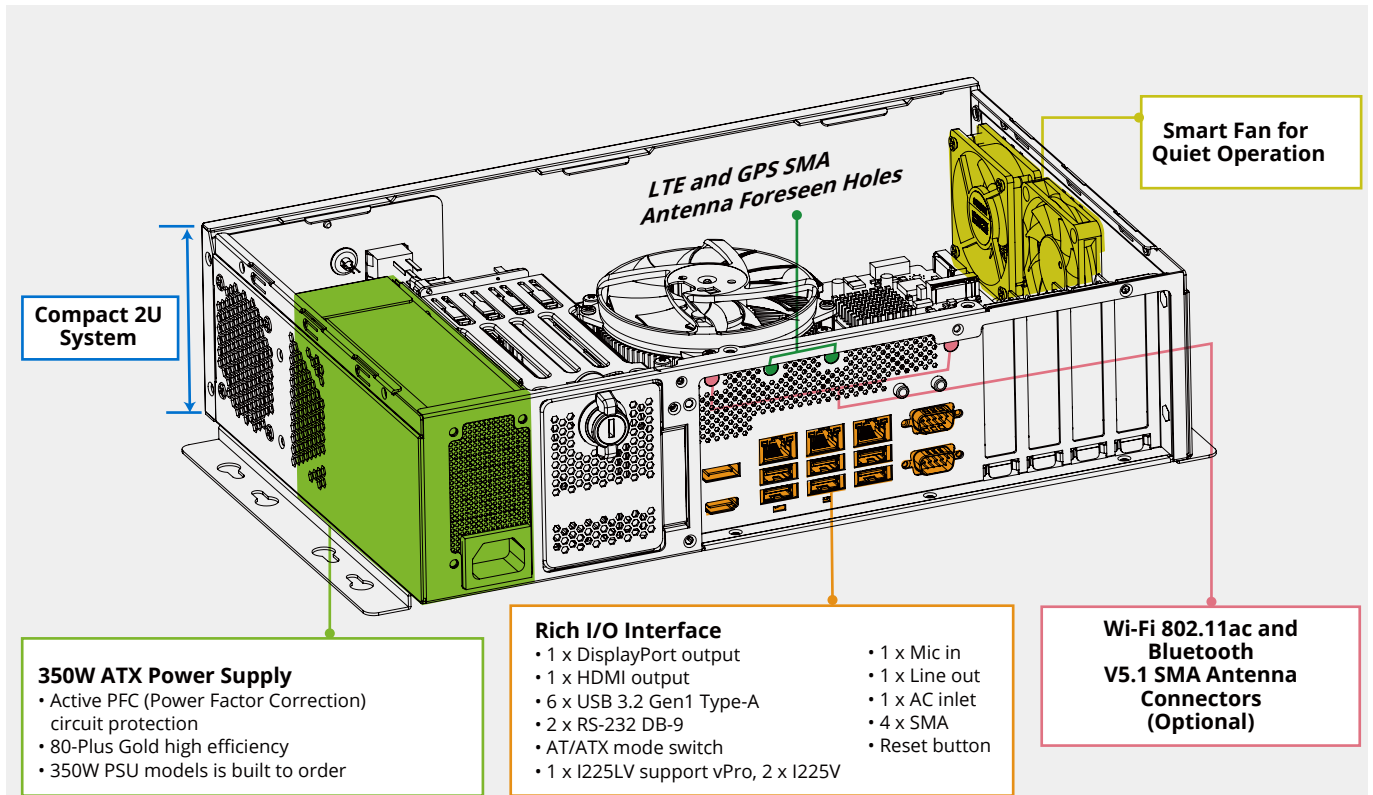
| Part No.                | Description   |
|-------------------------|---|
| FLEX-BX210-Q470-I3C-R20 | 2U Modular box PC, Intel® 10 <sup>th</sup> Generation Core™ i3-10320 3.8 GHz (up to 4.6 GHz, 4-core, TDP 65W), 8GB DDR4 pre-installed memory, 350W PSU, R20     |
| FLEX-BX210-Q470-I5C-R20 | 2U Modular box PC, Intel® 10 <sup>th</sup> Generation Core™ i5-10500TE 2.3 GHz (up to 3.7 GHz, 6-core, TDP 35W), 8GB DDR4 pre-installed memory, 350W PSU, R20   |
| FLEX-BX210-Q470-I9D-R20 | 2U Modular box PC, Intel® 10 <sup>th</sup> Generation Core™ i9-10900TE 1.8 GHz (up to 4.5 GHz, 10-core, TDP 35W), 16GB DDR4 pre-installed memory, 350W PSU, R20 |

Packing List

|                      |                |
|----------------------|----------------|
| 1 x Mounting bracket | 1 x Power cord |
|----------------------|----------------|



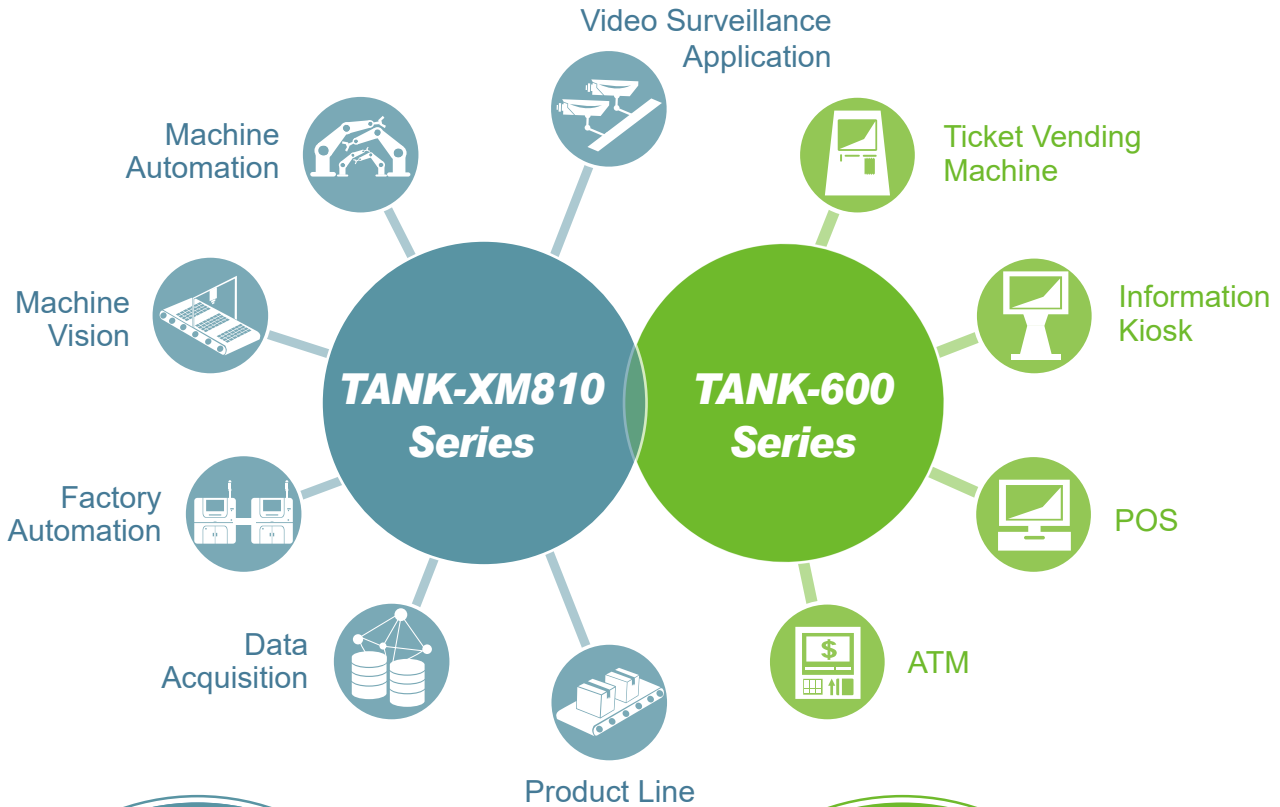
Hardware Features



# Industrial Automation Solution

IEI offers complete rugged fanless products with a wide range of I/O interfaces and multiple expansion, allowing users to connect to different devices for comprehensive automation solution. IEI's industrial automation solution provides a reliable platform to fulfill a wide variety of application demand, such as machine automation, surveillance application, and information kiosk. "TANK" is a model name for a series of IEI ruggedize embedded box products.

## Ruggedized Solution



### ■ TANK XM81 Series

#### Multiple Expansion Slot

- 2 x 2.5GbE ports
- Multiple USB ports and serial ports
- Wide range temperature
- Low power consumption



### ■ TANK-XM81/600 Series

#### Multiple Serial Port

- Multiple expansion slot
- Multiple internal expansion boards for flexible selection
- Support multiple types storage device

## TANK Series Selection Guide

The TANK series contains great coverage of the Intel® desktop, mobile and Atom® solutions. From high performance to low power consumption, IEI provides a vast series of specifications to fulfill the diverse demands of our customers.

|         | Platform                      | Model  |
|---------|-------------------------------|--|
| Desktop | Alder Lake-S                  | TANK-XM811-R680E                                 |
|         | Comet Lake                    | TANK-XM810-Q470                                  |
|         | Coffee Lake/<br>Coffee Lake-R | TANK-880-Q370                                    |
|         | Skylake/<br>Kaby Lake         | TANK-870-Q170<br>TANK-870e-H110<br>TANK-871-Q170 |

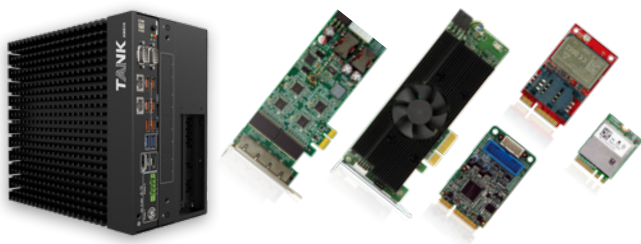
## A Variety of Applications

IEI TANK ruggedized embedded box series is ideal for applications that require remote control or multiple video outputs. Furthermore, with the IEI iRIS technology, the users can achieve Internet of Things (IoT) among different devices, such as panel PCs and single board computers.



### Multiple Expansion Slots

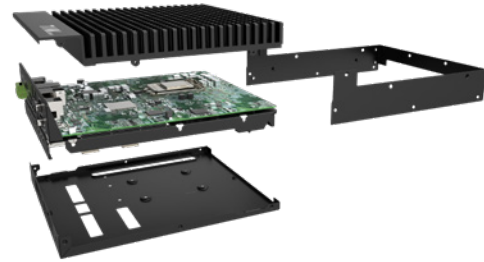
The TANK Series integrates multiple expansion such as PCIe/PCI slots and PCIe Mini / M.2 card slots. Users could install the card they need such as graphics card, capture card, I/O card, PoE card or AI accelerator card to enhance system function and performance, and it allows system to be customized, upgraded and repaired for faster time to market.



## Key Features

### Modular Design, Easy to Install

The mainboard is secured to the support bracket to prevent PCB from bending or warping. The three-layer structure consisting of heat spreader, mainboard and baseboard makes it easier to install CPU, memory and HDD, compared with the former TANK series.



### Flexible Expansion

Different expansion requirements can be met. Dual-slot and four-slot SKUs are provided for selection. Customers can choose the type of expansion slot according to their needs.



### Support High-performance Graphics Card

With IEI power board, it can support 3060 and other advanced graphics cards.

Maximum length of graphics card supported: 350mm

\*Specified power adapter is required.

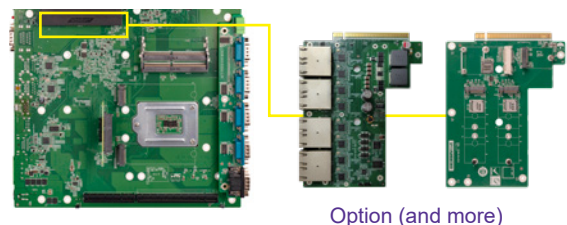
### NVIDIA 3060

\*Support advanced graphics card



### Modular Board Design

It supports various optional modules, such as M.2 expansion card, 8-port PoE expansion card, etc.



Option (and more)

### Support 35W & 65W CPU

IEI TANK series has been CE and FCC certified, which proves that we give top priority to quality control and inspection of all our products.

| Operating temperature:                               |              |
|--|--------------|
| With 35w CPU:<br>(or 65W CPU PL1 & PL2, default 35W) | -20°C ~ 60°C |
| With 65w CPU:  | -20°C ~ 50°C |

# Industrial Automation System



| Model Name     |                          | TANK-XM811  | TANK-XM810   | TANK-880-Q370   |
|----------------|--------------------------|---|--|---|
| Chassis        | Color                    | Black C   | Black C  | Black C + Silver  |
|                | Dimensions (WxDxH) (mm)  | 230.6 x 256.04 x 76.2   | 230.6 x 256.04 x 76.2  | 169 x 255.2 x 225   |
|                | System Fan               | Fanless   | Fanless  | Fanless   |
|                | Chassis Construction     | Extruded aluminum alloys  | Extruded aluminum alloys   | Extruded aluminum alloys  |
| Motherboard    | CPU                      | 12 <sup>th</sup> Gen Intel® Core™ CPU 35/65W<br>Intel® Core™ i5-12500TE 1.9 GHz (up to 4.3 GHz, 6-core, 35W TDP)<br>Intel® Core™ i7-12700TE 1.4 GHz (up to 4.6 GHz, 12-core, 35W TDP) | 10/11 <sup>th</sup> Gen Intel® Core™ CPU 35/65W<br>Intel® Core™ i3-10320 3.8 GHz (up to 4.6 GHz, quad-core, 65W TDP)<br>Intel® Core™ i5-10500TE 2.3 GHz (up to 3.7 GHz, 6-core, 35W TDP)<br>Intel® Core™ i7-10700TE 2.0 GHz (up to 4.4 GHz, 8-core, 35W TDP) | 8 <sup>th</sup> Gen Intel® Core™ CPU & Intel® Core™ i7-9700TE 1.8 GHz (up to 3.8 GHz, 8-core, TDP 35W)<br>Intel® Core™ i5-9500TE 2.2 GHz (up to 3.6 GHz, 6-core, TDP 35W) |
|                | Chipset                  | R680E   | Q470/Q470E   | Intel® Q370   |
|                | System Memory            | 2 x SO-DIMM DDR4 3200 MHz (8GB pre-installed) (up to 64GB)  | 2 x SO-DIMM DDR4 2933 MHz (up to 64GB)   | 2 x SO-DIMM DDR4 2666/ 2400 MHz (8GB pre-installed) (up to 64GB)  |
| IPMI           | iRIS Solution            | N/A   | N/A  | N/A   |
| Storage        | Hard Drive               | 1 x 2.5" SATA 6Gb/s HDD/SSD bay   | 1 x 2.5" SATA 6Gb/s HDD/SSD bay  | 4 x 2.5" SATA 6Gb/s HDD/SSD bay (RAID 0/1/5/10 support)   |
| I/O Interfaces | USB                      | 8 x USB 3.2 Gen 2 (10Gb/s)  | 6 x USB 3.2 Gen 2 (10Gb/s)<br>2 x USB 2.0  | 6 x USB 3.2 Gen 1   |
|                | Ethernet                 | 2 x RJ-45<br>2 x I225V 2.5GbE (colay I225LM)  | 2 x RJ-45<br>2 x I225V 2.5GbE (colay I225LM)   | 3 x RJ-45:<br>1 x GbE by Intel® I219<br>2 x GbE by Intel® I210  |
|                | COM Port                 | 2 x RS-232/422/485, 4 x RS-232  | 2 x RS-232/422/485, 4 x RS-232   | 3 x RS-232/422/485 with AFC (DB-9 with 2.5kV isolation)   |
|                | Digital I/O              | 12-bit Digital I/O (6-in/6-out) DB15  | 12-bit Digital I/O (6-in/6-out) DB15   | 8-bit Digital I/O (4-in/ 4-out)   |
|                | Display                  | 1 x DP++<br>1 x HDMI  | 1 x DP++<br>1 x HDMI   | 1 x HDMI (up to 3840x2160@30Hz)<br>1 x DP (up to 4096x2304@60Hz)  |
|                | Audio                    | N/A   | N/A  | 1 x Line-out, 1 x Mic-in  |
|                | Wireless                 | 1 x 802.11a/b/g/n/ac (optional)   | 1 x 802.11a/b/g/n/ac (optional)  | 1 x 802.11a/b/g/n/ac (optional)   |
|                | TPM                      | Support Intel® PTT function   | Support Intel® PTT function  | 1 x TPM 2.0 (2 x 10 pin) (optional)   |
| Expansions     | PCIe Mini                | Optional  | Optional   | 1 x Full-size (PCIe/ USB 2.0/ SATA)   |
|                | M.2                      | 1 x 2280 M-key (PCIe x4)<br>1 x 2230 A-key (USB+PCIe x1, supports vPRO)   | 2 x 2280 M-key (PCIe x2)   | 1 x 2230 A-key (PCIe x2/USB 2.0)<br>2 x 2280 M-key (PCIe x2)  |
|                | Backplane                | Optional  | Optional   | 1 x PCIe x16<br>1 x PCIe x1<br>2 x PCIe x4  |
| Power          | Power Input              | 12 ~ 28V DC   | 12 ~ 28V DC  | DC Jack: 9 ~ 36V DC<br>Terminal Block: 9 ~ 36V DC   |
|                | Power Consumption        | 12V @ 8.8A<br>(Intel® Core™ i9-12900TE with 16GB memory)  | 12V @ 8A<br>(Intel® Core™ i9-10900TE with 8GB memory)  | 19V@3.6A<br>(Intel® Core™ i7-8700T with 8GB memory)   |
|                | Internal Power Connector | N/A   | N/A  | 12V@10A   |
| Reliability    | Mounting                 | Wall mount  | Wall mount   | Wall mount  |
|                | Operating Temperature    | -20°C ~ -60°C with air flow (SSD)<br>10% ~ 95% non-condensing   | -20°C ~ -60°C with air flow (SSD)<br>10% ~ 95% non-condensing  | -20°C ~ 60°C with air flow (SSD)<br>10% ~ 95% non-condensing  |
|                | Operating Shock          | Half-sine wave shock 5G, 11ms<br>100 shocks per axis (SSD)  | Half-sine wave shock 5G, 11ms<br>100 shocks per axis (SSD)   | Half-sine wave shock 5G, 11ms<br>100 shocks per axis (SSD)  |
|                | Operating Vibration      | MIL-STD-810G 514.6C-1 (with SSD)  | MIL-STD-810G 514.6C-1 (with SSD)   | MIL-STD-810G 514.6C-1 (SSD)   |
|                | Weight (Net/Gross)       | 3.33 kg/3.7 kg  | 3.2 kg/3.5 kg  | 5.4 kg/8.45 kg  |
|                | Safety/EMC               | CE/FCC  | CE/FCC   | CE/FCC  |
| OS             | Supported OS             | Windows 10 / Windows 11 IoT Enterprise/ Linux   | Windows 10 / Windows 11 IoT Enterprise/ Linux  | Microsoft Windows 10 / Windows 11 / Linux   |



# Industrial Automation System



| Model Name     |                          | TANK-871-Q170  | TANK-870-Q170   |
|----------------|--------------------------|--|---|
| Chassis        | Color                    | Black C + Silver   | Black C + Silver  |
|                | Dimensions (WxDxH) (mm)  | 82.2 x 255.2 x 204   | 2-slot: 121.5 x 255.2 x 205<br>4-slot: 154.8 x 255.2 x 205  |
|                | System Fan               | Fanless  | Fanless   |
|                | Chassis Construction     | Extruded aluminum alloys   | Extruded aluminum alloys  |
| Motherboard    | CPU                      | 7 <sup>th</sup> Gen Intel® Core™ CPU &<br>Intel® Core™ i7-6700TE 2.4 GHz (up to 3.4 GHz, quad-core, TDP 35)<br>Intel® Core™ i5-6500TE 2.3 GHz (up to 3.3 GHz, quad-core, TDP 35) |   |
|                | Chipset                  | Intel® Q170  | Intel® Q170   |
|                | System Memory            | 2 x SO-DIMM DDR4 2666<br>(4GB pre-installed) (up to 32GB)  | 2 x SO-DIMM DDR4 2666<br>(4GB pre-installed) (up to 32GB)   |
| IPMI           | iRIS Solution            | 1 x iRIS-2400 (optional)   | 1 x iRIS-2400 (optional)  |
| Storage        | Hard Drive               | 2 x 2.5" SATA 6Gb/s HDD/SSD bay (RAID 0/1 support)   | 2 x 2.5" SATA 6Gb/s HDD/SSD bay (RAID 0/1 support)  |
| I/O Interfaces | USB                      | 4 x USB 3.2 Gen 1<br>4 x USB 2.0   | 4 x USB 3.2 Gen 1<br>4 x USB 2.0  |
|                | Ethernet                 | 2 x RJ-45:<br>LAN1: GbE by Intel® I219LM<br>LAN2 (iRIS): GbE by Intel® I210  | 2 x RJ-45:<br>LAN1: GbE by Intel® I219LM<br>LAN2 (iRIS): GbE by Intel® I210   |
|                | COM Port                 | 2 x RS-232/422/485 with AFC (DB-9)<br>4 x RS-232 (2 x RJ-45, 2 x DB-9 with 2.5kV isolation)  | 2 x RS-232/422/485 with AFC (DB-9)<br>4 x RS-232 (2 x RJ-45, 2 x DB-9 with 2.5kV isolation)   |
|                | Digital I/O              | 8-bit Digital I/O (4-in/ 4-out)  | 8-bit Digital I/O (4-in/ 4-out)   |
|                | Display                  | 1 x VGA (up to 1920 x 1200@60Hz)<br>1 x HDMI/DP (up to 3840x2160@30Hz/4096x2304@60Hz)<br>1 x iDP (optional)  | 1 x VGA (up to 1920 x 1200@60Hz)<br>1 x HDMI/DP (up to 3840x2160@30Hz/4096x2304@60Hz)<br>1 x iDP (optional)   |
|                | Audio                    | 1 x Line-out, 1 x Mic-in   | 1 x Line-out, 1 x Mic-in  |
|                | Wireless                 | 1 x 802.11 a/b/g/n/ac (optional)   | 1 x 802.11 a/b/g/n/ac (optional)  |
|                | TPM                      | 1 x TPM 2.0 (2 x 10 pin) (optional)  | 1 x TPM 2.0 (2 x 10 pin) (optional)   |
| Expansions     | PCIe Mini                | 1 x Half-size (PCIe/ USB 2.0)<br>1 x Full-size (PCIe/ USB 2.0/ SATA)   | 1 x Half-size (PCIe/ USB 2.0)<br>1 x Full-size (PCIe/ USB 2.0/ SATA)  |
|                | M.2                      | N/A  | N/A   |
|                | Backplane                | N/A  | 2-slot model: 1 x PCIe x16, 1 x PCI<br>2-slot model: 2 x PCIe x8<br>4-slot model: 2 x PCIe x8, 2 x PCI, 1 x Full-size PCIe Mini (PCIe/USB 2.0) 4-slot model: 1 x PCIe x16, 3 x PCI, 1 x Full-size PCIe Mini (PCIe/ USB 2.0) |
| Power          | Power Input              | DC Jack: 9 ~ 36V DC<br>Terminal Block: 9 ~ 36V DC  | DC Jack: 9 ~ 36V DC<br>Terminal Block: 9 ~ 36V DC   |
|                | Power Consumption        | 19V@3.68 A<br>(Intel® Core™ i7-6700TE with 8 GB memory)  | 19V@3.68 A<br>(Intel® Core™ i7-6700TE with 8 GB memory)   |
|                | Internal Power Connector | 5V@3A or 12V@3A  | 5V@3A or 12V@3A   |
| Reliability    | Mounting                 | Wall mount   | Wall mount  |
|                | Operating Temperature    | i7-6700TE: -20°C ~ 45°C with air flow (SSD), 10% ~ 95% non-condensing<br>i5-6500TE: -20°C ~ 60°C with air flow (SSD), 10% ~ 95% non-condensing                                   | i7-6700TE: -20°C ~ 45°C with air flow (SSD), 10% ~ 95% non-condensing<br>i5-6500TE: -20°C ~ 60°C with air flow (SSD), 10% ~ 95% non-condensing  |
|                | Operating Shock          | Half-sine wave shock 5G, 11ms, 100 shocks per axis (SSD)   | Half-sine wave shock 5G, 11ms, 100 shocks per axis (SSD)  |
|                | Operating Vibration      | MIL-STD-810G 514.6 C-1 (SSD)   | MIL-STD-810G 514.6 C-1 (SSD)  |
|                | Weight (Net/Gross)       | 3.5 kg/4.5 kg  | 2-slot: 4.2 kg/6.3 kg<br>4-slot: 4.5 kg/6.5 kg  |
|                | Safety/EMC               | CE/FCC/KC  | CE/FCC/KC   |
| OS             | Supported OS             | Microsoft® Windows® 8 Embedded, Microsoft® Windows® Embedded Standard 7 E,<br>Microsoft® Windows® 10 IoT Enterprise  |   |

# Industrial Automation System



| Model Name     |                         | TANK-870e-H110  | TANK-610-BW  |
|----------------|-------------------------|---|--|
| Chassis        | Color                   | Dark silver purple + Silver   | Black C + Silver   |
|                | Dimensions (WxDxH) (mm) | 132.6 x 255.2 x 190   | 184 x 200.6 x 58.2   |
|                | System Fan              | Fanless   | Fanless  |
|                | Chassis Construction    | Extruded aluminum alloys  | Extruded aluminum alloys   |
| Motherboard    | CPU                     | 7 <sup>th</sup> Gen Intel® Core™ CPU & Intel® Core™ i7-6700TE 2.4 GHz (up to 3.4 GHz, quad-core, TDP 35)<br>Intel® Core™ i5-6500TE 2.3 GHz (up to 3.3 GHz, quad-core, TDP 35) | Intel® Celeron® N3160 1.6 GHz (up to 2.24 GHz, quad-core, TDP 6W)        |
|                | Chipset                 | Intel® H110   | SoC  |
|                | System Memory           | 2 x SO-DIMM DDR4 2666 (4GB pre-installed)(up to 32GB)   | 2 x DDR3L SO-DIMM (2GB pre-installed)(up to 8GB)                         |
| Storage        | Hard Drive              | 2 x 2.5" SATA 6Gb/s HDD/SSD bay   | 1 x 2.5" SATA 6Gb/s HDD/SSD Bay  |
| I/O Interfaces | USB                     | 4 x USB 3.2 Gen1  | 4 x USB 3.2 Gen1   |
|                | Ethernet                | 2 x RJ-45:<br>2 x GbE by RTL8111G   | 2 x RJ-45:<br>2 x GbE by Intel® I210                                     |
|                | COM Port                | 2 x RS-232/422/485 with AFC (DB-9 with 2.5kV isolation)   | 2 x RS-232/422/485 with AFC<br>6 x RS-232                                |
|                | Digital I/O             | N/A   | N/A  |
|                | Display                 | 1 x VGA (up to 1920 x 1200@60Hz)<br>1 x HDMI (up to 3840 x 2160@30Hz)   | 1 x VGA (up to 1920 x 1200@60Hz)<br>1 x HDMI (up to 3840 x 2160@30Hz)    |
|                | Audio                   | 1 x Line-out, 1 x Mic-in  | 1 x Line-out, 1 x Mic-in   |
|                | Wireless                | 1 x 802.11a/b/g/n/ac (optional)   | 1 x 802.11a/b/g/n/ac (optional)  |
|                | TPM                     | N/A   | N/A  |
| Expansions     | PCIe Mini               | 1 x Full-size (PCIe/ USB 2.0)<br>1 x Full-size (PCIe/ USB 2.0/ SATA)  | 1 x Half-size (PCIe/USB 2.0)<br>1 x Full-size (PCIe/SATA)                |
|                | M.2                     | N/A   | N/A  |
|                | Backplane               | 3A: 1 x PCIe x16, 2 x PCI<br>3B: 1 x PCIe x16, 1 x PCIe x4, 1 x PCI<br>3C: 3 x PCI  | N/A  |
| Power          | Power Input             | DC Jack: 9 ~ 36V DC<br>Terminal Block: 9 ~ 36V DC   | DC Jack: 9 ~ 36V DC<br>Terminal Block: 9 ~ 36V DC                        |
|                | Power Consumption       | 19V@3.44A<br>(Intel® Core™ i7-6700TE with 8GB memory)   | 12V@1.49A<br>(Intel® Celeron® N3160 with 4GB DDR3L memory)               |
| Reliability    | Mounting                | Wall mount & Din Rail   | Wall mount, VESA 100   |
|                | Operating Temperature   | -20°C ~ 50°C with air flow (SSD), 10% ~ 95% non-condensing  | -40°C ~ 60°C with air flow(SSD), 10% ~ 95% non-condensing                |
|                | Operating Shock         | Half-sine wave shock 5G, 11ms, 100 shocks per axis (SSD)  | Half-sine wave shock 5G, 11ms, 100 shocks per axis (SSD)                 |
|                | Operating Vibration     | MIL-STD-810G 514.6C-1 (SSD)   | MIL-STD-810G 514.6C-1 (SSD)  |
|                | Weight (Net/Gross)      | 2.8 kg/4.3 kg   | 2.2 kg/3 kg  |
|                | Safety/EMC              | CE/FCC/KC   | CE/FCC/KC  |
| OS             | Supported OS            | Microsoft® Windows® 8 Embedded, Microsoft® Windows® Embedded Standard 7 E, Microsoft® Windows® 10 IoT Enterprise  | Microsoft® Windows 8 Embedded, Microsoft® Windows® Embedded Standard 7 E |

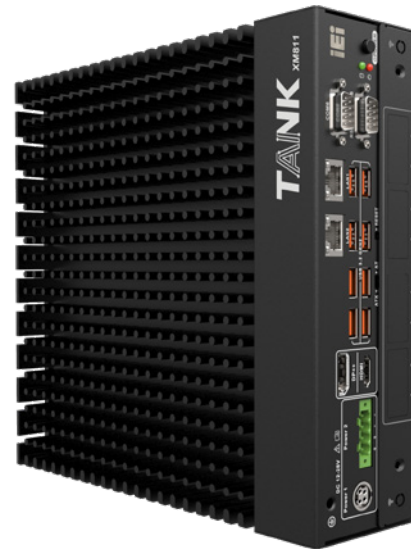
# TANK-XM811

- High-Performance 12<sup>th</sup> Generation Intel® Core™ Processor
- Fanless Embedded Computer

**Preliminary**

## Features

- Supported CPUs:
  - Intel® Core™ i5-12500TE 1.9 GHz (up to 4.3 GHz, 6-core, 35W TDP)
  - Intel® Core™ i7-12700TE 1.4 GHz (up to 4.6 GHz, 12-core, 35W TDP)
- 2 x 2.5G Ethernet ports
- Multiple USB ports and serial ports
- Multiple internal expansion boards for flexible selection
- Various optional backplanes and chassis
- CE/FCC compliant

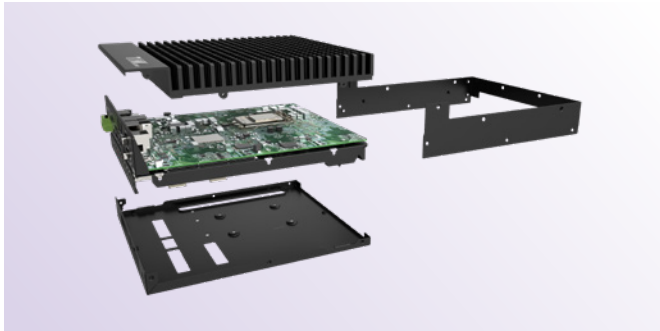


## Specifications

| Model Name          |                              | TANK-XM811  |
|---------------------|------------------------------|---|
| Chassis             | Color                        | Black C   |
|                     | Dimensions (WxDxH) (mm)      | 230.6 x 256.04 x 76.2   |
|                     | System Fan                   | Fanless   |
|                     | Chassis Construction         | Extruded aluminum alloys  |
| Motherboard         | CPU                          | 12 <sup>th</sup> Gen Intel® Core™ CPU 35/65W TDP<br>Intel® Core™ i5-12500TE 1.9 GHz (up to 4.3 GHz, 6-core, 35W TDP)<br>Intel® Core™ i7-12700TE 1.4 GHz (up to 4.6 GHz, 12-core, 35W TDP) |
|                     | Chipset                      | R680E   |
|                     | Memory                       | 2 x SO-DIMM DDR4 3200 (8GB pre-installed) (up to 64GB)  |
| Storage             | HDD Bay                      | 1 x 2.5" SATA 6Gb/s HDD/SSD bay   |
| I/O Interfaces      | Ethernet                     | 2 x RJ-45, 2 x I225V 2.5GbE (colay I225LM)  |
|                     | USB 3.2 Gen 2 (10Gb/s)       | 8   |
|                     | COM                          | 2 x RS-232/422/485, 4 x RS-232  |
|                     | Digital I/O                  | 12-bit (6-in/6-out) DB15  |
|                     | Display Interface            | 1 x DP++, 1 x HDMI  |
| Internal Expansions | M.2                          | 1 x 2280 M-key (PCIe x4)<br>1 x 2230 A-key (USB+PCIe x1, supports vPRO)   |
|                     | Expansion Backplane          | Optional  |
| Power               | Power Input                  | 12 ~ 28V DC   |
|                     | Remote Power                 | 1 x 2-pin   |
|                     | Power Consumption            | 12V @ 8.8A (Intel® Core™ i9-12900TE with 16GB memory)   |
| Reliability         | Mounting                     | Wall mount  |
|                     | Operating Temperature        | -20°C ~ 60°C with air flow (CPU TDP35W &SSD)<br>-20°C ~ 50°C with air flow (CPU TDP65W &SSD), 10% ~ 95% non-condensing  |
|                     | Storage Temperature          | -40°C ~ 85°C, 10% ~ 95%, non-condensing   |
|                     | Operating Shock              | Half-sine wave shock 5G, 11ms, 100 shocks per axis (SSD)  |
|                     | Operating Vibration          | MIL-STD-810G 514.6C-1 (with SSD)  |
|                     | Weight (Net/Gross)           | 3.33/3.7 kg   |
|                     | Safety / EMC                 | CE/FCC  |
| Watchdog Timer      | Programmable 1 ~ 255 sec/min |   |
| OS                  | Supported OS                 | Windows® 10/11 IoT Enterprise/ Linux  |

### Modular Design, Easy to Install

The mainboard is secured to the support bracket to prevent PCB from bending or warping. The three-layer structure consisting of heat spreader, mainboard and baseboard makes it easier to install CPU, memory and HDD, compared with the former TANK series.



### Support High-performance Graphics Card

With IEI power board, it can support 3060 and other advanced graphics cards.

Maximum length of graphics card supported:350mm

\*Specified power adapter is required.

#### NVIDIA 3060

\*Support advanced graphics card



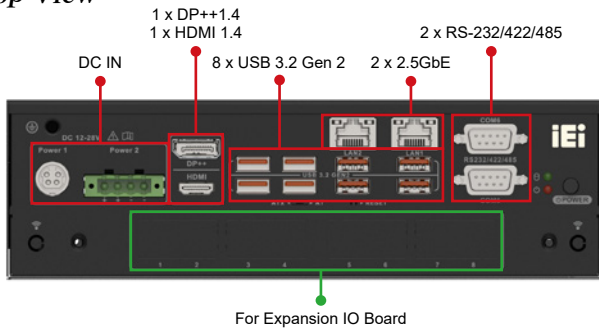
### Flexible Expansion

Different expansion requirements can be met. Dual-slot and four-slot SKUs are provided for selection. Customers can choose the type of expansion slot according to their needs.

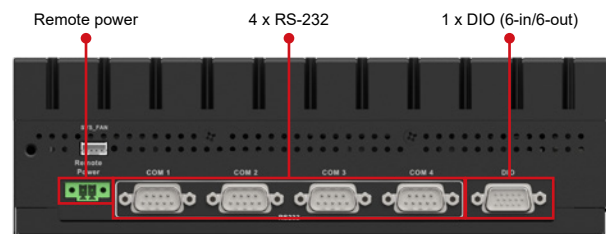


### Fully Integrated I/O

#### Top View

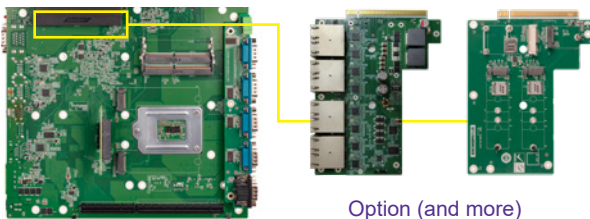


#### Front View



### Modular Board Design

It supports various optional modules, such as M.2 expansion card, 8-port PoE expansion card, etc.



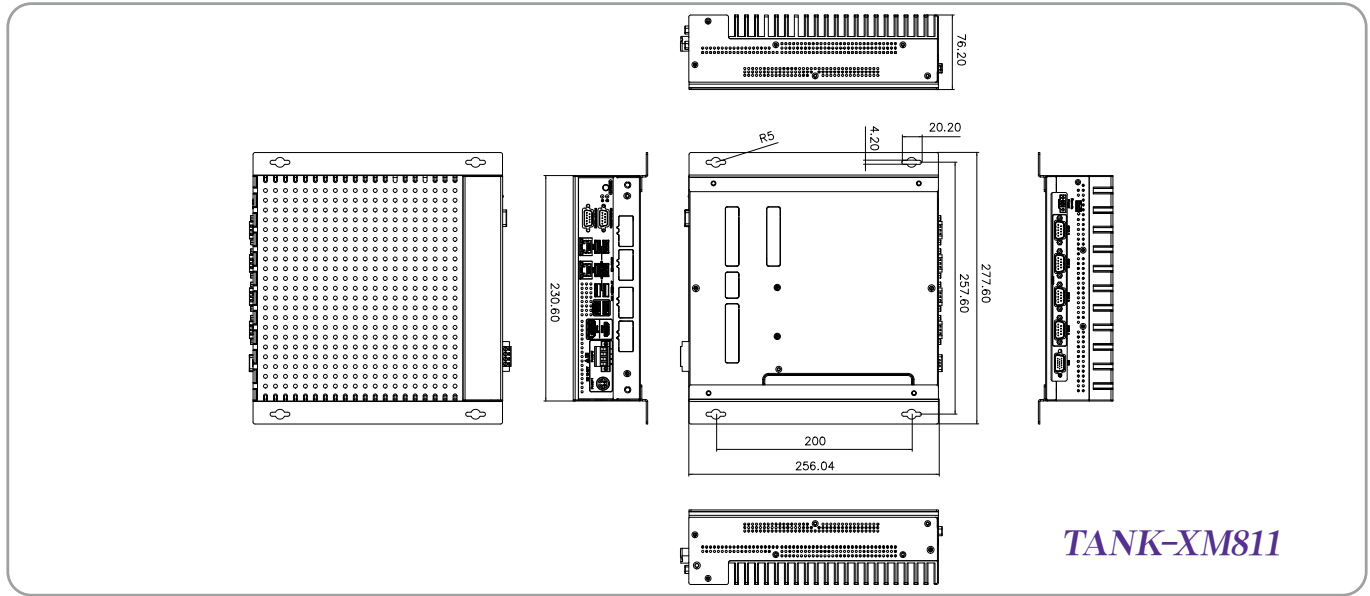
| Expansion IO Board |  |
|--------------------|--|
| GPOE-XM81-8P-R10   | I/O expansion module for TANK 81 series, 8 x 2.5G LAN with PoE                       |
| TXIOB-XM81-A-R10   | I/O expansion module for TANK 81 series, 2 x M.2 B Key, 1 x M.2 A Key, 1 x PCIe Mini |

### Support 35W & 65W CPU

| Operating temperature:                            |              |
|---|--------------|
| With 35w CPU (or 65W CPU PL1 & PL2, default 35W): | -20°C ~ 60°C |
| With 65w CPU:                                     | -20°C ~ 50°C |



Dimensions (Unit: mm)



Ordering Information

| Model               | Description  |
|---------------------|--|
| TANK-XM811-i5AC-R10 | Ruggedized Fanless Embedded System with Intel® Core™ i5, 8GB RAM, 1 x HDMI, 1 x DP++, 12~28V DC and RoHS |
| TANK-XM811-i7AC-R10 | Ruggedized Fanless Embedded System with Intel® Core™ i7, 8GB RAM, 1 x HDMI, 1 x DP++, 12~28V DC and RoHS |

Options

| Part No.             | Description  |
|----------------------|--|
| EMB-WIFI-KIT02I3-R10 | 2T2R M.2 wifi module kit for embedded system, IEEE802.11a/b/g/n/ac/ax, 1 x M.2 AE Key Wireless LAN & Bluetooth 5.2; Intel; AX210. NGWG Module, 2 x RF cable, 2 x Antenna; RoHS             |
| 63040-010180-200-RS  | Adapter Power; FSP; FSP180-ABAN3; 9NA1804008; Active PFC; Vin: 90~264VAC; 180W; Dim: 75.6*151.3*25.4mm; Plug=6.5mm; Cable=1500mm; Erp(NO LOAD 0.5W); Vout: 19VDC; Din 4Pin/lock; CCL; RoHS |
| 32000-000002-RS      | European power cord  |

Optional Expansion Backplane

| Part No.             | Description  |
|----------------------|--|
| TXCBP-XM81-2A-R10    | Expansion backplane module for TANK 81 Series, 2 slot, 1 x PCIe x16 & 1 x PCIe x4  |
| TXCBP-XM81-2B-R10    | Expansion backplane module for TANK 81 Series, 2 slot, 2 x PCIe x8   |
| TXCBP-XM81-4A-R10    | Expansion backplane module for TANK 81 Series, 4 slot, 1 x PCIe x16 & 2 x PCIe x4 & 1 x PCIe x1 w/ external power supply |
| TXCBP-XM81-4B-R10    | Expansion backplane module for TANK 81 Series, 4 slot, 2 x PCIe x8 & 2 x PCIe x4 w/ external power supply                |
| TXCBP-XM81-4C-R10    | Expansion backplane module for TANK 81 Series, 4 slot, 1 x PCIe x16 & 2 x PCI & 1 x PCIe x4                              |
| TXCBP-XM81-G1-PW-R10 | Expansion backplane module for TANK 81 Series, 4 slot, 1 x PCIe x16 & 1 x PCIe x4 w/ external power supply               |
| TXCBP-XM81-G2-PW-R10 | Expansion backplane module for TANK 81 Series, 6 slot, 2 x PCIe x8 & 2 x PCIe x4 w/ external power supply                |
| IDD-X1228150-R10*    | Extended Power Board for TANK-XM81 Series, 150W DC/DC 12-28V input 12V output  |

\* For expansion cards (graphics cards, accelerator cards) that require independent power supply to provide independent power supply, it must be equipped with a Backplane with W/external power supply function.

Optional Expansion Chassis

| Part No.        | Description                                   |
|-----------------|---|
| TXC-XM81-3S-R10 | 3-slot expansion chassis for TANK 81 Series   |
| TXC-XM81-4S-R10 | 4-slot expansion chassis for TANK 81 Series   |
| TXC-XM81-G1-R10 | One GPU expansion chassis for TANK 81 Series  |
| TXC-XM81-G2-R10 | Dual GPU expansion chassis for TANK 81 Series |

Optional Internal Expansion Boards

| Part No.         | Description  |
|------------------|--|
| GPOE-XM81-8P-R10 | I/O expansion module for TANK 81 Series, 8 x 2.5G LAN with PoE                       |
| TXIOB-XM81-A-R10 | I/O expansion module for TANK 81 Series, 2 x M.2 B Key, 1 x M.2 A Key, 1 x PCIe Mini |

Packing List

|                |                 |                      |
|----------------|-----------------|----------------------|
| 1 x Screw pack | 1 x Power cable | 1 x Mounting bracket |
|----------------|-----------------|----------------------|

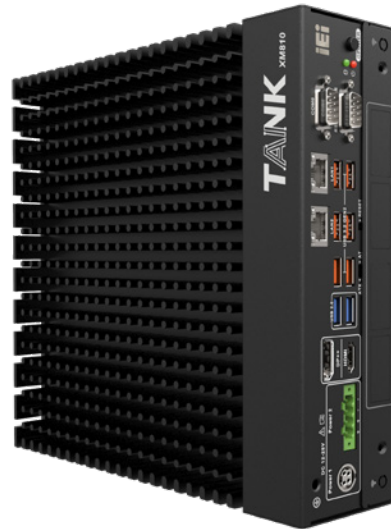
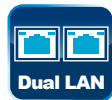
# TANK-XM810

- High-Performance 10<sup>th</sup> /11<sup>th</sup> Generation Intel® Core™ Processor
- Fanless Embedded Computer



## Features

- Supported CPUs:
  - Intel® Core™ i3-10320 3.8 GHz (up to 4.6 GHz, quad-core, 65W TDP)
  - Intel® Core™ i5-10500TE 2.3 GHz (up to 3.7 GHz, 6-core, 35W TDP)
  - Intel® Core™ i7-10700TE 2.0 GHz (up to 4.4 GHz, 8-core, 35W TDP)
- 2 x 2.5GbE ports
- Multiple USB ports and serial ports
- Multiple internal expansion boards for flexible selection
- Various optional backplanes and chassis
- CE/FCC compliant

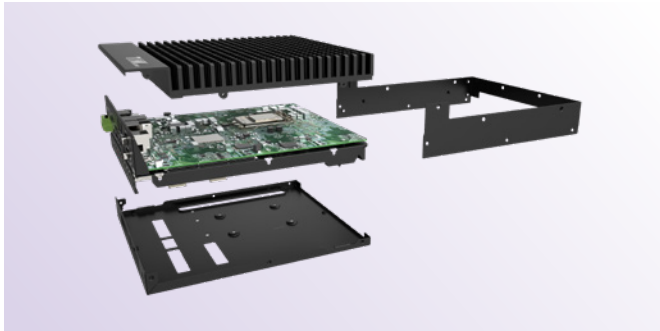


## Specifications

| Model Name          |                              | TANK-XM810   |
|---------------------|------------------------------|--|
| Chassis             | Color                        | Black C  |
|                     | Dimensions (WxDxH) (mm)      | 230.6 x 256.04 x 76.2  |
|                     | System Fan                   | Fanless  |
|                     | Chassis Construction         | Extruded aluminum alloys   |
| Motherboard         | CPU                          | 10/11 <sup>th</sup> Gen Intel® Core™ CPU TDP 35/65W<br>Intel® Core™ i3-10320 3.8 GHz (up to 4.6 GHz, quad-core, 65W TDP)<br>Intel® Core™ i5-10500TE 2.3 GHz (up to 3.7 GHz, 6-core, 35W TDP)<br>Intel® Core™ i7-10700TE 2.0 GHz (up to 4.4 GHz, 8-core, 35W TDP) |
|                     | Chipset                      | Q470/Q470E   |
|                     | Memory                       | 2 x SO-DIMM DDR4 2933 MHz (up to 64GB)   |
| Storage             | HDD Bay                      | 1 x 2.5" SATA 6Gb/s HDD/SSD bay  |
| I/O Interfaces      | Ethernet                     | 2 x RJ-45, 2 x I225V 2.5GbE (colay I225LM)   |
|                     | USB 2.0                      | 2  |
|                     | USB 3.2 Gen 2 (10Gb/s)       | 6  |
|                     | COM                          | 2 x RS-232/422/485, 4 x RS-232   |
|                     | Digital I/O                  | 12-bit (6-in/6-out) DB15   |
|                     | Display Interface            | 1 x DP++, 1 x HDMI   |
| Internal Expansions | M.2                          | 2 x 2280 M-key (PCIe x2)   |
|                     | Expansion Backplane          | Optional   |
| Power               | Power Input                  | 12 ~ 28V DC  |
|                     | Remote Power                 | 1 x 2-pin  |
|                     | Power Consumption            | 12V @ 8A (Intel® Core™ i9-10900TE with 8GB memory)   |
| Reliability         | Mounting                     | Wall mount   |
|                     | Operating Temperature        | -20°C ~ 60°C with air flow (CPU TDP35W & SSD)<br>-20°C ~ 50°C with air flow (CPU TDP65W & SSD), 10% ~ 95% non-condensing   |
|                     | Storage Temperature          | -40°C ~ 85°C, 10% ~ 95%, non-condensing  |
|                     | Operating Shock              | Half-sine wave shock 5G, 11ms, 100 shocks per axis (SSD)   |
|                     | Operating Vibration          | MIL-STD-810G 514.6C-1 (with SSD)   |
|                     | Weight (Net/Gross)           | 3.2/3.5 kg   |
|                     | Safety / EMC                 | CE/FCC   |
| Watchdog Timer      | Programmable 1 ~ 255 sec/min |  |
| OS                  | Supported OS                 | Windows® 10/11 IoT Enterprise/ Linux   |

### Modular Design, Easy to Install

The mainboard is secured to the support bracket to prevent PCB from bending or warping. The three-layer structure consisting of heat spreader, mainboard and baseboard makes it easier to install CPU, memory and HDD, compared with the former TANK series.



### Support High-performance Graphics Card

With IEI power board, it can support 3060 and other advanced graphics cards.

Maximum length of graphics card supported:350mm

\*Specified power adapter is required.

#### NVIDIA 3060

\*Support advanced graphics card



### Flexible Expansion

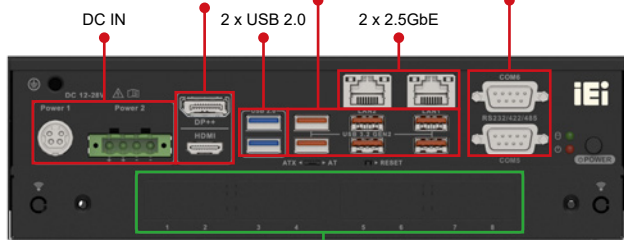
Different expansion requirements can be met. Dual-slot and four-slot SKUs are provided for selection. Customers can choose the type of expansion slot according to their needs.



### Fully Integrated I/O

#### Top View

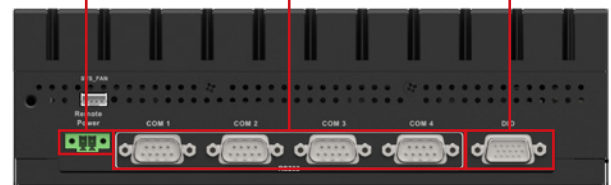
- 1 x DP++1.4
- 1 x HDMI 1.4
- 6 x USB 3.2 Gen 2
- 2 x RS-232/422/485



For Expansion IO Board

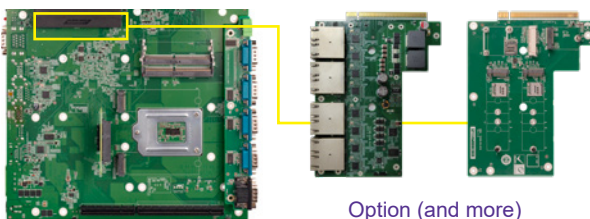
#### Front View

- Remote power
- 4 x RS-232
- 1 x DIO (6-in/6-out)



### Modular Board Design

It supports various optional modules, such as M.2 expansion card, 8-port PoE expansion card, etc.



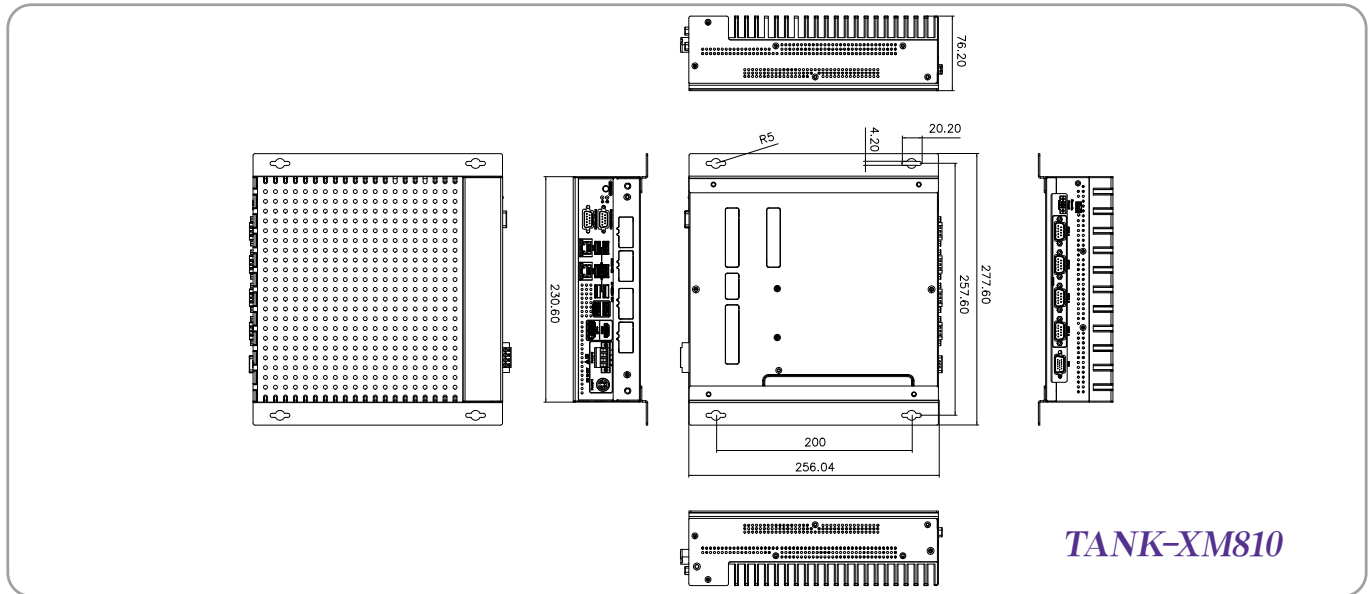
Option (and more)

| Expansion IO Board |  |
|--------------------|--|
| GPOE-XM81-8P-R10   | I/O expansion module for TANK 81 series, 8 x 2.5G LAN with PoE                       |
| TXIOB-XM81-A-R10   | I/O expansion module for TANK 81 series, 2 x M.2 B Key, 1 x M.2 A Key, 1 x PCIe Mini |

### Support 35W & 65W CPU

| Operating temperature:                            |              |
|---|--------------|
| With 35w CPU (or 65W CPU PL1 & PL2, default 35W): | -20°C ~ 60°C |
| With 65w CPU:                                     | -20°C ~ 50°C |

Dimensions (Unit: mm)



Ordering Information

| Part No.            | Description  |
|---------------------|--|
| TANK-XM810-i3BC-R10 | Ruggedized Fanless Embedded System with Intel® Core™ i3-10320 3.8 GHz, (up to 4.6 GHz, 4-core, TDP 65W), 8GB DDR4 pre-installed memory, 1xHDMI, 1xDP++, 12~28V DC and RoHS   |
| TANK-XM810-i5AC-R10 | Ruggedized Fanless Embedded System with Intel® Core™ i5-10500TE 2.3 GHz, (up to 3.7 GHz, 6-core, TDP 35W), 8GB DDR4 pre-installed memory, 1xHDMI, 1xDP++, 12~28V DC and RoHS |
| TANK-XM810-i7AC-R10 | Ruggedized Fanless Embedded System with Intel® Core™ i7-10700TE 2.0 GHz, (up to 4.4 GHz, 8-core, TDP 35W), 8GB DDR4 pre-installed memory, 1xHDMI, 1xDP++, 12~28V DC and RoHS |

Options

| Part No.             | Description  |
|----------------------|--|
| EMB-WIFI-KIT02I3-R10 | 2T2R M.2 wifi module kit for embedded system, IEEE802.11a/b/g/n/ac/ax, 1 x M.2 AE Key Wireless LAN & Bluetooth 5.2; Intel; AX210. NGWG Module, 2 x RF cable, 2 x Antenna; RoHS             |
| 63040-010180-200-RS  | Adapter Power; FSP; FSP180-ABAN3; 9NA1804008; Active PFC; Vin: 90~264VAC; 180W; Dim: 75.6*151.3*25.4mm; Plug=6.5mm; Cable=1500mm; Erp(NO LOAD 0.5W); Vout: 19VDC; Din 4Pin/lock; CCL; RoHS |
| 32000-000002-RS      | European power cord  |

Optional Expansion Backplane

| Part No.             | Description  |
|----------------------|--|
| TXCBP-XM81-2A-R10    | Expansion backplane module for TANK 81 Series, 2 slot, 1 x PCIe x16 & 1 x PCIe x4  |
| TXCBP-XM81-2B-R10    | Expansion backplane module for TANK 81 Series, 2 slot, 2 x PCIe x8   |
| TXCBP-XM81-4A-R10    | Expansion backplane module for TANK 81 Series, 4 slot, 1 x PCIe x16 & 2 x PCIe x4 & 1 x PCIe x1 w/ external power supply |
| TXCBP-XM81-4B-R10    | Expansion backplane module for TANK 81 Series, 4 slot, 2 x PCIe x8 & 2 x PCIe x4 w/ external power supply                |
| TXCBP-XM81-4C-R10    | Expansion backplane module for TANK 81 Series, 4 slot, 1 x PCIe x16 & 2 x PCI & 1 x PCIe x4                              |
| TXCBP-XM81-G1-PW-R10 | Expansion backplane module for TANK 81 Series, 4 slot, 1 x PCIe x16 & 1 x PCIe x4 w/ external power supply               |
| TXCBP-XM81-G2-PW-R10 | Expansion backplane module for TANK 81 Series, 6 slot, 2 x PCIe x8 & 2 x PCIe x4 w/ external power supply                |
| IDD-X1228150-R10*    | Extended Power Board for TANK-XM81 Series, 150W DC/DC 12-28V input 12V output  |

\* For expansion cards (graphics cards, accelerator cards) that require independent power supply to provide independent power supply, it must be equipped with a Backplane with W/external power supply function.

Optional Expansion Chassis

| Part No.        | Description                                   |
|-----------------|---|
| TXC-XM81-3S-R10 | 3-slot expansion chassis for TANK 81 Series   |
| TXC-XM81-4S-R10 | 4-slot expansion chassis for TANK 81 Series   |
| TXC-XM81-G1-R10 | One GPU expansion chassis for TANK 81 Series  |
| TXC-XM81-G2-R10 | Dual GPU expansion chassis for TANK 81 Series |

Optional Internal Expansion Boards

| Part No.         | Description  |
|------------------|--|
| GPOE-XM81-8P-R10 | I/O expansion module for TANK 81 Series, 8 x 2.5G LAN with PoE                       |
| TXIOB-XM81-A-R10 | I/O expansion module for TANK 81 Series, 2 x M.2 B Key, 1 x M.2 A Key, 1 x PCIe Mini |

Packing List

|                |                 |
|----------------|-----------------|
| 1 x Screw pack | 1 x Power cable |
|----------------|-----------------|

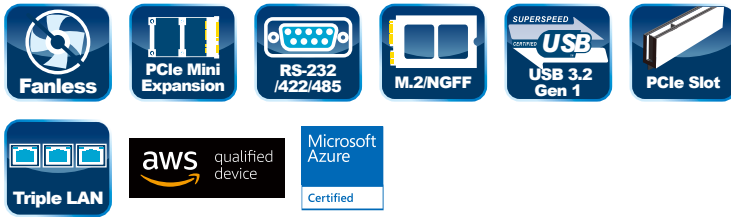


# TANK-880-Q370

- High-Performance 8<sup>th</sup>/9<sup>th</sup> Generation Intel® Core™ Processor
- Fanless Embedded Computer

## Features

- 8<sup>th</sup>/9<sup>th</sup> Gen Intel® Core™ processor platform with Intel® Q370 chipset and DDR4 memory
- Dual independent displays with high resolution support
- Rich high-speed I/O interfaces
- On-board internal power connector for providing power to add-on cards
- Four accessible 2.5" HDD/SSD SATA 6 Gb/s bay (with RAID 0/1/5/10 support)
- Great flexibility for hardware expansion

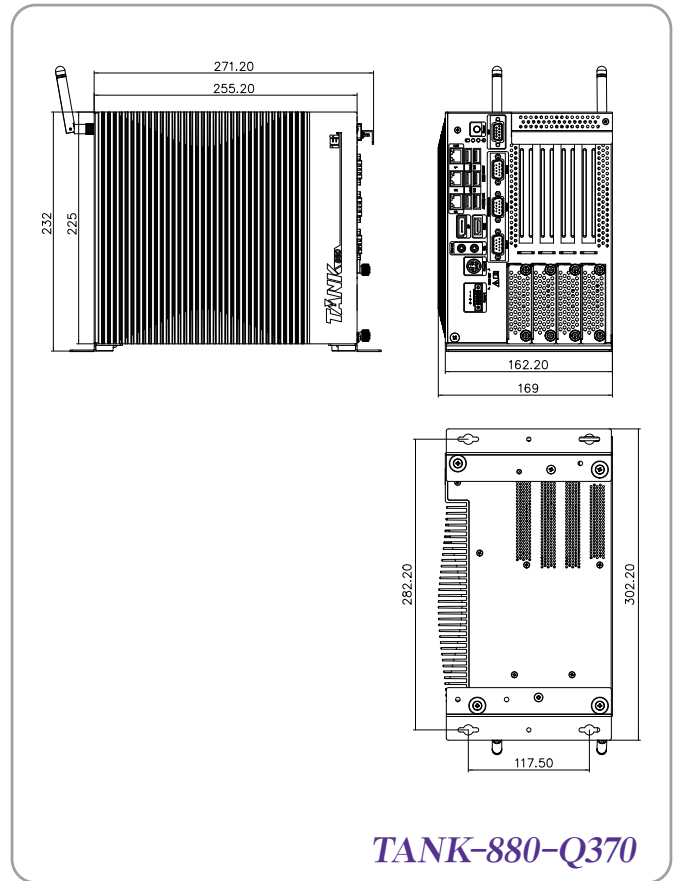
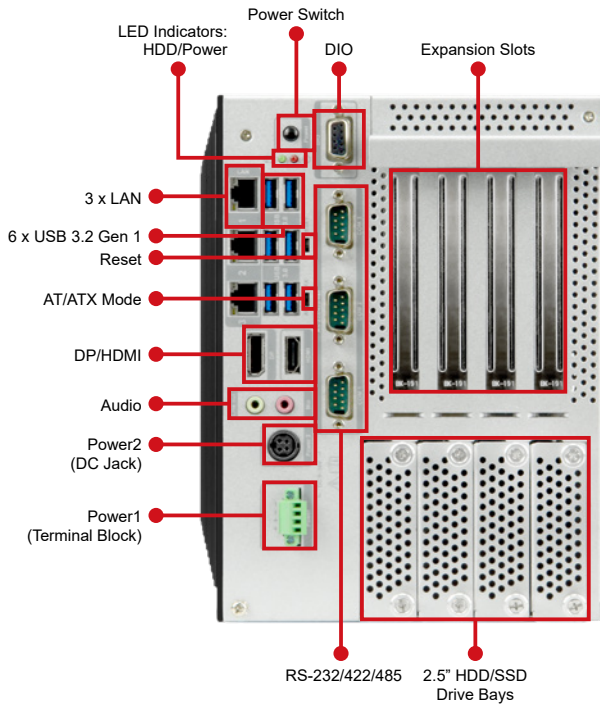


## Specifications

| Model Name     |                        | TANK-880-Q370   |
|----------------|------------------------|---|
| Chassis        | Color                  | Black C + Silver  |
|                | Dimensions(WxDxH) (mm) | 169 x 255.2 x 225   |
|                | System Fan             | Fanless   |
|                | Chassis Construction   | Extruded aluminum alloys  |
| Motherboard    | CPU                    | 8 <sup>th</sup> Gen Intel® Core™ CPU & Intel® Core™ i7-9700TE 1.8 GHz (up to 3.8 GHz, 8-core, TDP 35W)<br>Intel® Core™ i5-9500TE 2.2 GHz (up to 3.6 GHz, 6-core, TDP 35W) |
|                | Chipset                | Intel® Q370   |
|                | System Memory          | 2 x SO-DIMM DDR4 2666/2400 (8GB pre-installed)(up to 64GB)  |
| Storage        | Hard Drive             | 4 x 2.5" HDD/SSD SATA 6Gb/s bay (with RAID 0/1/5/10 support)  |
| I/O Interfaces | USB                    | 6 x USB 3.2 Gen 1   |
|                | Ethernet               | 3 x RJ-45:<br>1 x GbE by Intel® I219<br>2 x GbE by Intel® I210  |
|                | COM Port               | 3 x RS-232/422/485 with AFC (DB-9 with 2.5kV isolation)   |
|                | Digital I/O            | 8-bit Digital I/O (4-in/ 4-out)   |
|                | Display                | 1 x HDMI 1.4b (up to 3840 x 2160@30Hz)<br>1 x DP (up to 4096 x 2304@60Hz)   |
|                | Audio                  | 1 x Line-out, 1 x Mic-in  |
|                | TPM 2.0                | 1 x TPM 2.0 (2 x 10 pin)(optional)  |
|                | Expansions             | PCIe Mini   |
| M.2            |                        | 1 x 2230 A-key (PCIe x2/USB 2.0)<br>2 x 2280 M-key (PCIe x2)  |
| Backplane      |                        | 1 x PCIe by 16, 1 x PCIe by 1, 2 x PCIe by 4  |
| Power          | Power Input            | DC Jack: 9 ~ 36V DC<br>Terminal Block: 9 ~ 36V DC   |
|                | Power Consumption      | 19W @ 5.4A (Intel® Core™ i7-9700TE with 8GB memory)   |
|                | Internal Power Output  | 12V @ up to 10A   |
| Reliability    | Mounting               | Wall mount  |
|                | Operating Temperature  | -20°C ~ 60°C with air flow (SSD), 10% ~ 95% non-condensing  |
|                | Storage Temperature    | -40°C ~ 85°C with air flow (SSD), 10% ~ 95% non-condensing  |
|                | Operating Shock        | Half-sine wave shock 5G, 11ms, 100 shocks per axis (SSD)  |
|                | Operation Vibration    | MIL-STD-810G 514.6C-1 (SSD)   |
|                | Weight ( Net/Gross)    | 5.4 kg/8.45 kg  |
|                | Safety / EMC           | CE/FCC  |
|                | Watchdog timer         | Programmable 1 ~ 255 sec/min  |
| OS             | Supported OS           | Microsoft Windows 10 / Windows 11, Linux  |

Fully Integrated I/O

Dimensions (Unit: mm)



TANK-880-Q370

Ordering Information

| Part No.                    | Description  |
|-----------------------------|--|
| TANK-880-Q370-I7R/8G/4A-R10 | Ruggedized fanless embedded system with Intel® i7-9700TE 1.8 GHz, (up to 3.8 GHz, 8-core, TDP 35W), 8GB DDR4 pre-installed memory, 1 x PCIe by 16 & 2 x PCIe by 4 & 1 x PCIe by 1 expansion, HDMI/DP, 9 ~ 36V DC, RoHS |
| TANK-880-Q370-I5R/8G/4A-R10 | Ruggedized fanless embedded system with Intel® i5-9500TE 2.2 GHz, (up to 3.6 GHz, 6-core, TDP 35W), 8GB DDR4 pre-installed memory, 1 x PCIe by 16 & 2 x PCIe by 4 & 1 x PCIe by 1 expansion, HDMI/DP, 9 ~ 36V DC, RoHS |

Options

| Part No.                | Description  |
|-------------------------|--|
| Wi-Fi Module            | 27319-000009-RS*<br>Wireless LAN Module; Wireless LAN & Bluetooth M.2 Module; Sparklan; R9701810011; IEEE802.11a/b/g/n/ac; 2.412 GHz~2.4835 GHz, 5.15 GHz~5.85 GHz; M.2 2230;; 3.3V; 22*30*2.15mm; QCNFA364A; QCA6174A-5; 2x2 MIMO; Dual Band; WCBN808A-Q2; CCL; CCL; RoHS |
| Antenna                 | 32505-000900-100-RS*<br>External Antenna; WLAN; RG 178; 108MM; TANK-700-QM67-R10; PEAK GAIN 2.0DBI; Exceltek; 2.4-2.5 GHz/5.15-5.85 GHz; REVERSE SMA PLUG; RoHS  |
| RF Cable                | 32501-004000-100-RS*<br>RF; RF CABLE; LINE DIAMETER:0.81mm; 250MM;; 50Ω; Sparklan; 0-6 GHz; VSWR≤1.3; I-PEX MHF-4 Plug; REVERSE SMA JACK; NUT x 1; WASHER x 1;; RoHS   |
| Adapter                 | 63040-010150-700-RS<br>Adapter Power; FSP; FSP150-ABAN3; 9NA1504811; Active PFC; Vin:90 ~ 264VAC; 150W; Dim:75.6*151.3*25.4mm; Plug=6.5mm; Cable=1500mm; Erp(NO LOAD 0.15W); Vout:19VDC; Din 4Pin/lock; CCL; RoHS  |
| Power Cord              | 32000-000002-RS<br>European power cord   |
| TPM 2.0 Module          | TPM-IN02-R20<br>20-pin Infineon TPM2.0 module, software mangement tool, firmware v5.5  |
| System Fan              | 31100-000440-RS<br>FAN; +12V; 4PIN; Everflow; 92*92*25mm; 3600RPM; TWO BALL BEARING; LINE LENGTH:180MM; 4.4+/-0.3MM; F129025BU; F129025BUAFW30 aR; AXIAL FAN; WITH FRAME; 73.29CFM; 11.4~12.6V; 44dB; 70000hur; TUV, UL, CE; CCL; RoHS                                     |
| OS: Windows Embedded 10 | TANK-880-Q370-W10E64-H-R10<br>OS Image with Windows® Embedded Standard 10 E High End 64-bit 2019 for TANK-880-Q370-i7 Series, with DVD-ROM, RoHS   |
| OS: Windows Embedded 10 | TANK-880-Q370-W10E64-V-R10<br>OS Image with Windows® Embedded Standard 10 E Value 64-bit 2019 for TANK-880-Q370-i5 Series, with DVD-ROM, RoHS  |

\* Each Wi-Fi module needs two antennas and two RF cables to fully support Wi-Fi function.

Packing List

|                   |                        |
|-------------------|------------------------|
| 1 x Chassis Screw | 1 x Wall Mount Bracket |
|-------------------|------------------------|

# TANK-871-Q170

- High-Performance 6<sup>th</sup>/7<sup>th</sup> Generation Intel® Core™ Processor
- Fanless Embedded Computer

## Features

- 6<sup>th</sup>/7<sup>th</sup> Gen Intel® Core™ processor platform with Intel® Q170 chipset and DDR4 memory
- Triple independent display with high resolution support
- Rich high-speed I/O interfaces on one side for easy installation
- IEI iRIS-2400 solution

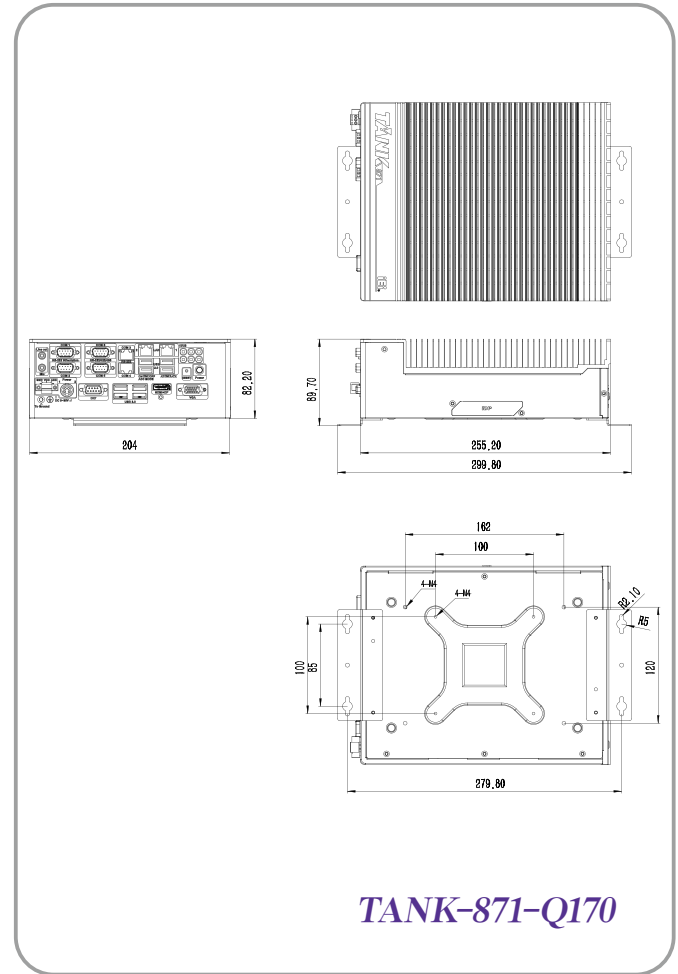
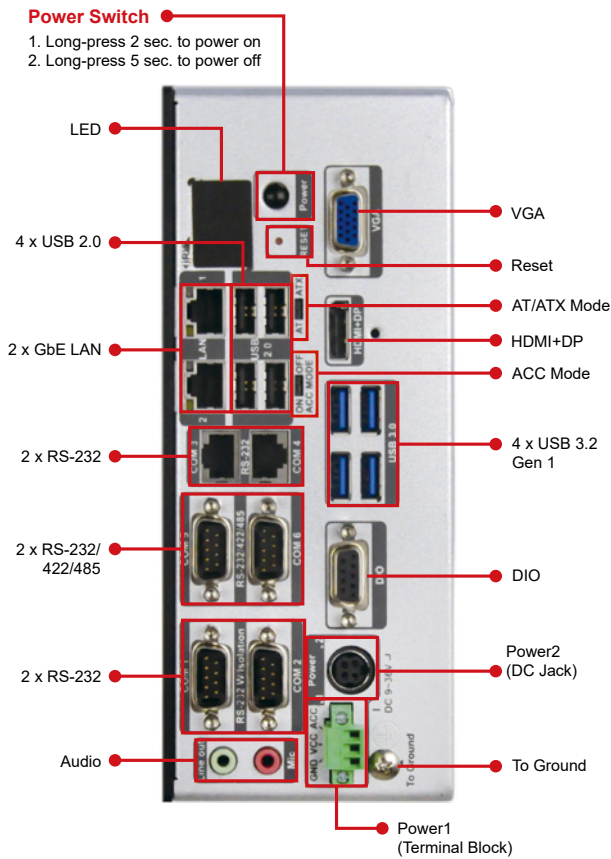


## Specifications

| Model Name     |                                | TANK-871-Q170   |
|----------------|--------------------------------|---|
| Chassis        | Color                          | Black C + Silver  |
|                | Dimensions (WxDxH) (mm)        | 82.2 x 255.2 x 204  |
|                | System Fan                     | Fanless   |
|                | Chassis Construction           | Extruded aluminum alloy   |
| Motherboard    | CPU                            | 7 <sup>th</sup> Gen Intel® Core™ CPU & Intel® Core™ i7-6700TE 2.4 GHz (up to 3.4 GHz, quad-core, TDP 35)<br>Intel® Core™ i5-6500TE 2.3 GHz (up to 3.3 GHz, quad-core, TDP 35) |
|                | Chipset                        | Intel® Q170   |
|                | System Memory                  | 2 x SO-DIMM DDR4 2133 (4GB pre-installed) (up to 32GB)  |
| IPMI           | iRIS solution                  | 1 x iRIS-2400 (optional)  |
| Storage        | Hard Drive                     | 2 x 2.5" SATA 6Gb/s HDD/SSD bay (RAID 0/1 support)  |
| I/O Interfaces | USB                            | 4 x USB 3.2 Gen 1<br>4 x USB 2.0  |
|                | Ethernet                       | 2 x RJ-45:<br>LAN1: GbE by Intel® I219LM<br>LAN2 (iRIS): GbE by Intel® I210   |
|                | COM Port                       | 2 x RS-232/422/485 with AFC (DB-9)<br>4 x RS-232 (2 x RJ-45, 2 x DB-9 with 2.5kV isolation)   |
|                | Digital I/O                    | 8-bit Digital I/O (4-in/ 4-out)   |
|                | Display                        | 1 x VGA (up to 1920 x 1200@60Hz)<br>1 x HDMI/DP (up to 3840 x 2160@30Hz /4096x2304@60Hz)<br>1 x iDP (optional)  |
|                | Audio                          | 1 x Line-out, 1 x Mic-in  |
|                | Wireless                       | 1 x 802.11a/b/g/n/ac (optional)   |
|                | TPM                            | 1 x TPM 2.0 (2 x 10 pin) (optional)   |
| Expansions     | PCIe Mini                      | 1 x Half-size (PCIe/ USB 2.0)<br>1 x Full-size (PCIe/ USB 2.0/ SATA)  |
| Power          | Power Input                    | DC Jack: 9 ~ 36V DC<br>Terminal Block: 9 ~ 36V DC   |
|                | Power Consumption              | 19W@3.68A (Intel® Core™ i7-6700TE with 8GB memory)  |
| Reliability    | Mounting                       | Wall mount  |
|                | Operating Temperature/Humidity | i7-6700TE: -20°C ~ 45°C with air flow (SSD), 10% ~ 95% non-condensing<br>i5-6500TE: -20°C ~ 60°C with air flow (SSD), 10% ~ 95% non-condensing                                |
|                | Storage Temperature/Humidity   | -40°C ~ 85°C with air flow (SSD), 10% ~ 95% non-condensing  |
|                | Operating Shock                | Half-sine wave shock 5G, 11ms, 100 shocks per axis (SSD)  |
|                | Operating Vibration            | MIL-STD-810G 514.6 C-1 (SSD)  |
|                | Weight (Net/Gross)             | 3.5 kg/4.5 kg   |
|                | Safety/EMC                     | CE/FCC/KC   |
| OS             | Supported OS                   | Microsoft® Windows® 8 Embedded, Microsoft® Windows® Embedded Standard 7 E, Microsoft® Windows® 10 IoT Enterprise  |

Fully Integrated I/O

Dimensions (Unit: mm)



Ordering Information

| Part No.                 | Description  |
|--------------------------|--|
| TANK-871-Q170i-i7/4G-R10 | Ruggedized fanless embedded system with Intel® Core™ i7-6700TE 2.4 GHz (up to 3.4 GHz, quad core, TDP 35W), 4GB DDR4 pre-installed memory, VGA/HDMI+DP/iDP, iRIS-2400 optional, 9 ~ 36V DC, RoHS |
| TANK-871-Q170i-i5/4G-R10 | Ruggedized fanless embedded system with Intel® Core™ i5-6500TE 2.3 GHz (up to 3.3 GHz, quad core, TDP 35W), 4GB DDR4 pre-installed memory, VGA/HDMI+DP/iDP, iRIS-2400 optional, 9 ~ 36V DC, RoHS |

Options

| Part No.                   | Description  |
|----------------------------|--|
| 32000-000002-RS            | European power cord  |
| 63040-010120-300-RS        | Adapter Power;FSP;FSP120-AHAN3;9NA1206708;Active PFC;Vin:90 ~ 264VAC;120W;Dim:75.6*151.3*25.4mm;Plug=6.5mm;Cable=1500mm;Erp(NO LOAD 0.15W);Vout:12VDC;Din 4Pin/lock;CCL;RoHS |
| IRIS-2400-R10              | IPMI 2.0 adapter card with AST2400 BMC chip for DDR3 SO-DIMM socket interface  |
| EMB-WIFI-KIT01-R20         | 1T1R wifi module kit for embedded system, IEEE802.11a/b/g/n/ac WiFi with Bluetooth 4.0/3.0+HS, 1 x wifi module, 2 x 250mm RF cable, 2 xAntenna, RoHS                         |
| TANK-870-Q170-WES7E64-R10  | OS Image with Windows® Embedded Standard 7 E 64-bit for TANK-870-Q170 Series, with DVD-ROM, RoHS   |
| TANK-870-Q170-W10E64-H-R10 | OS Image with Windows® Embedded Standard 10 E High End 64-bit for TANK-870-Q170-i7 Series, with DVD-ROM, RoHS  |
| TANK-870-Q170-W10E64-V-R10 | OS Image with Windows® Embedded Standard 10 E Value 64-bit for TANK-870-Q170-i5 Series, with DVD-ROM, RoHS   |
| TPM-IN02-R20               | 20-pin Infineon TPM2.0 module, software mangement tool, firmware v5.5  |

Packing List

|                   |                      |
|-------------------|----------------------|
| 1 x Chassis Screw | 1 x Mounting Bracket |
|-------------------|----------------------|



# TANK-870-Q170

- High-Performance 6<sup>th</sup>/7<sup>th</sup> Generation Intel® Core™ Processor
- Fanless Embedded Computer

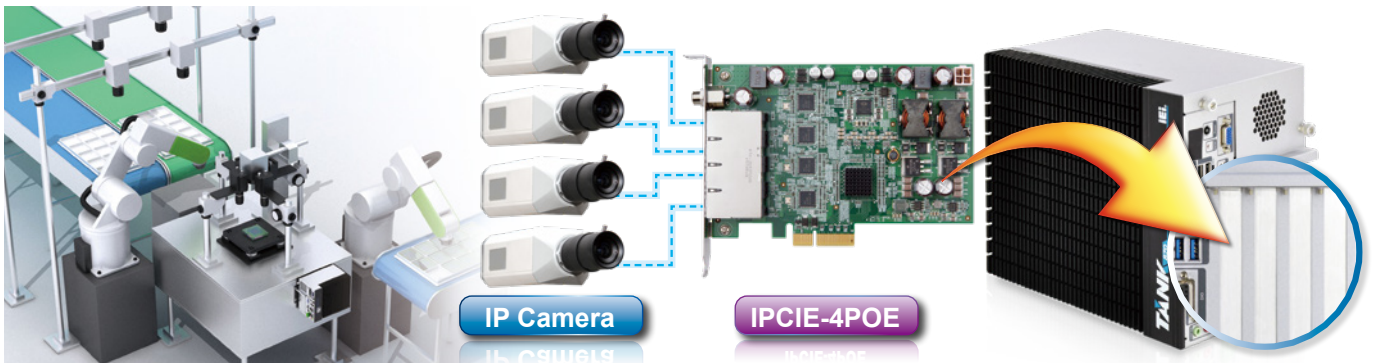
## Features

- 6<sup>th</sup>/7<sup>th</sup> Gen Intel® Core™ processor platform with Intel® Q170 chipset and DDR4 memory
- Triple independent display with high resolution support
- Rich high-speed I/O interfaces on one side for easy installation
- On-board internal power connector for providing power to add-on cards
- Great flexibility for hardware expansion



## Smart Choice for Surveillance System

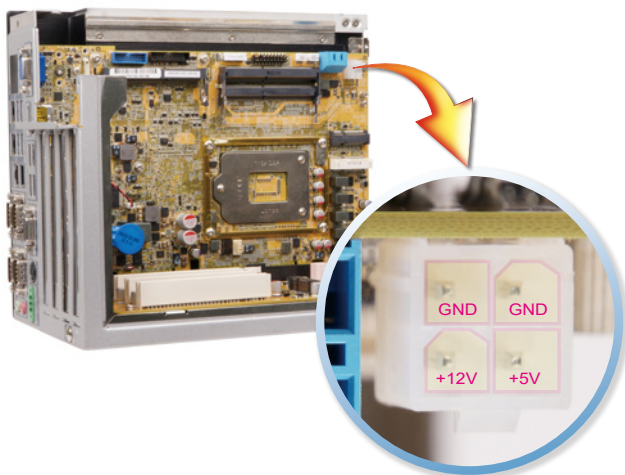
The TANK-870-Q170 integrated with IEI PoE Ethernet port expansion card can be used as a surveillance system for factory and public security. IEI PoE expansion card can support up to four PoE IEEE802.3af ports (max. 15.4 W per port ) by PCIe x4.



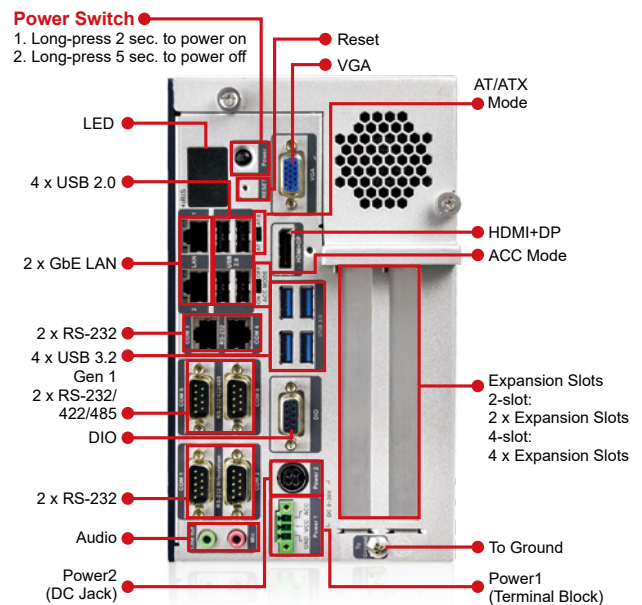
## 5V@3A or 12V@3A

### Internal Power Connector

The TANK-870-Q170 provides the most convenient 4-pin internal power connector for add-on card usage, adding more flexibility to the embedded system in industrial environment.



## Fully Integrated I/O



## Flexible Expansion Interface

| Backplane | TANK-870-Q170i-2A | TANK-870-Q170i-2B | TANK-870-Q170i-4A |          |
|-----------|-------------------|-------------------|-------------------|----------|
| Slot Type | PCIe x16          | PCIe x16          | PCIe x16          | PCIe x16 |
| Signal    | PCIe x8           | PCIe x16          | PCIe x8           | PCIe x8  |
| Slot Type | PCIe x16          | PCI               | PCI               | PCI      |
| Signal    | PCIe x8           | PCI               | PCI               | PCI      |
| PCIe Mini | N/A               | N/A               | 1                 |          |

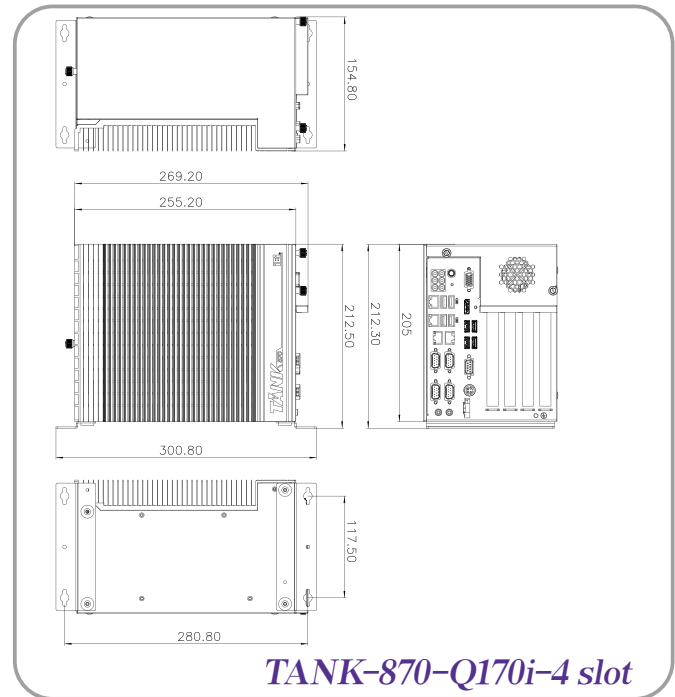
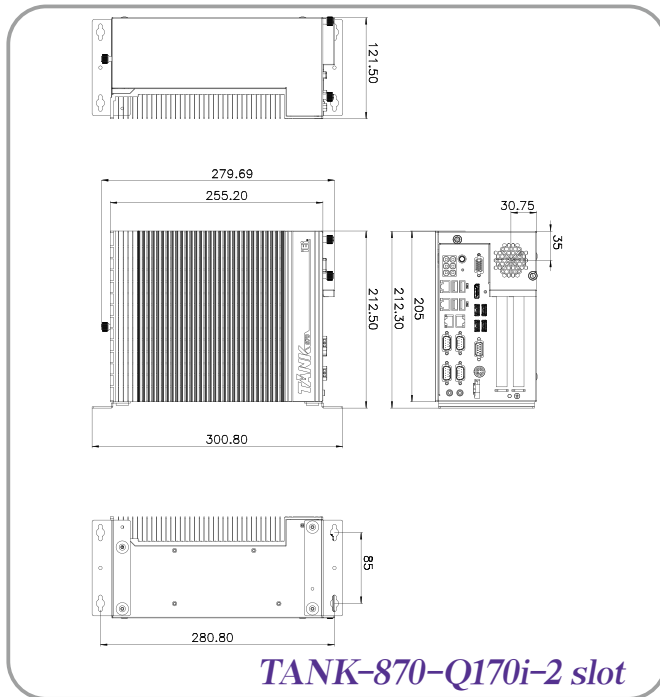
\* The expansions described above are provided by the backplanes

## Specifications

| Model Name     | TANK-870-Q170           |  |
|----------------|-------------------------|--|
| Chassis        | Color                   | Black C + Silver   |
|                | Dimensions (WxDxH) (mm) | 2-slot: 121.5 x 255.2 x 205<br>4-slot: 154.8 x 255.2 x 205   |
|                | System Fan              | Fanless  |
|                | Chassis Construction    | Extruded aluminum alloys   |
| Motherboard    | CPU                     | 7 <sup>th</sup> Gen Intel® Core™ CPU &<br>Intel® Core™ i7-6700TE 2.4 GHz (up to 3.4 GHz, quad-core, TDP 35)<br>Intel® Core™ i5-6500TE 2.3 GHz (up to 3.3 GHz, quad-core, TDP 35) |
|                | Chipset                 | Intel® Q170  |
|                | System Memory           | 2 x SO-DIMM DDR4 2133 (4GB pre-installed)(up to 32GB)  |
| IPMI           | iRIS Solution           | 1 x iRIS-2400 (optional)   |
| Storage        | Hard Drive              | 2 x 2.5" SATA 6Gb/s HDD/SSD bay (RAID 0/1 support)   |
| I/O Interfaces | USB                     | 4 x USB 3.2 Gen 1<br>4 x USB 2.0   |
|                | Ethernet                | 2 x RJ-45:<br>LAN1: GbE by Intel® I219LM<br>LAN2 (iRIS): GbE by Intel® I210  |
|                | COM Port                | 2 x RS-232/422/485 with AFC (DB-9)<br>4 x RS-232 (2 x RJ-45, 2 x DB-9 with 2.5kV isolation)  |
|                | Digital I/O             | 8-bit Digital I/O (4-in/ 4-out)  |
|                | Display                 | 1 x VGA (up to 1920 x 1200@60Hz)<br>1 x HDMI/DP (up to 3840 x 2160@30Hz /4096 x 2304@60Hz)<br>1 x iDP (optional)   |
|                | Audio                   | 1 x Line-out, 1 x Mic-in   |
|                | Wireless                | 1 x 802.11 a/b/g/n/ac (optional)   |
|                | TPM                     | 1 x TPM 2.0 (2 x 10 pin) (optional)  |
| Expansions     | PCIe Mini               | 1 x Half-size (PCIe/ USB 2.0)<br>1 x Full-size (PCIe/ USB 2.0/ SATA)*  |
|                | Backplane               | 2-slot model: 1 x PCIe x16, 1 x PCI<br>2-slot model: 2 x PCIe x8<br>4-slot model: 2 x PCIe x8, 2 x PCI, 1 x Full-size PCIe Mini (PCIe/ USB 2.0)                                  |
| Power          | Power Input             | DC Jack: 9 ~ 36V DC<br>Terminal Block: 9 ~ 36V DC  |
|                | Power Consumption       | 19V@3.68A (Intel® Core™ i7-6700TE with 8 GB memory)  |
|                | Internal Power output   | 5V@3A or 12V@3A  |
| Reliability    | Mounting                | Wall mount   |
|                | Operating Temperature   | i7-6700TE: -20°C ~ 45°C with air flow (SSD), 10% ~ 95% non-condensing<br>i5-6500TE: -20°C ~ 60°C with air flow (SSD), 10% ~ 95% non-condensing                                   |
|                | Storage Temperature     | -40°C ~ 85°C with air flow (SSD), 10% ~ 90% non-condensing   |
|                | Operating Shock         | Half-sine wave shock 5G, 11ms, 100 shocks per axis (SSD)   |
|                | Operating Vibration     | MIL-STD-810G 514.6 C-1 (SSD)   |
|                | Weight (Net/Gross)      | 2-slot: 4.2 kg/6.3 kg<br>4-slot: 4.5 kg/6.5 kg   |
|                | Safety/EMC              | CE/FCC/KC  |
| OS             | Supported OS            | Microsoft® Windows® 8 Embedded, Microsoft® Windows® Embedded Standard 7 E,<br>Microsoft® Windows® 10 IoT Enterprise  |

\* TANK-870-Q170-QGW has no Full-size PCIe mini slot

Dimensions (Unit: mm)



Ordering Information

| Part No.                    | Description  |
|-----------------------------|--|
| TANK-870-Q170i-i5/4G/2A-R11 | Ruggedized fanless embedded system with Intel® Core™ i5-6500TE 2.3 GHz (up to 3.3 GHz, quad core, TDP 35W), 4GB DDR4 pre-installed memory, 2 x PCIe by 8 expansion, VGA/HDMI+DP/iDP, iRIS-2400 optional, 9 ~ 36V DC, RoHS            |
| TANK-870-Q170i-i5/4G/2B-R11 | Ruggedized fanless embedded system with Intel® Core™ i5-6500TE 2.3 GHz (up to 3.3 GHz, quad core, TDP 35W), 4GB DDR4 pre-installed memory, 1 x PCIe by 16 & 1 x PCI expansion, VGA/HDMI+DP/iDP, iRIS-2400 optional, 9 ~ 36V DC, RoHS |
| TANK-870-Q170i-i5/4G/4A-R11 | Ruggedized fanless embedded system with Intel® Core™ i5-6500TE 2.3 GHz (up to 3.3 GHz, quad core, TDP 35W), 4GB DDR4 pre-installed memory, 2 x PCIe by 8 & 2 x PCI expansion, VGA/HDMI+DP/iDP, iRIS-2400 optional, 9 ~ 36V DC, RoHS  |
| TANK-870-Q170i-i7/4G/2A-R11 | Ruggedized fanless embedded system with Intel® Core™ i7-6700TE 2.4 GHz (up to 3.4 GHz, quad core, TDP 35W), 4GB DDR4 pre-installed memory, 2 x PCIe by 8 expansion, VGA/HDMI+DP/iDP, iRIS-2400 optional, 9 ~ 36V DC, RoHS            |
| TANK-870-Q170i-i7/4G/2B-R11 | Ruggedized fanless embedded system with Intel® Core™ i7-6700TE 2.4 GHz (up to 3.4 GHz, quad core, TDP 35W), 4GB DDR4 pre-installed memory, 1 x PCIe by 16 & 1 x PCI expansion, VGA/HDMI+DP/iDP, iRIS-2400 optional, 9 ~ 36V DC, RoHS |
| TANK-870-Q170i-i7/4G/4A-R11 | Ruggedized fanless embedded system with Intel® Core™ i7-6700TE 2.4 GHz (up to 3.4 GHz, quad core, TDP 35W), 4GB DDR4 pre-installed memory, 2 x PCIe by 8 & 2 x PCI expansion, VGA/HDMI+DP/iDP, iRIS-2400 optional, 9 ~ 36V DC, RoHS  |

Options

| Part No.                   | Description   |
|----------------------------|---|
| 32000-000002-RS            | European power cord   |
| 63040-010120-300-RS        | Adapter Power;FSP;FSP120-AHAN3;9NA1206708;Active PFC;Vin:90 ~ 264VAC;120W;Dim:75.6*151.3*25.4mm;Plug=6.5mm;Cable=1500m m;Erp(NO LOAD 0.15W);Vout:12VDC;Din 4Pin/lock;CCL;RoHS |
| 63040-010150-700-RS        | Adapter Power;FSP;FSP150-ABAN3;9NA1504811;Active PFC;Vin:90 ~ 264VAC;150W;Dim:75.6*151.3*25.4mm;Plug=6.5mm;Cable=1500m m;Erp(NO LOAD 0.15W);Vout:19VDC;Din 4Pin/lock;CCL;RoHS |
| IRIS-2400-R10              | IPMI 2.0 adapter card with AST2400 BMC chip for DDR3 SO-DIMM socket interface   |
| EMB-FAN-KIT02-R10          | Fan Module;MODIFY 31100-000272-RS;+12V DC;4PIN;40*40*15mm ;STANDARD;;FD124015LB2W3;; L= 400mm MOLEX 5051-04P P=2.54;CCL;RoHS  |
| EMB-WIFI-KIT01-R20         | 1T1R wifi module kit for embedded system, IEEE802.11a/b/g/n/ac WiFi with Bluetooth 4.0/3.0+HS, 1 x wifi module, 2 x 250mm RF cable, 2 x Antenna, RoHS                         |
| DP-DP-R10                  | DisplayPort to DisplayPort converter board (for IEI IDP connector)  |
| DP-HDMI-R10                | DisplayPort to HDMI converter board (for IEI IDP connector)   |
| DP-LVDS-R10                | DisplayPort to 24-bit dual channel LVDS converter board (for IEI IDP connector)   |
| DP-VGA-R10                 | DisplayPort to VGA converter board (for IEI IDP connector)  |
| DP-DVI-R10                 | DisplayPort to DVI-D converter board (for IEI IDP connector)  |
| IPCIE-4POE-R10             | PCI Express Power over Ethernet frame grabber card, 4-port 1000 Base(T), 802.3af compliant, RoHS  |
| TANK-870-Q170-WES7E64-R10  | OS Image with Windows® Embedded Standard 7 E 64-bit for TANK-870-Q170 Series, with DVD-ROM, RoHS  |
| TANK-870-Q170-W10E64-H-R10 | OS Image with Windows® Embedded Standard 10 E High End 64-bit for TANK-870-Q170-i7 Series, with DVD-ROM, RoHS   |
| TANK-870-Q170-W10E64-V-R10 | OS Image with Windows® Embedded Standard 10 E Value 64-bit for TANK-870-Q170-i5 Series, with DVD-ROM, RoHS  |
| TPM-IN02-R20               | 20-pin Infineon TPM2.0 module, software mangement tool, firmware v5.5   |

\* The TANK-870 can support up to 40°C operating temperature when installing with the IPCIE-4POE-R10.

Packing List

|                   |                      |                             |
|-------------------|----------------------|-----------------------------|
| 1 x Chassis Screw | 1 x Mounting Bracket | 2 x RJ-45 to COM Port Cable |
|-------------------|----------------------|-----------------------------|

# TANK-870e-H110

- High-Performance 6<sup>th</sup>/7<sup>th</sup> Generation Intel® Core™ Processor
- Fanless Embedded Computer

## Features

- 6<sup>th</sup>/7<sup>th</sup> Gen Intel® Core™ processor platform with Intel® H110 chipset and DDR4 memory
- Support dual display VGA+HDMI
- On-board internal power connector for providing power to add-on cards
- Great flexibility for hardware expansion



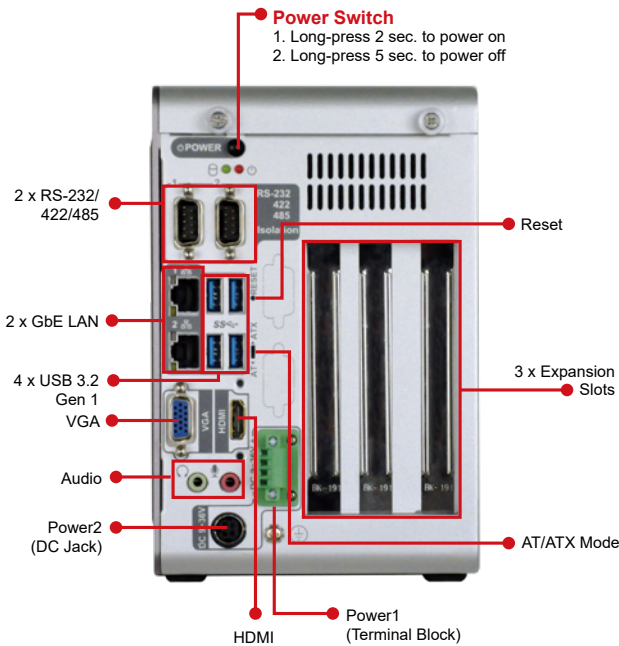
## Specifications

| Model Name     |                          | TANK-870e-H110   |
|----------------|--------------------------|--|
| Chassis        | Color                    | Dark silver purple + Silver  |
|                | Dimensions (WxDxH) (mm)  | 132.6 x 255.2 x 190  |
|                | System Fan               | Fanless  |
|                | Chassis Construction     | Extruded aluminum alloys   |
| Motherboard    | CPU                      | 7 <sup>th</sup> Gen Intel® Core™ CPU & Intel® Core™ i5-6500TE 2.3 GHz (up to 3.3 GHz, quad-core, TDP 35)         |
|                | Chipset                  | Intel® H110  |
|                | System Memory            | 2 x SO-DIMM DDR4 2133 (4GB pre-installed)(up to 32GB)  |
| Storage        | Hard Drive               | 2 x 2.5" SATA 6Gb/s HDD/SSD bay  |
| I/O Interfaces | USB                      | 4 x USB 3.2 Gen 1  |
|                | Ethernet                 | 2 x RJ-45:<br>2 x GbE by RTL8119I  |
|                | COM Port                 | 2 x RS-232/422/485 with AFC (DB-9 with 2.5kV isolation)  |
|                | Display                  | 1 x VGA (up to 1920 x 1200@60Hz)<br>1 x HDMI (up to 3840 x 2160@30Hz)  |
|                | Audio                    | 1 x Line-out, 1 x Mic-in   |
|                | Wireless                 | 1 x 802.11a/b/g/n/ac (optional)  |
| Expansions     | PCIe Mini                | 1 x Full-size (PCIe/ USB 2.0)<br>1 x Full-size (PCIe/ USB 2.0/ SATA)   |
|                | Backplane                | 3A: 1 x PCIe x16, 2 x PCI<br>3B: 1 x PCIe x16, 1 x PCIe x4, 1 x PCI  |
| Power          | Power Input              | DC Jack: 9 ~ 36V DC<br>Terminal Block: 9 ~ 36V DC  |
|                | Power Consumption        | 19 V@3.44 A (Intel® Core™ i7-6700TE with 8 GB memory)  |
|                | Internal Power Connector | 5V@3A or 12V@3A  |
| Reliability    | Mounting                 | Wall mount & DIN Rail  |
|                | Operating Temperature    | i5-6500TE -20°C ~ 60°C with air flow (SSD), 10% ~ 95% non-condensing   |
|                | Storage Temperature      | -40°C ~ 85°C with air flow (SSD), 5% ~ 90% non-condensing  |
|                | Operating Shock          | Half-sine wave shock 5G, 11ms, 100 shocks per axis (SSD)   |
|                | Operating Vibration      | MIL-STD-810G 514.6C-1 (SSD)  |
|                | Weight (Net/Gross)       | 4.2 kg/6.3 kg  |
|                | Safety/EMC               | CE/FCC/KC  |
| OS             | Supported OS             | Microsoft® Windows® 8 Embedded, Microsoft® Windows® Embedded Standard 7 E, Microsoft® Windows® 10 IoT Enterprise |

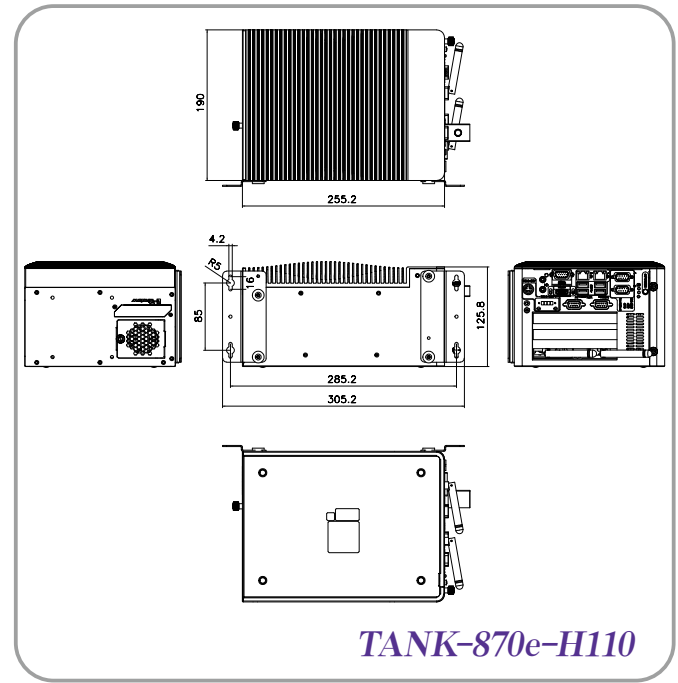
## Versatile Expansion Interface

| Backplane | 3A HPE-3S6 |              | 3B HPE-3S7 |             |              |
|-----------|------------|--------------|------------|-------------|--------------|
| Slot      | 2 x PCI    | 1 x PCIe x16 | 1 x PCI    | 1 x PCIe x4 | 1 x PCIe x16 |
| Signal    | PCI        | PCIe x16     | PCI        | PCIe x1     | PCIe x16     |

## Fully Integrated I/O



## Dimensions (Unit: mm)



## Ordering Information

| Part No.                           | Description   |
|------------------------------------|---|
| <b>TANK-870e-H110-i5/4G/3A-R11</b> | Ruggedized fanless embedded system with Intel® Core i5-6500TE 2.3 GHz, (up to 3.3 GHz, quad core, TDP 35W), 4GB DDR4 pre-installed memory, 1 x PCIe by 16 & 2 x PCI expansion, VGA/HDMI, 9 ~ 36V DC, RoHS                 |
| <b>TANK-870e-H110-i5/4G/3B-R11</b> | Ruggedized fanless embedded system with Intel® Core i5-6500TE 2.3 GHz, (up to 3.3 GHz, quad core, TDP 35W), 4GB DDR4 pre-installed memory, 1 x PCIe by 16 & 1 x PCIe by 1 & 1 x PCI expansion, VGA/HDMI, 9 ~ 36V DC, RoHS |

## Options

| Part No.                           | Description  |
|------------------------------------|--|
| <b>32000-000002-RS</b>             | European power cord  |
| <b>63040-010120-300-RS</b>         | Adapter Power;FSP;FSP120-AHAN3;9NA1206708;Active PFC;Vin:90 ~ 264VAC;120W;Dim:75.6*151.3*25.4mm;Plug=6.5mm;Cable=1500mm;Erp(NO LOAD 0.15W);Vout:12VDC;Din 4Pin/lock;CCL;RoHS |
| <b>EMB-FAN-KIT02-R10</b>           | Fan Module;MODIFY 31100-000272-RS;+12V DC;4PIN;40*40*15mm ;STANDARD;;FD124015LB2W3; L= 400mm MOLEX 5051-04P P=2.54;CCL;RoHS  |
| <b>EMB-WIFI-KIT11-R20</b>          | 1T1R wifi module kit for embedded system, IEEE802.11a/b/g/n/ac WiFi with Bluetooth 4.0/3.0+HS, 1 x wifi module, 2 x 400mm RF cable, 2 x Antenna, RoHS                        |
| <b>DK-75-R10</b>                   | DIN mount kit adapter for VESA-75  |
| <b>TANK-870e-H110-WES7E64-R10</b>  | OS Image with Windows® Embedded Standard 7 E 64-bit for TANK-870e-H110 Series, with DVD-ROM, RoHS  |
| <b>TANK-870e-H110-W10E64-V-R10</b> | OS Image with Windows® Embedded Standard 10 E Value 64-bit for TANK-870e-H110-i5 Series, with DVD-ROM, RoHS  |

## Packing List

|                   |                      |
|-------------------|----------------------|
| 1 x Chassis Screw | 1 x Mounting Bracket |
|-------------------|----------------------|



# TANK-610-BW

Fanless Embedded System

## Features

- Intel® Celeron® N3160 processor
- Multiple COM ports: six RS-232 and two RS-232/422/485
- VGA and HDMI dual independent display
- mSATA and one 2.5" SATA storage device
- Wide range temperature



## Specifications

| Model Name     | TANK-610-BW             |  |
|----------------|-------------------------|--|
| Chassis        | Color                   | Black C + Silver   |
|                | Dimensions (WxDxH) (mm) | 184 x 200.6 x 58.2   |
|                | System Fan              | Fanless  |
|                | Chassis Construction    | Extruded aluminum alloy  |
| Motherboard    | CPU                     | Intel® Celeron® N3160 1.6 GHz (up to 2.24 GHz, quad-core, TDP 6W)        |
|                | Chipset                 | SoC  |
|                | System Memory           | 2 x DDR3L SO-DIMM (2GB pre-installed)(up to 8GB)                         |
| Storage        | Hard Drive              | 1 x 2.5" SATA 6Gb/s HDD/SSD Bay  |
| I/O Interfaces | USB                     | 4 x USB 3.2 Gen1   |
|                | Ethernet                | 2 x RJ-45:<br>2 x GbE by Intel® I210                                     |
|                | COM Port                | 2 x RS-232/422/485 with AFC<br>6 x RS-232                                |
|                | Display                 | 1 x VGA (up to 1920 x 1200@60Hz)<br>1 x HDMI (up to 3840 x 2160@30Hz)    |
|                | Audio                   | 1 x Line-out, 1 x Mic-in   |
|                | Wireless                | 1 x 802.11a/b/g/n/ac (optional)  |
|                | Expansions              | PCIe Mini  |
| Power          | Power Input             | DC Jack: 9 ~ 36V DC<br>Terminal Block: 9 ~ 36V DC                        |
|                | Power Consumption       | 12 V@1.49 A (Intel® Celeron® N3160 with 4 GB DDR3L memory)               |
| Reliability    | Mounting                | Wall mount, VESA 100   |
|                | Operating Temperature   | -40°C ~ 60°C with air flow (SSD), 10% ~ 95% non-condensing               |
|                | Storage Temperature     | -40°C ~ 80°C with air flow (SSD), 10% ~ 95% non-condensing               |
|                | Operating Shock         | Half-sine wave shock 5G, 11ms, 100 shocks per axis (SSD)                 |
|                | Operating Vibration     | MIL-STD-810G 514.6C-1 (SSD)  |
|                | Weight (Net/Gross)      | 2.2 kg/3 kg  |
|                | Safety/EMC              | CE/FCC   |
| OS             | Supported OS            | Microsoft® Windows 8 Embedded, Microsoft® Windows® Embedded Standard 7 E |

## Various Applications



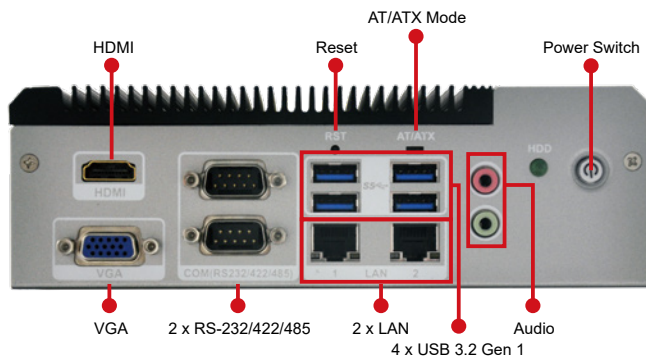
3 x Kiosk

Control Center

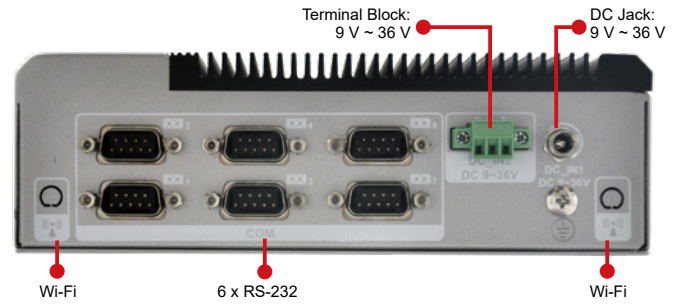
3 x AFC

Fully Integrated I/O

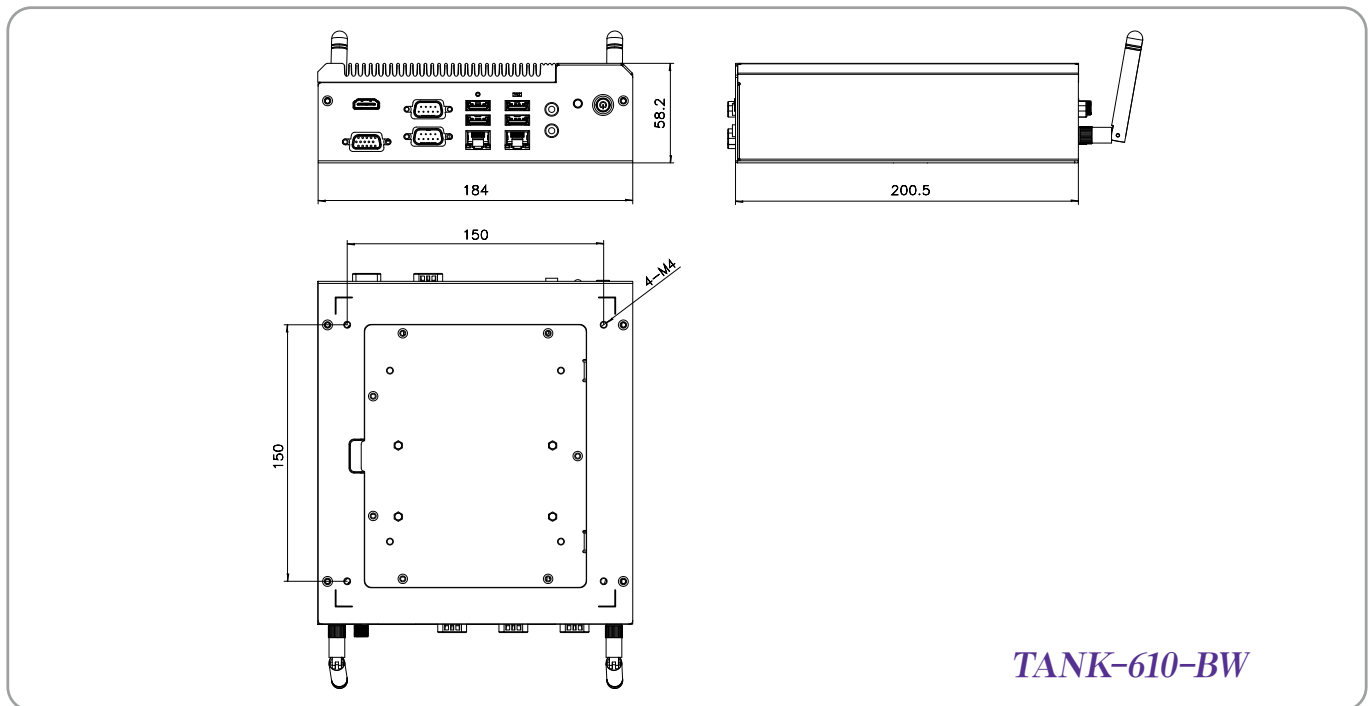
Front View



Rear View



Dimensions (Unit: mm)



TANK-610-BW

Ordering Information

| Part No.              | Description   |
|-----------------------|---|
| TANK-610-BW-N3/2G-R10 | Fanless wide temperature embedded system with Intel® Celeron® N3160 1.6 GHz, (up to 2.24 GHz, quad-core, TDP 6W), 2GB DDR3L pre-installed memory, 9 V ~ 36 V DC, with RS-232/422/485, USB 3.2 Gen 1 (5Gb/s), VGA/HDMI, dual Intel® PCIe GbE, RoHS |

Options

| Part No.                | Description   |
|-------------------------|---|
| AFLWK-19                | VESA 100 mount kit  |
| EMB-WIFI-KIT11-R20      | 1T1R wifi module kit for embedded system, IEEE802.11a/b/g/n/ac WiFi with Bluetooth 4.0/3.0+HS, 1 x wifi module, 2 x 350mm RF cable, 2 x Antenna, RoHS |
| TANK-610-BW-WES7E64-R10 | OS Image with Windows® Embedded Standard 7 E 64-bit for TANK-610 BW Series, with DVD-ROM, RoHS, R10   |
| DK-100-R10              | VESA 100 to DIN-Rail mounting kit   |

Packing List

| Item                           | Qty | Description  |
|--------------------------------|-----|--|
| Power cord                     | 1   | 1500 mm, European Standard                                     |
| Power adapter (Meet PSE & ErP) | 1   | FSP065-REBN2, 90 V ~ 264 V AC input, 65 W, 19 V DC output, ErP |
| Wall mount bracket             | 1   | Wall mount bracket/holder                                      |
| Screw set                      | 1   |  |

# DIN-Rail Embedded System



| Model Name     |                              | DRPC-W-TGL-U   | DRPC-W-JL  | DRPC-W-EHL   |
|----------------|------------------------------|--|--|--|
| Chassis        | Color                        | Black  |  |  |
|                | Dimensions (WxDxH)(mm)       | 176 x 116 x 67.8   | 176 x 116 x 60.8   |  |
|                | System Fan                   | Fanless  |  |  |
|                | Chassis Construction         | Extruded aluminum alloys   |  |  |
| Motherboard    | CPU                          | Intel® Core™ i7-1185G7E 1.8 GHz (up to 4.4 GHz, quad-core, TDP 15W)<br>Intel® Core™ i5-1145G7E 1.5 GHz (up to 4.1 GHz, quad-core, TDP 15W)<br>Intel® Core™ i3-1115G4E 2.2 GHz (up to 3.9 GHz, dual-core, TDP 15W)<br>Intel® Celeron® 6305 1.8 GHz (dual-core, TDP 15W) | Intel® Jasper Lake Celeron® N5105 2.0 GHz (up to 2.9 GHz, quad-core, TDP=10W)      | Intel® Atom® 6000 series (Elkhart Lake platform)<br>Intel® Celeron® J6412 2.0 GHz (up to 2.6 GHz, quad-core, TDP=10W)                                      |
|                | Chipset                      | SoC  |  |  |
|                | System Memory                | 1 x DDR4 3200 MHz SO-DIMM (up to 32GB)   | 1 x DDR4 2933 MHz SO-DIMM (up to 16GB)   | Onboard LPDDR4 8G (up to 16GB)   |
| Storage        | Hard Drive                   | 1 x 2.5" SATA 6Gb/s HDD bay  |  |  |
|                | eMMC                         | N/A  | N/A  | N/A  |
|                | Micro SD                     | N/A  | N/A  | N/A  |
| I/O Interfaces | USB                          | 4 x USB 3.2  | 2 x USB 3.2  | 2 x USB 3.2  |
|                | Ethernet                     | 3 x 2.5GbE   | 3 x 2.5GbE   | 2 x 2.5GbE   |
|                | COM Port                     | 2 x RS-232/422/485 (optional)  | 2 x RS-232 (optional)  | 2 x RS-232/422/485 (optional)  |
|                | Digital I/O                  | 1 x 12-bit digital I/O (optional)  |  |  |
|                | Display                      | 1 x DP, 2 x HDMI   | 1 x DP, 1 x HDMI   | 1 x DP, 1 x HDMI   |
|                | Wireless                     | Optional   |  |  |
|                | TPM                          | Intel PTT  |  |  |
|                | Other                        | 1 x Power button, 1 x Reset button, 1 x Power LED, 1 x HDD LED, 1 x System fan connector   |  |  |
| Expansions     | PCIe Mini                    | N/A  | N/A  | N/A  |
|                | M.2                          | 1 x M.2 2230 A key slot for Wi-Fi & BT<br>1 x M.2 2242/3052 B key slot for 5G (PCIe x2)<br>1 x M.2 2240/3040 B key slot (only for IEI M.2 eDP/LVDS module)   | 1 x M.2 2230 A key slot<br>1 x M.2 3042/2280 B key slot for 5G, w/ SIM slot (PCIe) | 1 x M.2 2230 A key slot for Wi-Fi & BT<br>1 x M.2 2242/3052 B key slot for 5G (PCIe x2)<br>1 x M.2 2240/3040 B key slot (only for IEI M.2 eDP/LVDS module) |
|                | Backplane                    | N/A  | N/A  | N/A  |
| Power          | Power Input                  | 12V DC   |  |  |
|                | Power Consumption            | 12V@4.1A<br>(Intel® i5-1145G7E with 8GB DDR4 memory)   | 12V@2.45A<br>(Intel® N5105 with 16GB DDR4 memory)                                  | 12V@2.5A<br>(Intel® J6412 with 4GB DDR4 memory)  |
|                | Remote PWR                   | N/A  | N/A  | N/A  |
| Reliability    | Mounting                     | DIN-Rail   |  |  |
|                | Operating Temperature        | -20°C ~ 60°C with airflow, 10% ~ 95% non-condensing  |  |  |
|                | Storage Temperature          | -30°C ~ 85°C, 10% ~ 95% non-condensing   |  |  |
|                | Operating Shock              | Half-sine wave shock 5G, 11ms, 3 shocks per axis   |  |  |
|                | Operating Vibration          | MIL-STD-810F 514.5C-2  |  |  |
|                | Weight (Net/Gross)           | 0.98/1.2 kg  | 0.91/1.16 kg   | 0.92/1.16 kg   |
|                | Safety/EMC                   | CE/ FCC  |  |  |
| Watchdog Timer | Programmable 1 ~ 255 sec/min |  |  |  |
| OS             | Supported OS                 | Microsoft® Windows 10 / 11, Linux  |  |  |

# DIN-Rail Embedded System

**New**



| Model Name     |                              | DRPC-240-TGL-U  | DRPC-230-ULT5  |
|----------------|------------------------------|---|--|
| Chassis        | Color                        | Black   | Black & Silver   |
|                | Dimensions (WxDxH)(mm)       | 81 x 150 x 190  | Non-slot: 81 x 150 x 190<br>One-slot: 127 x 150 x 190  |
|                | System Fan                   | Fanless   | Fanless  |
|                | Chassis Construction         | Extruded aluminum alloy   | Extruded aluminum alloy  |
| Motherboard    | CPU                          | Intel® Celeron® 6305 1.8 GHz (dual-core, TDP 15W)<br>Intel® Core™ i5-1145G7E 1.5 GHz (up to 4.1 GHz, quad-core, TDP 15W)<br>Intel® Core™ i7-1185G7E 1.8 GHz (up to 4.4 GHz, quad-core, TDP 15W) | Intel® Core™ i5-8365UE 1.6 GHz (up to 4.1 GHz, quad-core, TDP 15W)<br>Intel® Celeron® 4205U 1.8 GHz (dual-core, TDP 15W) |
|                | Chipset                      | SoC   | SoC  |
|                | System Memory                | 2 x SO-DIMM DDR4 3200 MHz (8 GB pre-installed) (up to 64GB)<br>Support in-band ECC  | 2 x SO-DIMM DDR4 2400 MHz (8GB pre-installed) (up to 64GB)   |
| Storage        | Hard Drive                   | 1 x 2.5" SATA 6Gb/s HDD/SSD bay   | 1 x 2.5" SATA 6Gb/s HDD/SSD bay  |
|                | eMMC                         | N/A   | N/A  |
|                | Micro SD                     | N/A   | N/A  |
| I/O Interfaces | USB                          | 2 x USB 3.2 Gen 2<br>2 x USB 2.0  | i5 model: 6 x USB 3.2 Gen 2<br>Celeron model: 4 x USB 3.2 Gen 2, 2 x USB 2.0   |
|                | Ethernet                     | 4 x RJ-45:<br>1 x 2.5 GbE by Intel® I225LM<br>3 x 2.5 GbE by Intel® I225V (colay I225LM)<br>* Support optional PoE af module  | 3 x RJ-45:<br>1 x GbE by Intel® I219<br>2 x GbE by Intel® I210   |
|                | COM Port                     | 2 x RS-422/485 with AFC (DB-9, with 2.5kV isolation)<br>2 x RS-232 (DB-9, with 2.5kV isolation)   | 4 x RS-232/422/485 with AFC (DB9)<br>2 x RS-232 (RJ-45)  |
|                | Digital I/O                  | 12-bit Digital I/O (6-in/ 6-out)  | 8-bit Digital I/O (4-in/ 4-out)(pin header)  |
|                | Display                      | 1 x HDMI (up to 3840 x 2160@30Hz)<br>1 x DP++ (up to 4096 x 2304@60Hz)  | 1 x HDMI (up to 3840 x 2160@30Hz)<br>1 x DP (up to 4096 x 2304@60Hz)   |
|                | Wireless                     | 1 x 802.11a/b/g/n/ac (optional)   | 1 x 802.11a/b/g/n/ac (optional)  |
|                | TPM                          | Support Intel PTT   | 1 x TPM 2.0 (2 x 10 pin)(optional)   |
|                | Other                        | 1 x Power button, 1 x Reset button, 1 x AT/ATX switch, 1 x Power LED (green),<br>1 x HDD LED (yellow), 4-pin external system fan connector  | 1 x Power button, 1 x Reset button, 1 x AT/ATX switch, 1 x Power LED (green),<br>1 x HDD LED (yellow)                    |
| Expansions     | PCIe Mini                    | N/A   | 1 x Full-size with SIM card slot (PCIe/USB 3.0/SATA)   |
|                | M.2                          | 1 x 2230 A-key (PCIe x1/USB 2.0)<br>1 x 3042/52/80 B-key (PCIe x2/USB 3.0/USB 2.0)  | i5 model: 1 x 2230 A-key (PCIe x1/USB 2.0)<br>Celeron model: 1 x 2230 A-key (PCIe x1)                                    |
|                | Backplane                    | 1 x PCIe Gen 3 x4   | One-slot:<br>1 x PCIe Gen 3 x4, 1 x USB 2.0  |
| Power          | Power Input                  | Terminal block: 12 ~ 28V DC   | Terminal block: 12 ~ 24V DC  |
|                | Power Consumption            | 12V @ 6.98A<br>(Intel® Core™ i5-1145G7E with 8GB memory)  | 12V @ 4.98A<br>(Intel® Core™ i5-8365UE with 8GB memory)  |
|                | Remote PWR                   | N/A   | N/A  |
| Reliability    | Mounting                     | DIN-Rail  | DIN-Rail   |
|                | Operating Temperature        | -20°C ~ 60°C with air flow (SSD), 10% ~ 95% non-condensing  | -20°C ~ 60°C with air flow, 10% ~ 95% non-condensing   |
|                | Storage Temperature          | -40°C ~ 85°C, 10% ~ 95% non-condensing  | -40°C ~ 85°C with air flow (SSD), 10% ~ 95% non-condensing   |
|                | Operating Shock              | Half-sine wave shock 5G, 11ms, 100 shocks per axis (SSD)  | Half-sine wave shock 5G, 11ms, 100 shocks per axis (SSD)   |
|                | Operating Vibration          | MIL-STD-810G 514.6C-1 (SSD)   | MIL-STD-810G 514.6C-1 (SSD)  |
|                | Weight (Net/ Gross)          | 2.15/ 2.5 kg  | Non-slot: 2.9 kg/ 3.2 kg<br>One-slot: 3.2 kg/ 3.5 kg   |
|                | Safety/EMC                   | CE/ FCC   | CE/ FCC  |
| Watchdog Timer | Programmable 1 ~ 255 sec/min | Programmable 1 ~ 255 sec/min  |  |
| OS             | Supported OS                 | Microsoft Windows 10 / Windows 11, Linux  | Microsoft Windows 10 / Windows 11, Linux   |

# DIN-Rail Embedded System



| Model Name     |                              | DRPC-130-AL   | DRPC-120-BT   |
|----------------|------------------------------|---|---|
| Chassis        | Color                        | Black   | Black   |
|                | Dimensions (WxDxH) (mm)      | 58.75 x 130 x 174   | 74.08 x 140 x 171.5   |
|                | System Fan                   | Fanless   | Fanless   |
|                | Chassis Construction         | Extruded aluminum alloy   | Extruded aluminum alloy   |
| Motherboard    | CPU                          | Intel® Atom® x5-E3930 1.3 GHz (up to 1.8 GHz, dual-core, TDP 6.5W)                                    | Intel® Atom® E3845 1.91 GHz (quad-core, TDP 10W)  |
|                | Chipset                      | SoC   | SoC   |
|                | System Memory                | 1 x SO-DIMM DDR3L 1333/1600 (4GB pre-installed) (up to 8GB)   | 1 x SO-DIMM DDR3L 1066 (2GB pre-installed) (up to 8GB)                                      |
| IPMI           | iRIS Solution                | N/A   | 1 x iRIS-2400 (optional)  |
| Storage        | Hard Drive                   | 1 x 2.5" SATA 6Gb/s HDD/SSD bay   | 1 x 2.5" SATA 3Gb/s HDD/SSD bay   |
|                | eMMC                         | 1 x eMMC 5.0 (optional, up to 32GB)   | N/A   |
| I/O Interfaces | USB                          | 4 x USB 3.2 Gen 1   | 2 x USB 3.2 Gen 1<br>2 x USB 2.0  |
|                | Ethernet                     | 2 x RJ-45:<br>2 x GbE by Intel® I211  | 2 x RJ-45:<br>1 x GbE by Intel® I211<br>1 x GbE by Intel® I210                              |
|                | COM Port                     | 4 x RS-232/422/485 with AFC (DB9)   | 2 x RS-232/422/485 with AFC (DB9 with 3kV isolation)<br>2 x RS-232 (DB9 with 3kV isolation) |
|                | Digital I/O                  | 8-bit Digital I/O (4-in/ 4-out)   | 8-bit Digital I/O (4-in/ 4-out)   |
|                | CAN-bus                      | 1 x Port support two CAN-bus (DB9 with 2.5kV isolation)   | N/A   |
|                | Display                      | 2 x HDMI (up to 3840 x 2160@30Hz)   | 1 x HDMI (up to 1920 x 1200@60Hz)<br>1 x VGA (up to 1920 x 1200@60Hz)                       |
|                | Wireless                     | 1 x 802.11a/b/g/n/ac (optional)   | 1 x 802.11a/b/g/n/ac (optional)   |
|                | TPM                          | 1 x TPM 2.0 (2 x 10 pin) (optional)   | N/A   |
|                | Motor Connector              | N/A   | N/A   |
|                | Other                        | 1 x Power button, 1 x Reset button, 1 x AT/ATX switch, 1 x Power LED (green),<br>1 x HDD LED (yellow) | 1 x Power button, 1 x Reset button, 1 x AT/ATX switch                                       |
| Expansions     | PCIe Mini                    | 1 x Half-size (PCIe/USB 2.0)<br>1 x Full-size (PCIe/USB 2.0/SATA)                                     | 1 x Half-size (PCIe)<br>1 x Full-size (PCIe/USB 2.0/SATA)                                   |
|                | M.2                          | N/A   | N/A   |
| Power          | Power Input                  | Terminal block: 12 ~ 24V DC   | Terminal block: 9 ~ 30V DC  |
|                | Power Consumption            | 12V @ 2.88 A<br>(Intel® Atom® x5-E3930 with 4GB memory)   | 12V @ 2.1 A<br>(Intel® Atom® E3845 with 2GB memory)   |
|                | Remote PWR                   | Terminal block: PSON  | N/A   |
| Reliability    | Mounting                     | DIN-Rail  | DIN-Rail  |
|                | Operating Temperature        | -20°C ~ 60°C with air flow (SSD), 10% ~ 95% non-condensing  | -20°C ~ 60°C with air flow (SSD), 10% ~ 95% non-condensing                                  |
|                | Storage Temperature          | -40°C ~ 85°C with air flow (SSD), 10% ~ 95% non-condensing  | -40°C ~ 85°C with air flow (SSD), 10% ~ 95% non-condensing                                  |
|                | Operating Shock              | Half-sine wave shock 5G, 11ms, 100 shocks per axis (SSD)  | Half-sine wave shock 5G, 11ms, 100 shocks per axis (SSD)                                    |
|                | Operating Vibration          | MIL-STD-810G 514.6C-1 (SSD)   | MIL-STD-810G 514.6C-1 (SSD)   |
|                | Weight (Net/Gross)           | 1.4 kg/ 2.5 kg  | 1.4 kg/ 2.5 kg  |
|                | Safety/EMC                   | CE/ FCC   | CE/ FCC   |
| Watchdog Timer | Programmable 1 ~ 255 sec/min | Programmable 1 ~ 255 sec/min  |   |
| OS             | Supported OS                 | Microsoft® Windows 10, Linux  | Microsoft® 8, Microsoft® Windows® Embedded Standard 7 E                                     |



# DRPC-W-TGL-U

- Fanless DIN-Rail Embedded System
- Tiger Lake 11<sup>th</sup> Gen Intel® Celeron™ Solution (up to 4 cores)

**Preliminary**



## Features

- Supported CPU:
  - Intel® Core™ i7-1185G7E 1.8 GHz (up to 4.4 GHz, quad-core, TDP 15W)
  - Intel® Core™ i5-1145G7E 1.5 GHz (up to 4.1 GHz, quad-core, TDP 15W)
  - Intel® Core™ i3-1115G4E 2.2 GHz (up to 3.9 GHz, dual-core, TDP 15W)
  - Intel® Celeron™ 6305 1.8 GHz (dual-core, TDP 15W)
- Support dual independent display
- 2 x 2.5GbE ports
- 1 x M.2 A Key
- 1 x M.2 B Key (with SIM card slot)



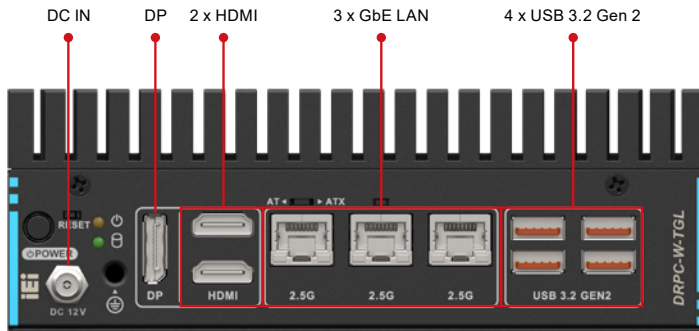
External fan module

## Specifications

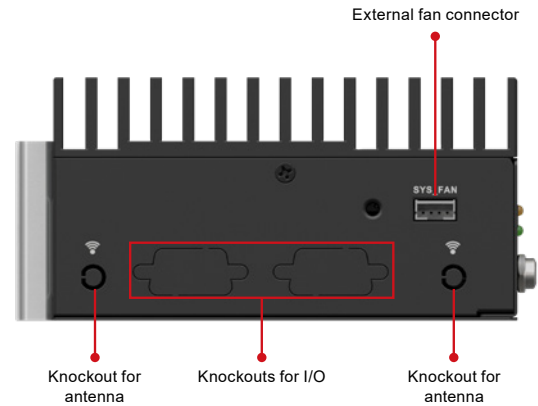
| Model Name          |                         | DRPC-W-TGL-U-i7C-R10  | DRPC-W-TGL-U-i5C-R10  | DRPC-W-TGL-U-i3C-R10  | DRPC-W-TGL-U-CC-R10                               |
|---------------------|-------------------------|---|---|---|---|
| Chassis             | Color                   | Black   |   |   |   |
|                     | Dimensions (WxDxH) (mm) | 176 x 116 x 67.8  |   |   |   |
|                     | System Fan              | Fanless   |   |   |   |
|                     | Chassis Construction    | Extruded aluminum alloys  |   |   |   |
| Motherboard         | CPU                     | Intel® Core™ i7-1185G7E 1.8 GHz (up to 4.4 GHz, quad-core, TDP 15W)   | Intel® Core™ i5-1145G7E 1.5 GHz (up to 4.1 GHz, quad-core, TDP 15W) | Intel® Core™ i3-1115G4E 2.2 GHz (up to 3.9 GHz, dual-core, TDP 15W) | Intel® Celeron™ 6305 1.8 GHz (dual-core, TDP 15W) |
|                     | Chipset                 | SoC   |   |   |   |
|                     | Memory                  | 1x DDR4 3200MHz SO-DIMM (pre-installed 8GB) (up to 32GB)  |   |   |   |
| Storage             | HDD Bay                 | 1 x 2.5" SATA 6Gb/s HDD bay   |   |   |   |
| IO Interfaces       | USB                     | 4 x USB 3.2   |   |   |   |
|                     | LAN                     | 3 x 2.5GbE  |   |   |   |
|                     | Display                 | 1 x DP, 2 x HDMI  |   |   |   |
|                     | Others                  | 1 x Power button, 1 x Reset button, 1 x Power LED, 1 x HDD LED, 1 x System fan connector                      |   |   |   |
| Internal Expansions | PCIe Mini               | N/A   |   |   |   |
|                     | M.2                     | 1 x M.2 A Key 2230 for WIFI & BT (optional)<br>1 x M.2 B Key (PCIe x2) 3042/3052 w/SIM slot for 5G (optional) |   |   |   |
| Power               | Power Input             | 12V DC  |   |   |   |
|                     | Power Consumption       | 12V@4.1A (Intel i5-1145G7E With 8GB DDR4 Memory)  |   |   |   |
| Reliability         | Mounting                | DIN-Rail  |   |   |   |
|                     | Operating Temperature   | -20°C ~ 60°C with airflow, 10% ~ 95% non-condensing   |   |   |   |
|                     | Storage Temperature     | -30°C ~ 85°C, 10% ~ 95% non-condensing  |   |   |   |
|                     | Operating Shock         | Half-sine wave shock 5G, 11ms, 3 shocks per axis  |   |   |   |
|                     | Operating Vibration     | MIL-STD-810F 514.5C-2   |   |   |   |
|                     | Weight (Net/Gross)      | 0.98/1.2 Kg   |   |   |   |
|                     | Safety/EMC              | CE/FCC  |   |   |   |
|                     | Watchdog Timer          | Programmable 1 ~ 255 sec/min  |   |   |   |
| OS                  | Supported OS            | Microsoft® Windows 10 / 11, Linux   |   |   |   |

Fully Integrated I/O

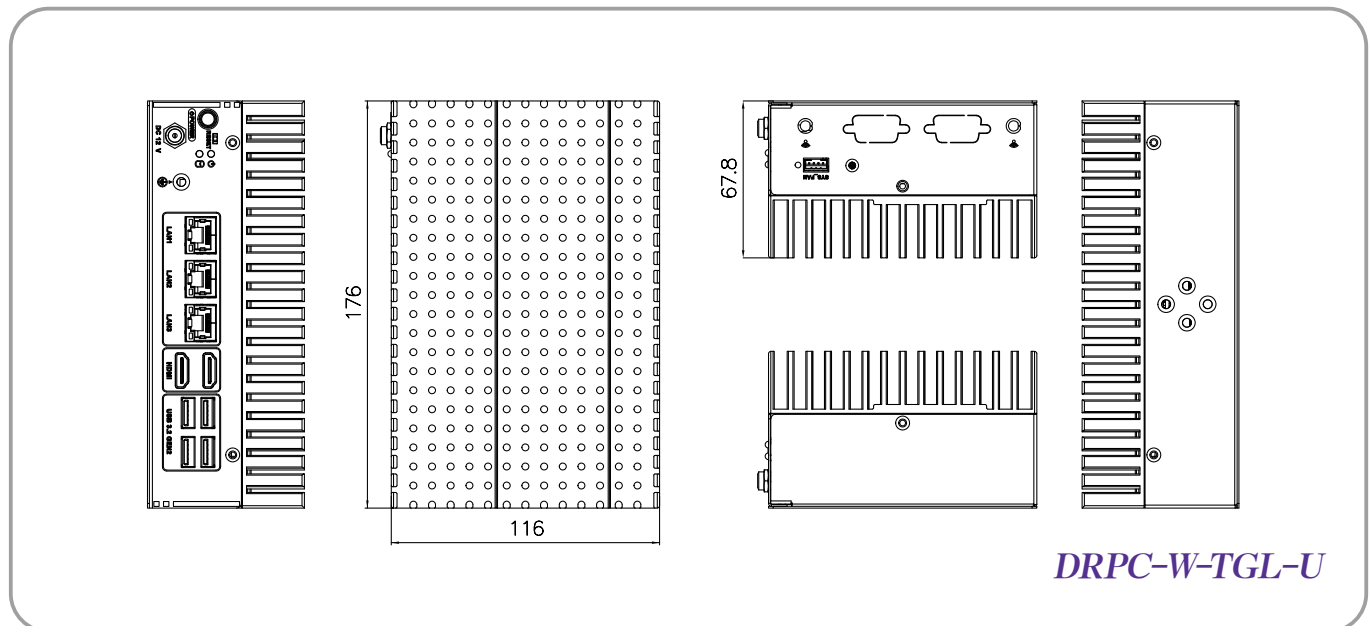
Front View



Top View



Dimensions (Unit: mm)



Ordering Information

| Part No.             | Description   |
|----------------------|---|
| DRPC-W-TGL-U-CC-R10  | Fanless System with Intel® Tiger Lake-U Celeron™ 6305 1.8 GHz (dual core, TDP 15W), 3 x 2.5GbE Lan, 1 x HDMI, 1 x DP, 8GB memory pre-installed, 12V DC, RoHS    |
| DRPC-W-TGL-U-i3C-R10 | Fanless System with Intel® Core™ Tiger Lake-U i3-1115G4E 2.2 GHz (quad core, TDP 15W), 3 x 2.5GbE Lan, 1 x HDMI, 1 x DP, 8GB memory pre-installed, 12V DC, RoHS |
| DRPC-W-TGL-U-i5C-R10 | Fanless System with Intel® Core™ i5-1145G7E up to 4.1 GHz TDP 28/15/12W, 3 x 2.5GbE Lan, 1 x HDMI, 1 x DP, 8GB memory pre-installed, 12V DC, RoHS               |
| DRPC-W-TGL-U-i7C-R10 | Fanless System with Intel® Tiger Lake-U i7-1185G7E 1.8 GHz (quad core, TDP 15W), 3 x 2.5GbE Lan, 1 x HDMI, 1 x DP, 8GB memory pre-installed, 12V DC, RoHS       |

Options

| Item     | Part No.             | Description   |
|----------|----------------------|---|
| Adapter  | 63040-010060-211-RS  | Adapter Power;FSP;FSP060-DHAN3;9NA0608097;;Vin:90~264VAC;60W;Dim:62.0*110*31.5mm;Plug=7.5mm;Cable=1200mm;Erp(NO LOAD 0.21W);Vout:12VDC;Φ2.5/Φ5.5/lock;CCL;RoHS              |
| Wifi Kit | EMB-WIFI-KIT0213-R10 | 2T2R M.2 wifi module kit for embedded system, IEEE802.11a/b/g/n/ac/ax, 1 x M.2 AE Key Wireless LAN & Bluetooth 5.2;Intel;AX210.NGWG Module, 2 x RF cable, 2 x Antenna; RoHs |
| Fan Kit  | SF-DRPC-W-R10        | External fan for DRPC-W Series  |

Packing List

|                           |                |                                 |
|---------------------------|----------------|---------------------------------|
| 1 x DIN-rail mounting kit | 1 x Screw pack | 1 x SATA cable with power cable |
|---------------------------|----------------|---------------------------------|

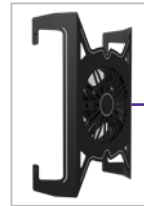
# DRPC-W-JL

- Fanless DIN-Rail Embedded System
- Jasper Lake Intel® Celeron™ Solution (up to 4 cores)



## Features

- Supported CPU: Intel® N5105 2.0 GHz (up to 2.9 GHz, quad-core, TDP 10W)
- Support dual independent display
- 3 x 2.5GbE ports
- 1 x M.2 A Key
- 1 x M.2 B Key (with SIM card slot)



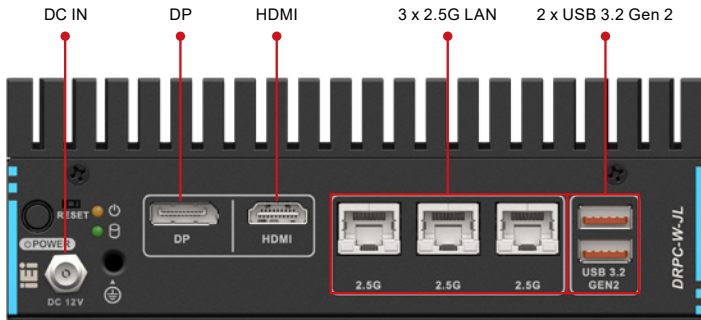
External fan module

## Specifications

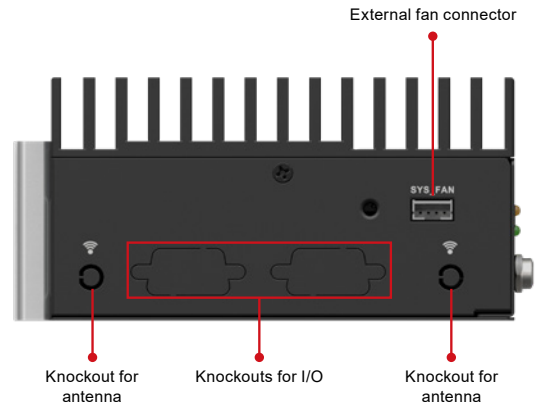
| Model Name          |                              | DRPC-W-JL   |
|---------------------|------------------------------|---|
| Chassis             | Color                        | Black   |
|                     | Dimensions (WxDxH) (mm)      | 176 x 116 x 60.8  |
|                     | System Fan                   | Fanless   |
|                     | Chassis Construction         | Extruded aluminum alloys  |
| Motherboard         | CPU                          | Intel® Celeron® N5105 2.0 GHz (up to 2.9 GHz, quad-core, TDP 10W)   |
|                     | Chipset                      | SoC   |
|                     | Memory                       | 1 x DDR4 2933 MHz SO-DIMM (pre-installed 8GB) (up to 16GB)  |
| Storage             | HDD Bay                      | 1 x 2.5" SATA 6Gb/s HDD bay   |
| IO Interfaces       | USB                          | 2 x USB 3.2   |
|                     | LAN                          | 3 x 2.5GbE  |
|                     | Display                      | 1 x DP<br>1 x HDMI  |
|                     | Others                       | 1 x Power button, 1 x Reset button, 1 x Power LED, 1 x HDD LED, 1 x System fan connector                      |
| Internal Expansions | PCIe Mini                    | N/A   |
|                     | M.2                          | 1 x M.2 A Key 2230 for WIFI & BT (optional)<br>1 x M.2 B Key (PCIe x2) 2242/2280 w/SIM slot for 5G (optional) |
| Power               | Power Input                  | 12V DC  |
|                     | Power Consumption            | 12V@2.45A (Intel N5105 with 16GB DDR4 memory )  |
| Reliability         | Mounting                     | DIN-Rail  |
|                     | Operating Temperature        | -20°C ~ 60°C with airflow, 10% ~ 95% non-condensing   |
|                     | Storage Temperature          | -30°C ~ 85°C, 10% ~ 95% non-condensing  |
|                     | Operating Shock              | Half-sine wave shock 5G, 11ms, 3 shocks per axis  |
|                     | Operating Vibration          | MIL-STD-810F 514.5C-2   |
|                     | Weight (Net/Gross)           | 0.91/1.16 kg  |
|                     | Safety/EMC                   | CE/FCC  |
| Watchdog Timer      | Programmable 1 ~ 255 sec/min |   |
| OS                  | Supported OS                 | Microsoft® Windows 10 / 11, Linux   |

Fully Integrated I/O

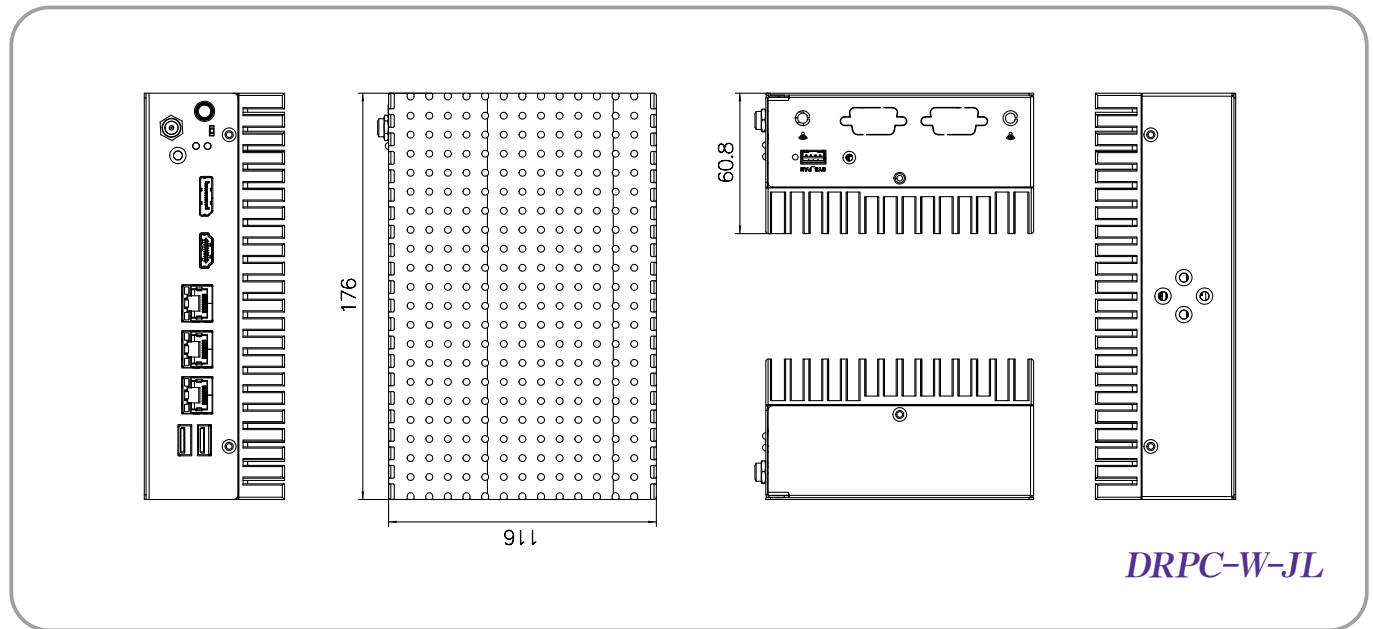
Front View



Top View



Dimensions (Unit: mm)



Ordering Information

| Part No.         | Description   |
|------------------|---|
| DRPC-W-JL-NC-R10 | Fanless System with Intel® Celeron™ N5105 up to 2.9 GHz TDP 10W, 3 x 2.5GbE Lan, 1 x HDMI, 1 x DP, 8GB memory pre-installed, 12V DC, RoHS |

Options

| Item     | Part No.             | Description   |
|----------|----------------------|---|
| Adapter  | 63040-010060-211-RS  | Adapter Power:FSP;FSP060-DHAN3;9NA0608097;;Vin:90~264VAC;60W;Dim:62.0*110*31.5mm;Plug=7.5mm;Cable=1200mm;Erp(NO LOAD 0.21W);Vout:12VDC;Φ2.5/Φ5.5/lock;CCL;RoHS              |
| Wifi Kit | EMB-WIFI-KIT0213-R10 | 2T2R M.2 wifi module kit for embedded system, IEEE802.11a/b/g/n/ac/ax, 1 x M.2 AE Key Wireless LAN & Bluetooth 5.2;Intel;AX210.NGWG Module, 2 x RF cable, 2 x Antenna; RoHS |
| Fan Kit  | SF-DRPC-W-R10        | External fan for DRPC-W Series  |

Packing List

|                           |                |                                 |
|---------------------------|----------------|---------------------------------|
| 1 x DIN-rail mounting kit | 1 x Screw pack | 1 x SATA cable with power cable |
|---------------------------|----------------|---------------------------------|

# DRPC-W-EHL

- Fanless DIN-Rail Embedded System
- Elkhart Lake Intel® Celeron™ Solution (up to 4 cores)

**Preliminary**



## Features

- Supported CPU: Intel® Celeron™ J6412 2.0 GHz (up to 2.6 GHz, quad-core, TDP 10W)
- Support dual independent display
- 2 x 2.5GbE ports
- 1 x M.2 A Key
- 1 x M.2 B Key (with SIM card slot)



External fan module

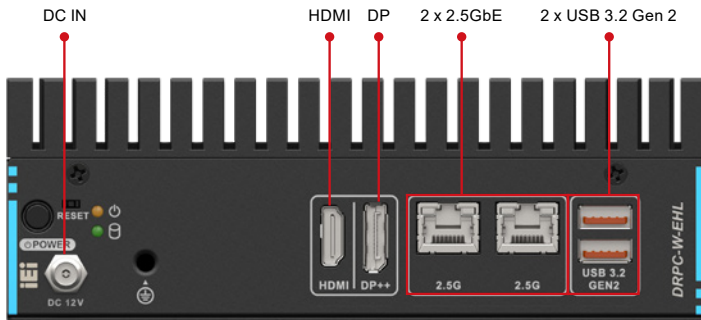
## Specifications

| Model Name          |                         | DRPC-W-EHL   |
|---------------------|-------------------------|--|
| Chassis             | Color                   | Black  |
|                     | Dimensions (WxDxH) (mm) | 176 x 116 x 60.8   |
|                     | System Fan              | Fanless  |
|                     | Chassis Construction    | Extruded aluminum alloys   |
| Motherboard         | CPU                     | Intel® Celeron® J6412 2.0 GHz (up to 2.6 GHz, quad-core, TDP 10W)  |
|                     | Chipset                 | SoC  |
|                     | Memory                  | Onboard LPDDR4X 3200MHz 8G (up to 16GB)  |
| Storage             | HDD Bay                 | 1 x 2.5" SATA 6Gb/s HDD bay  |
| IO Interfaces       | USB                     | 2 x USB 3.2  |
|                     | LAN                     | 2 x 2.5GbE   |
|                     | Display                 | 1 x DP<br>1 x HDMI   |
|                     | Others                  | 1 x Power button, 1 x Reset button, 1 x Power LED, 1 x HDD LED, 1 x System fan connector                 |
| Internal Expansions | PCIe Mini               | N/A  |
|                     | M.2                     | 1 x M.2 A Key 2230 for WIFI & BT (optional)<br>1 x M.2 B Key (PCIe x2) 3042 w/SIM slot for 5G (optional) |
| Power               | Power Input             | 12V DC   |
|                     | Power Consumption       | 12V@2.5A (Intel J6412 With 4GB DDR4 Memory)  |
| Reliability         | Mounting                | DIN-Rail   |
|                     | Operating Temperature   | -20°C ~ 60°C with airflow, 10% ~ 95% non-condensing  |
|                     | Storage Temperature     | -30°C ~ 85°C, 10% ~ 95% non-condensing   |
|                     | Operating Shock         | Half-sine wave shock 5G, 11ms, 3 shocks per axis   |
|                     | Operating Vibration     | MIL-STD-810F 514.5C-2  |
|                     | Weight (Net/Gross)      | 0.92/1.16 Kg   |
|                     | Safety/EMC              | CE/FCC   |
|                     | Watchdog Timer          | Programmable 1 ~ 255 sec/min   |

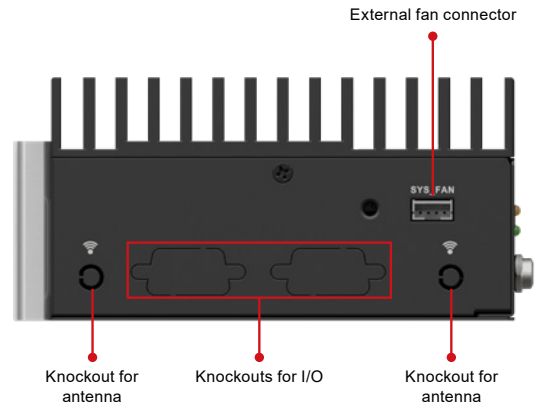


Fully Integrated I/O

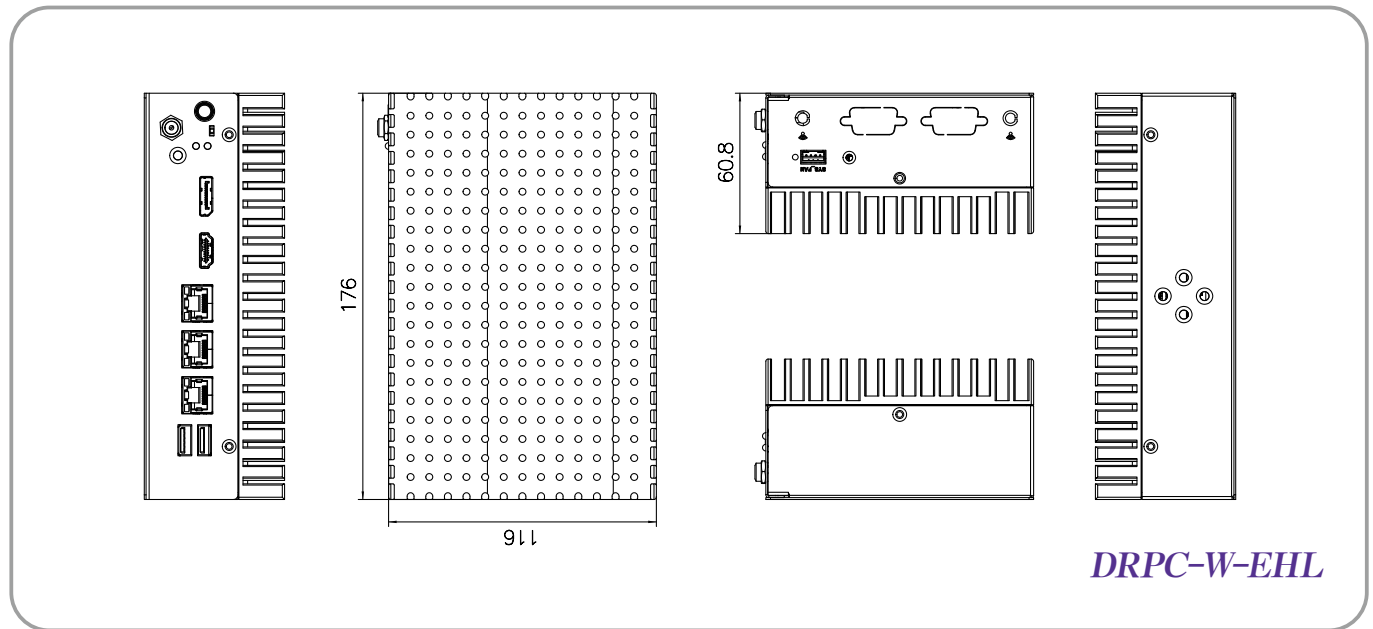
Front View



Top View



Dimensions (Unit: mm)



Ordering Information

| Part No.          | Description  |
|-------------------|--|
| DRPC-W-EHL-JC-R10 | Fanless System with Intel® Celeron® J6412 up to 2.6 GHz TDP 10W, 2 x 2.5GbE Lan, 1 x HDMI, 1 x DP, 1 x 2.5" SATA HDD bay, 8GB memory pre-installed, 12V DC, RoHS |

Options

| Item     | Part No.             | Description   |
|----------|----------------------|---|
| Adapter  | 63040-010060-211-RS  | Adapter Power;FSP;FSP060-DHAN3;9NA0608097;;Vin:90~264VAC;60W;Dim:62.0*110*31.5mm;Plug=7.5mm;Cable=1200mm;Erp(NO LOAD 0.21W);Vout:12VDC;Φ2.5/Φ5.5/lock;CCL;RoHS              |
| Wifi Kit | EMB-WIFI-KIT02I3-R10 | 2T2R M.2 wifi module kit for embedded system, IEEE802.11a/b/g/n/ac/ax, 1 x M.2 AE Key Wireless LAN & Bluetooth 5.2;Intel;AX210.NGWG Module, 2 x RF cable, 2 x Antenna; RoHs |
| Fan Kit  | SF-DRPC-W-R10        | External fan for DRPC-W Series  |

Packing List

|                           |                |                                 |
|---------------------------|----------------|---------------------------------|
| 1 x DIN-rail mounting kit | 1 x Screw pack | 1 x SATA cable with power cable |
|---------------------------|----------------|---------------------------------|

# DRPC-240-TGL-U

■ Fanless DIN-Rail Embedded System  
 ■ Tiger Lake 11<sup>th</sup> Gen Intel® Core™  
 Solution (up to 4 cores)

**New**

## Features

- Supported CPUs:
  - Intel® Celeron® 6305 1.8 GHz (dual-core, 15W TDP)
  - Intel® Core™ i5-1145G7E 1.5 GHz (up to 4.1 GHz, quad-core, 15W TDP)
  - Intel® Core™ i7-1185G7E 1.8 GHz (up to 4.4 GHz, quad-core, 15W TDP)
- 4 x 2.5GbE ports, supporting PoE (optional)
- Two RS-232 & two RS-422/485 (with 2.5kV isolation)
- CE/FCC compliant



## Specifications

| Model Name     |                              | DRPC-240-TGL-U-i7CS-R10  | DRPC-240-TGL-U-i5CS-R10  | DRPC-240-TGL-U-CCS-R10                               |
|----------------|------------------------------|--|--|--|
| Chassis        | Color                        | Black  |  |  |
|                | Dimensions (WxDxH) (mm)      | 81 x 150 x 190   |  |  |
|                | System Fan                   | Fanless  |  |  |
|                | Chassis Construction         | Extruded aluminum alloys   |  |  |
| Motherboard    | CPU                          | Intel® Core™ i7-1185G7E 1.8 GHz<br>(up to 4.4 GHz, quad-core, TDP 15W)   | Intel® Core™ i5-1145G7E 1.5 GHz<br>(up to 4.1 GHz, quad-core, TDP 15W) | Intel® Celeron® 6305 1.8 GHz<br>(dual-core, TDP 15W) |
|                | Chipset                      | SoC  |  |  |
|                | BIOS                         | BIOS   |  |  |
|                | Memory                       | 2 x SO-DIMM DDR4 3200 MHz (8 GB pre-installed) (up to 64GB)<br>Support in-band ECC   |  |  |
| Storage        | HDD Bay                      | 1 x 2.5" SATA 6Gb/s HDD/SSD bay  |  |  |
| I/O Interfaces | USB                          | 2 x USB 3.2 Gen 2<br>2 x USB 2.0   |  |  |
|                | Ethernet                     | 4 x RJ-45:<br>1 x 2.5GbE by Intel® I225LM<br>3 x 2.5GbE by Intel® I225V (colay I225LM)<br>* Support optional PoE af module                 |  |  |
|                | Port                         | 2 x RS-422/485 with AFC (DB-9, with 2.5kV isolation)<br>2 x RS-232 (DB-9, with 2.5kV isolation)  |  |  |
|                | Digital I/O                  | 12-bit Digital I/O (6-in/ 6-out)   |  |  |
|                | Display                      | 1 x HDMI (up to 3840 x 2160@30Hz)<br>1 x DP++ (up to 4096 x 2304@60Hz)   |  |  |
|                | Wireless                     | 1 x 802.11a/b/g/n/ac (optional)  |  |  |
|                | TPM                          | Support Intel PTT  |  |  |
|                | Others                       | 1 x Power button, 1 x Reset button, 1 x AT/ATX switch, 1 x Power LED (green),<br>1 x HDD LED (yellow), 4-pin external system fan connector |  |  |
| Expansions     | M.2                          | 1 x 2230 A-key (PCIe x1/USB 2.0)<br>1 x 3042/52/80 B-key (PCIe x2/USB 3.0/USB 2.0)   |  |  |
|                | Backplane                    | 1 x PCIe Gen 3 x4 (optional)   |  |  |
| Power          | Power Input                  | Terminal block: 12 ~ 28V DC  |  |  |
|                | Power Consumption            | 12V @ 6.98A (Intel® Core™ i5-1145G7E with 8GB memory)  |  |  |
| Reliability    | Mounting                     | DIN-Rail   |  |  |
|                | Operating Temperature        | -20°C ~ 60°C with air flow (SSD), 10% ~ 95% non-condensing   |  |  |
|                | Storage Temperature          | -40°C ~ 85°C, 10% ~ 95% non-condensing   |  |  |
|                | Operating Shock              | Half-sine wave shock 5G, 11ms, 100 shocks per axis (SSD)   |  |  |
|                | Operating Vibration          | MIL-STD-810G 514.6C-1 (SSD)  |  |  |
|                | Weight (Net/Gross)           | 2.15/2.5 kg  |  |  |
|                | Safety/EMC                   | CE/ FCC  |  |  |
| Watchdog Timer | Programmable 1 ~ 255 sec/min |  |  |  |
| OS             | Supported OS                 | Microsoft® Windows 10 / Windows 11, Linux  |  |  |

### **Built-in 11<sup>th</sup> Gen Intel® CPU**

It is powered by 11<sup>th</sup> Gen Intel® Core™ i7/i5 or Celeron® processor (FCBGA 1449) to unleash optimal performance and multitasking capability.

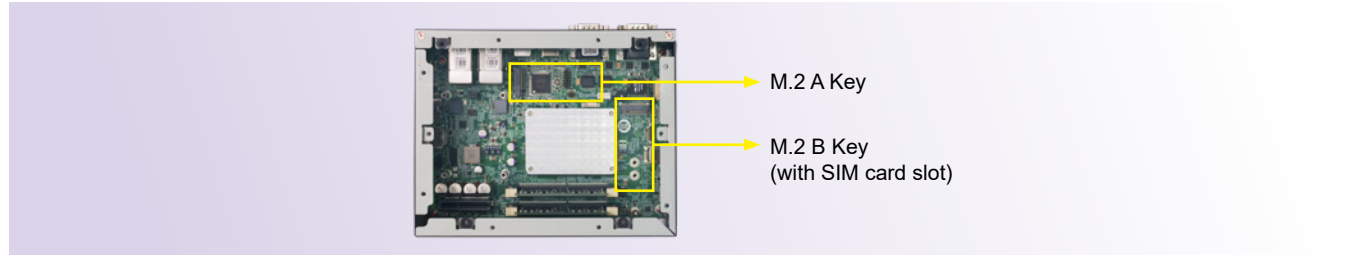
### **Built-in Intel® I225-LM (V) 2.5GbE Controllers**

Four RJ-45 Ethernet ports on the I/O panel through Intel® I225-V GbE controllers provide up to 2.5G network transmission rate, and support optional PoE modules.

### **USB 3.2 Gen 2 Ports, up to 10Gb/s**

### **Internal M.2 Expansion**

The system motherboard has one M.2 A key slot and one M.2 B key slot. The A key slot supports Wi-Fi or Bluetooth expansion; the B key slot (with SIM card holder) can support 4G modules or accelerator cards.

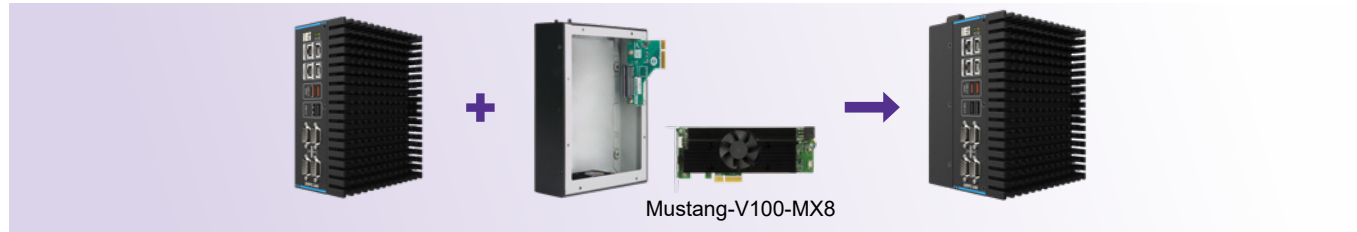


### **Optional PoE Module**



### **Support Chassis Expansion**

The expansion chassis provides one PCIe x4 slot for IEI Mustang accelerator card.

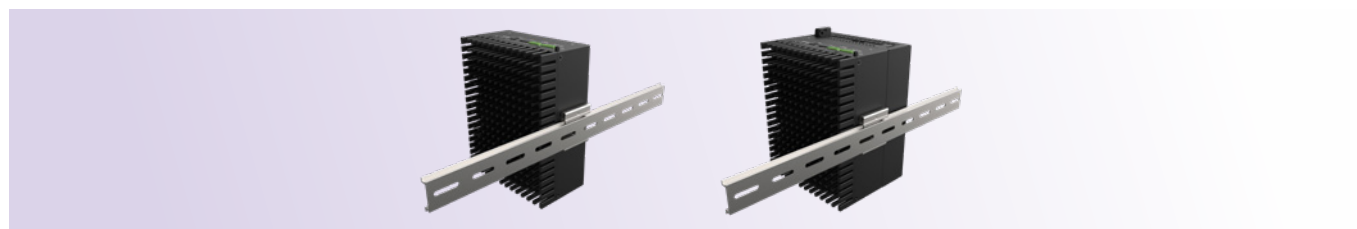


### **External Fan**

Installing an external fan helps to increase system performance in harsh environment.

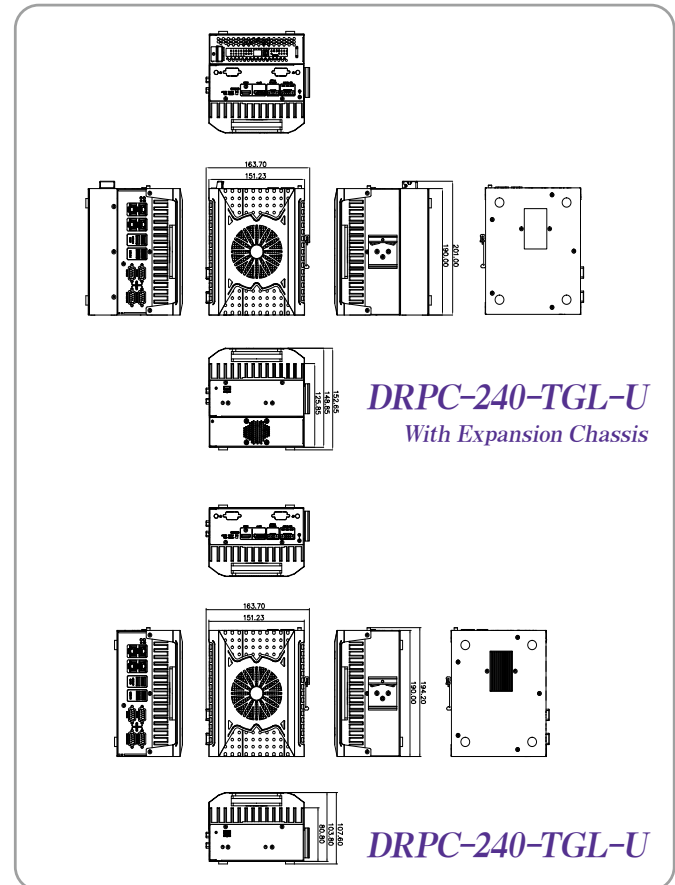
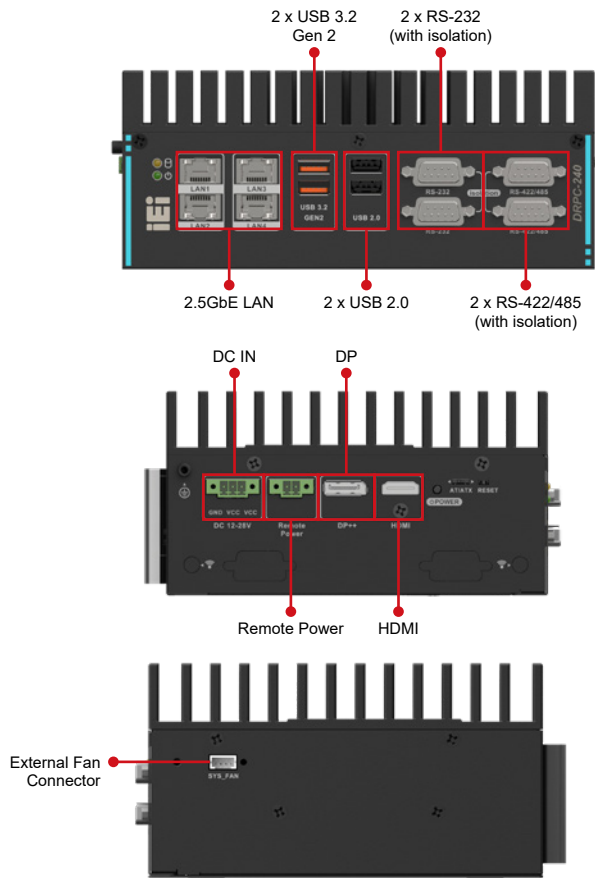


### **Support DIN-rail Mount**



Fully Integrated I/O

Dimensions (Unit: mm)



Ordering Information

| Part No.                | Description   |
|-------------------------|---|
| DRPC-240-TGL-U-CCS-R10  | Fanless embedded system, Intel® Tiger Lake-U Celeron® 6305 1.8 GHz (dual core, TDP 15W), 8GB DDR4 pre-installed memory, HDMI/DP++, 4 x 2.5GbE LAN, 4 x COM, DIO, 12~28V DC and RoHS |
| DRPC-240-TGL-U-i5CS-R10 | Fanless embedded system, Intel® Tiger Lake-U i5-1145G7E 1.5 GHz (quad core, TDP 15W), 8GB DDR4 pre-installed memory, HDMI/DP++, 4 x 2.5GbE LAN, 4 x COM, DIO, 12~28V DC and RoHS    |
| DRPC-240-TGL-U-i7CS-R10 | Fanless embedded system, Intel® Tiger Lake-U i7-1185G7E 1.8 GHz (quad core, TDP 15W), 8GB DDR4 pre-installed memory, HDMI/DP++, 4 x 2.5GbE LAN, 4 x COM, DIO, 12~28V DC and RoHS    |

Options

| Part No.                          | Description   |
|-----------------------------------|---|
| EMB-WIFI-KIT0213-R10              | 2T2R M.2 wifi module kit for embedded system, IEEE802.11a/b/g/n/ac/ax, 1 x M.2 AE Key Wireless LAN & Bluetooth 5.2; Intel; AX210; NGWG Module, 2 x RF cable, 2 x Antenna; RoHS              |
| GPOE-DRPC-240-R10 <sup>1</sup>    | PoE power module for DRPC-240 only  |
| SF-DRPC-240-R10                   | External fan for DRPC-240 only  |
| TXC-DRPC-240-1S-R10               | DRPC-240 Series 1 Slot Expansion Chassis with Riser Card  |
| 32031-000600-100-RS               | ROUND CABLE; DIO CABLE;; 2; 150mm; 28AWG; 300V; (A) D-SUB 15P MALE; (B) DU PONT 2*7P P=2.0 FEMALE; Wins Precision; C24210815-0; RoHS  |
| 32205-003800-300-RS               | FLAT CABLE; RS-232/422/485; RS-422/485 CABLE;; 2; 200MM; 28AWG; (A) D-SUB 9PIN MALE; (B) JST PHR-4 P=2.0; ONE PCS PKG W/ LABEL; Wins Precision; RoHS  |
| 32702-000400-200-RS               | POWER CORD; EUROPEAN CODE (VDE); 2; 1800MM;; (A) PLUG: SH-025 (16A/250V); (B) CONNECTOR: C5 (SM112, 2.5A/250V); Self-Man; CCL; RoHS   |
| 41019-2312C2-00-HF                | HOLDER; FAN FILTER BRACKET; NCT processing formation; DRPC-240-ULT6; PAINTING; PMS Black C; 41019-2312XX;; NCT(N); SECC; VER:00; CCL; Halogen Free  |
| 32102-054800-100-RS               | WIRE CABLE; POWER CABLE;; 2; 200mm; 18AWG; 300V; (A) POWER DIN 4P FEMALE; (B) TERMINAL BLOCK-3P P=3.5; Wins Precision; C24210816-0; RoHS  |
| 63040-010230-000-RS               | Adapter Power; FSP; FSP220-ABAN2; 9NA2200401; Active PFC; Vin: 90~264VAC; 220W; Cable=1500mm; Erp(NO LOAD 0.5W); Vout: 19VDC; Din 4Pin; CCL; RoHS   |
| 63040-010120-300-RS <sup>2</sup>  | Adapter Power; FSP; FSP120-AHAN3; 9NA1206708; Active PFC; Vin: 90~264VAC; 120W; Dim: 75.6*151.3*25.4mm; Plug=6.5mm; Cable=1500mm; Erp(NO LOAD 0.15W); Vout: 12VDC; Din 4Pin/lock; CCL; RoHS |
| Mustang-V100-MX8-R11 <sup>3</sup> | Computing Accelerator Card with 8 x Movidius Myriad X MA2485 VPU, PCIe Gen 2 x4 interface, RoHS   |

<sup>1</sup> For the PoE module, it is suggested to use a 180W (or above) power adapter (63040-010230-000-RS 220W is recommended).  
<sup>2</sup> The power adapter must be used with the 32102-054800-100-RS power cable.  
<sup>3</sup> For IEI Mustang accelerator card, it is suggested to use a 180W (or above) power adapter (63040-010230-000-RS 220W is recommended), and the Mustang can only be used in the dual-layer model.

Packing List

|                           |                |                    |
|---------------------------|----------------|--------------------|
| 1 x DIN-Rail mounting kit | 1 x Screw pack | 1 x Terminal block |
|---------------------------|----------------|--------------------|

# DRPC-230-ULT5

- Fanless DIN-Rail Embedded System
- Whiskey Lake 8<sup>th</sup> Gen Intel® Core™ Solution (up to 4 cores)



## Features

- Intel® Core™ i5-8365UE/ Celeron® 4305UE Processor
- Triple GbE LAN Ports
- Multiple USB 3.2 Gen 2 (10Gb/s)
- Multiple COM Ports
- Modulized Flexible Expansion



## Specifications

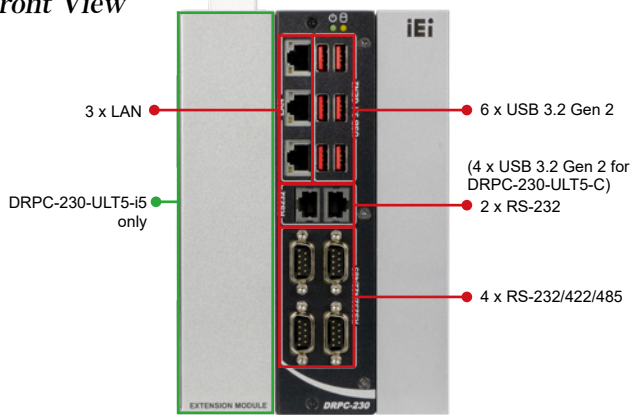
| Model Name     |                       | DRPC-230-ULT5-i5/S   | DRPC-230-ULT5-i5               | DRPC-230-ULT5-CE/S                                |
|----------------|-----------------------|--|--------------------------------|---|
| Chassis        | Color                 | Black & Silver   |                                |   |
|                | Dimensions (WxDxH)    | 81 x 150 x 190   | 127 x 150 x 190                | 81 x 150 x 190                                    |
|                | System Fan            | Fanless  |                                |   |
|                | Chassis Construction  | Extruded aluminum alloy  |                                |   |
| Motherboard    | CPU                   | Intel® Core™ i5-8365UE 1.6 GHz (up to 4.1 GHz, quad-core, TDP 15W)                                 |                                | Intel® Celeron® 4305UE 2 GHz (dual-core, TDP 15W) |
|                | Chipset               | SoC  |                                |   |
|                | System Memory         | 2 x SO-DIMM DDR4 2400 (8GB pre-installed) (up to 64GB)   |                                |   |
| Storage        | Hard Drive            | 1 x 2.5" SATA 6Gb/s HDD/SSD bay  |                                |   |
| I/O Interfaces | USB                   | 6 x USB 3.2 Gen 2  |                                | 4 x USB 3.2 Gen 2<br>2 x USB 2.0                  |
|                | Ethernet              | 3 x RJ-45:<br>1 x GbE by Intel® I219<br>2 x GbE by Intel® I210                                     |                                |   |
|                | COM Port              | 4 x RS-232/422/485 with AFC (DB9)<br>2 x RS-232 (RJ-45)  |                                |   |
|                | Digital I/O           | 8-bit Digital I/O (4-in/ 4-out)(pin header)  |                                |   |
|                | Display               | 1 x HDMI (up to 3840 x 2160@30Hz)<br>1 x DP (up to 4096 x 2304@60Hz)                               |                                |   |
|                | Wireless              | 1 x 802.11a/b/g/n/ac (optional)  |                                |   |
|                | TPM                   | 1 x TPM 2.0 (2 x 10 pin)(optional)   |                                |   |
|                | Other                 | 1 x Power button, 1 x Reset button, 1 x AT/ATX switch, 1 x Power LED (green), 1 x HDD LED (yellow) |                                |   |
| Expansions     | PCIe Mini             | 1 x Full-size with SIM card slot (PCIe/USB 3.0/SATA)   |                                |   |
|                | M.2                   | 1 x 2230 A-key (PCIe x1/USB 2.0)   |                                | 1 x 2230 A-key (PCIe x1)                          |
|                | Backplane             | -  | 1 x PCIe Gen 3 x4, 1 x USB 2.0 | -   |
| Power          | Power Input           | Terminal block: 12 ~ 24V DC<br>(Reserved internal 40W power with 12V DC output)                    |                                |   |
|                | Power Consumption     | 12V @ 4.98A (Intel® Core™ i5-8365UE with 8GB memory)   |                                |   |
| Reliability    | Mounting              | DIN-Rail   |                                |   |
|                | Operating Temperature | -20°C ~ 70°C with air flow (SSD), 10% ~ 95% non-condensing*  |                                |   |
|                | Storage Temperature   | -40°C ~ 85°C with air flow (SSD), 10% ~ 95% non-condensing   |                                |   |
|                | Operating Shock       | Half-sine wave shock 5G, 11ms, 100 shocks per axis (SSD)   |                                |   |
|                | Operating Vibration   | MIL-STD-810G 514.6C-1 (SSD)  |                                |   |
|                | Weight (Net/Gross)    | 2.9 kg/ 3.2 kg   | 3.2 kg/ 3.5 kg                 | 2.9 kg/ 3.2 kg                                    |
|                | Safety/EMC            | CE/ FCC  |                                |   |
|                | Watchdog Timer        | Programmable 1 ~ 255 sec/min   |                                |   |
| OS             | Supported OS          | Microsoft Windows 10 / Windows 11, Linux   |                                |   |

\* CPU can remain high performance and run at or above its base frequency without any thermal throttling under 60°C.

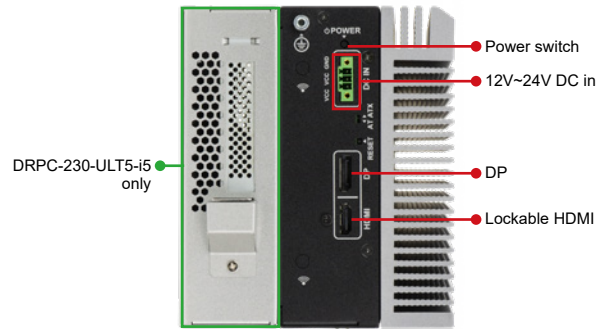


Fully Integrated I/O

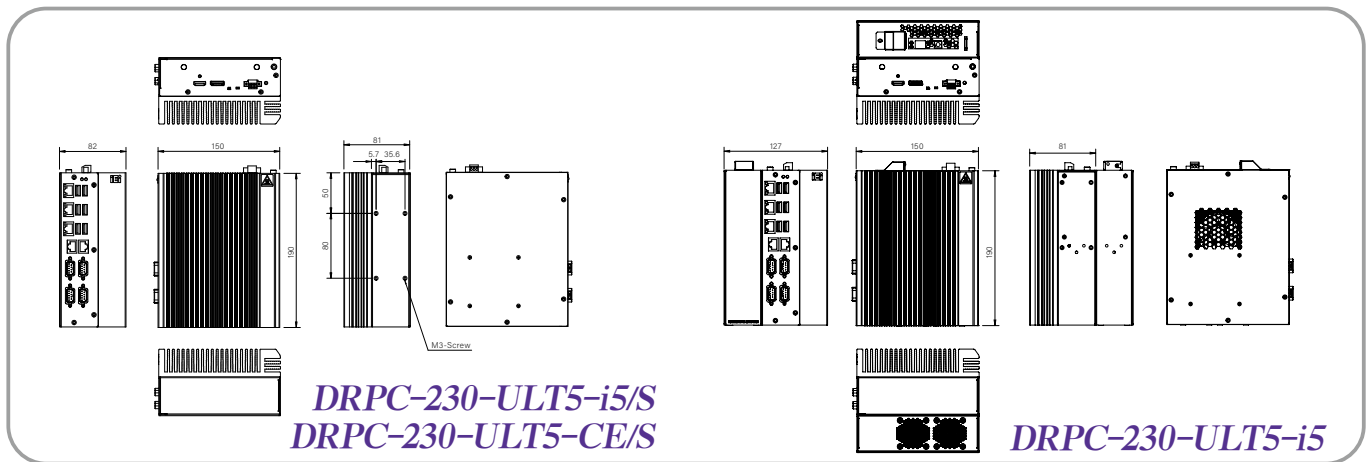
Front View



Top View



Dimensions (Unit: mm)



Ordering Information

| Part No.                  | Description   |
|---------------------------|---|
| DRPC-230-ULT5-i5/8G/S-R11 | Fanless embedded system, Intel® Whiskey Lake i5-8365UE 1.6 GHz (quad core, TDP 15W), 8GB DDR4 pre-installed memory, HDMI/DP, 3 PCIe GbE, 6 COM, 12~24V DC and RoHS                          |
| DRPC-230-ULT5-i5/8G-R11   | Fanless embedded system, Intel® Whiskey Lake i5-8365UE 1.6 GHz (quad core, TDP 15W), 8GB DDR4 pre-installed memory, HDMI/DP, 3 PCIe GbE, 6 COM, 12~24V DC, PCIe x4 expansion layer and RoHS |
| DRPC-230-ULT5-CE/8G/S-R11 | Fanless embedded system, Intel® Whiskey Lake Celeron® 4305UE 2 GHz (dual core, TDP 15W), 8GB DDR4 pre-installed memory, HDMI/DP, 3 PCIe GbE LAN, 6 COM, 12~24V DC and RoHS                  |

Options

| Item                           | Part No.                             | Description   |
|--------------------------------|--------------------------------------|---|
| Adapter <sup>1</sup>           | 63040-010060-211-RS                  | Adapter Power;FSP:FSP060-DHAN3;9NA0608097;;Vin:90~264VAC;60W;Dim:62.0*110*31.5mm;Plug=7.5mm;Cable=1200mm;Erp(NO LOAD 0.21W);Vout:12VDC;Φ2.5/Φ5.5/lock;CCL;RoHS  |
| Adapter <sup>1/2</sup>         | 63040-010096-230-RS                  | Adapter Power;FSP:FSP096-AHAN3;9NA0961412 ;Active PFC;Vin:90~264VAC;96W;Dim:75.6 x 151.3 x 25.4mm;Plug=7.5mm;Cable=1500mm;Erp(NO LOAD 0.15W);Vout:12VDC;Φ2.5/Φ5.5/lock;CCL;RoHS   |
| Power cable <sup>1</sup>       | 32102-026500-100-RS                  | WIRE CABLE;POWER CABLE;;2;200MM;18AWG;(A)DC JACK 5.5 x 2.5, NUT+WASHER;(B)TERMINAL BLOCK:3P P=3.5;SHANGHAI YING YU;RoHS   |
| Power cord                     | 32000-000002-RS                      | European power cord   |
| RJ-45 to D-SUB cable           | 32005-004600-200-RS                  | ROUND CABLE;RS-232/422/485;RS-232 CABLE;2;300MM;26AWG;(A)D-SUB 9P MALE+4#40 Screw;(B)RJ-45 8P8C PLUG, Iron+Sheathed;Wins Precision;RoHS   |
| Wifi module <sup>3</sup>       | 27319-000009-RS                      | Wireless LAN Module;Wireless LAN & Bluetooth M.2 Module;Sparklan;R9701810011;IEEE802.11a/b/g/n/ac;2.412 GHz~2.4835 GHz, 5.15 GHz~5.85 GHz;M.2 2230;;3.3V;22 x 30 x 2.15mm;QCFA364A;QCA6174A-5;2x2 MIMO;Dual Band;WCBN808A-Q2;CCL;CCL;RoHS |
| Antenna <sup>3</sup>           | 32505-000900-100-RS                  | External Antenna;WLAN;RG 178;108MM;TANK-700-QM67-R10;PEAK GAIN 2.0DBI;Exceltek;2.4-2.5 GHz/5.15-5.85 GHz;REVERSE SMA PLUG;RoHS  |
| RF cable <sup>3</sup>          | 32501-004000-100-RS                  | RF;RF CABLE;LINE DIAMETER:0.81mm;250MM;50Ω;Sparklan;0-6 GHz;VSWR≤1.3;I-PEX MHF-4 Plug;REVERSE SMA JACK;NUT x 1;WASHER x 1;RoHS  |
| TPM Module                     | TPM-IN03-R10                         | 20-pin Infineon SPI TPM 2.0 module, software mangement tool, firmware V7.63   |
| System fan <sup>4</sup>        | 31100-000365-RS                      | FAN;+12V;4PIN;YEN SUN;40 x 40 x 10mm;6500RPM;TWO BALL BEARING;LINE LENGTH:150MM;3.4+/-0.1MM;FD124010HB;FD124010HB-NBG(2W7T);AXIAL FAN;WITH FRAME;6.599CFM;7~13.2V;29dB;75000hur;UL, CUL, TUV;CCL;RoHS                                     |
| Accelerator cards <sup>4</sup> | Mustang-V100-MX8<br>Mustang-V100-MX4 | Computing Accelerator Card with 8 x Movidius Myriad X MA2485 VPU, PCIe Gen 2 x 4 interface, RoHS<br>Computing Accelerator Card with 4 x Intel® Movidius™ Myriad™ X MA2485 VPU, PCIe Gen 2 x 2 interface, RoHS                             |
| OS: Windows Embedded 10        | DRPC-230-ULT5-W10E64-V-R10           | OS Image with Windows® Embedded Standard 10 E Value 64-bit 2019 for DRPC-230-ULT5 Series, with DVD-ROM, RoHS  |

<sup>1</sup> It is required to order Power Cable together with Adapter for power usage  
<sup>2</sup> Please select 96W adapter if intend to add accelerator cards  
<sup>3</sup> Each Wi-Fi module needs two antennas and two RF cables to fully support Wi-Fi function  
<sup>4</sup> Only applicable for DRPC-230-ULT5-i5/8G-R10

Packing List

- 1 x Din-rail mounting kit
- 1 x Screw kit

# DRPC-130-AL

- Fanless DIN-Rail Embedded System
- Intel® Atom® x5-E3930 1.3 GHz (up to 1.8 GHz) Solution



## Features

- Intel® Atom® x5-E3930 1.3 GHz (up to 1.8 GHz)
- DDR3L 1.35V SO-DIMM supported
- Serial, CAN bus and digital I/O interface

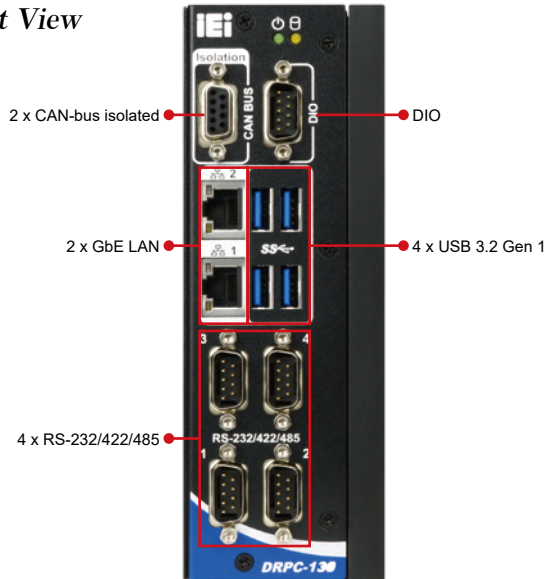


## Specifications

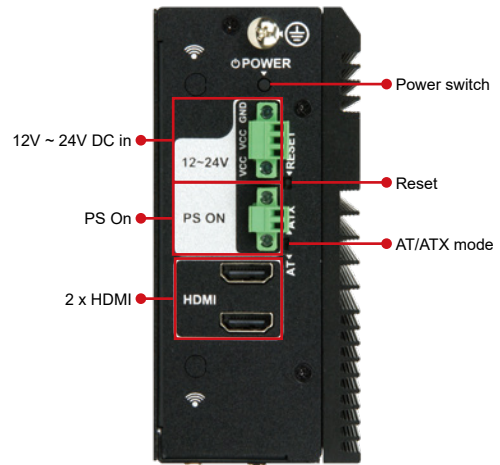
| Model Name     | DRPC-130-AL             |  |
|----------------|-------------------------|--|
| Chassis        | Color                   | Black  |
|                | Dimensions (WxDxH) (mm) | 58.75 x 130 x 174  |
|                | System Fan              | Fanless  |
|                | Chassis Construction    | Extruded aluminum alloy  |
| Motherboard    | CPU                     | Intel® Atom® x5-E3930 1.3 GHz (up to 1.8 GHz, dual-core, TDP 6.5W)   |
|                | Chipset                 | SoC  |
|                | System Memory           | 1 x SO-DIMM DDR3L 1333/1600 (up to 8GB)  |
| Storage        | Hard Drive              | 1 x 2.5" SATA 6Gb/s HDD/SSD bay  |
|                | eMMC                    | 1 x eMMC 5.0 (optional, up to 32GB)  |
| I/O Interfaces | USB                     | 4 x USB 3.2 Gen 1  |
|                | Ethernet                | 2 x RJ-45:<br>2 x GbE by Intel® I211   |
|                | COM Port                | 4 x RS-232/422/485 with AFC (DB9)  |
|                | Digital I/O             | 8-bit Digital I/O (4-in/ 4-out)  |
|                | CAN-bus                 | 1 x port support two CAN-bus (DB9 with 2.5kV isolation)  |
|                | Display                 | 2 x HDMI (up to 3840 x 2160@30Hz)  |
|                | Wireless                | 1 x 802.11a/b/g/n/ac (optional)  |
|                | TPM                     | 1 x TPM 2.0 (2 x 10 pin)(optional)   |
|                | Other                   | 1 x Power Button, 1 x Reset Button, 1 x AT/ATX Switch, 1 x LED for Power (Green), 1 x LED for HDD (Yellow) |
| Expansions     | PCIe Mini               | 1 x Half-size (PCIe/USB 2.0)<br>1 x Full-size (PCIe/USB 2.0/SATA)  |
|                | Power Input             | Terminal block: 12 ~ 24V DC  |
|                | Power Consumption       | 12V @ 2.88 A (Intel® Atom® x5-E3930 with 4GB memory)   |
| Power          | Remote PWR              | Terminal block: PSON   |
|                | Mounting                | DIN-Rail   |
|                | Operating Temperature   | -20°C ~ 60°C with air flow (SSD), 10% ~ 95% non-condensing   |
| Reliability    | Storage Temperature     | -40°C ~ 85°C with air flow (SSD), 10% ~ 95% non-condensing   |
|                | Operating Shock         | Half-sine wave shock 5G, 11ms, 100 shocks per axis (SSD)   |
|                | Operating Vibration     | MIL-STD-810G 514.6C-1 (SSD)  |
|                | Weight (Net/Gross)      | 1.4 kg/ 2.5 kg   |
|                | Safety/EMC              | CE/ FCC  |
|                | Watchdog Timer          | Programmable 1 ~ 255 sec/min   |
|                | OS                      | Supported OS   |

Fully Integrated I/O

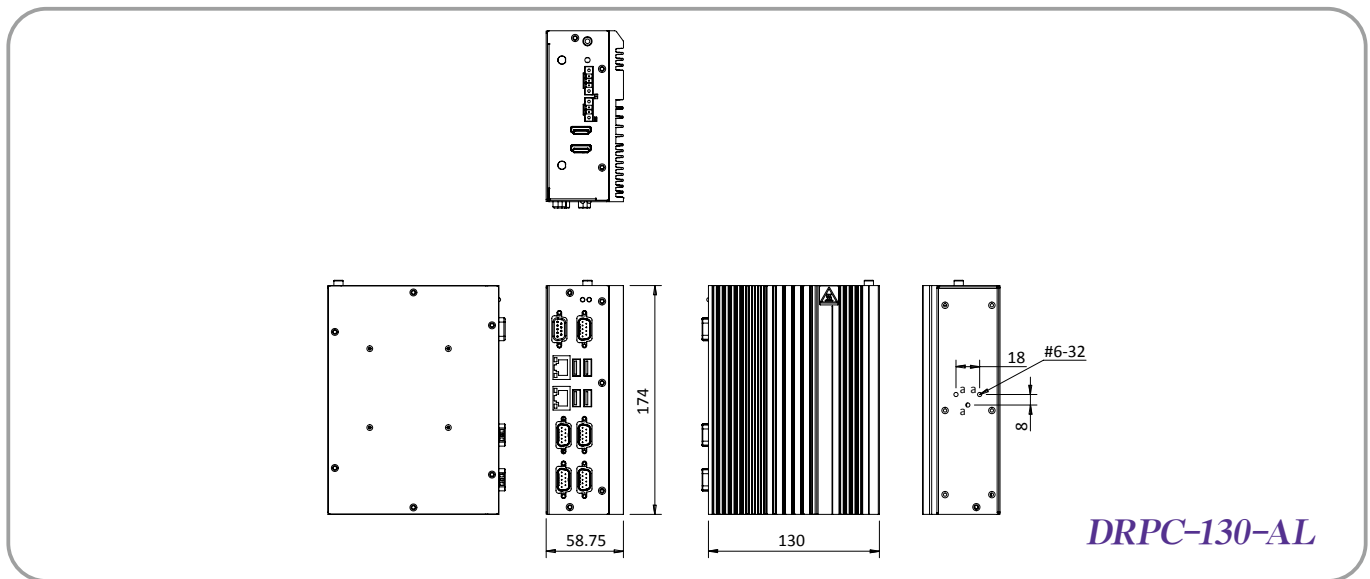
Front View



Top View



Dimensions (Unit: mm)



Ordering Information

| Part No.               | Description  |
|------------------------|--|
| DRPC-130-AL-E1-R11     | Fanless embedded system, Intel® Apollo Lake x5-E3930 1.3 GHz (up to 1.8 GHz, dual core), two HDMI, 8-bit DIO, CAN-Bus, COM, 12~24V DC and RoHS                                 |
| DRPC-130-AL-E1/4GB-R11 | Fanless embedded system, Intel® Apollo Lake x5-E3930 1.3 GHz (up to 1.8 GHz, dual core), 4GB DDR3L pre-installed memory, two HDMI, 8-bit DIO, CAN-Bus, COM, 12~24V DC and RoHS |

Options

| Item                    | Part No.              | Description   |
|-------------------------|-----------------------|---|
| Adapter*                | 63040-010036-210-RS   | Adapter Power;FSP;FSP060-DHAN3;9NA0608010;Vin:90~264VAC;60W;Dim:62.0*110*31.5mm;Plug=7.5mm;Cable=1200mm;Erp(NO LOAD 0.21W);Vout:12VDC;Φ2.5/Φ5.5/lock;CCL;RoHS |
| Power Cable*            | 32102-026500-100-RS   | WIRE CABLE;POWER CABLE;2;200MM;18AWG;(A)DC JACK 5.5X2.5, NUT+WASHER ;(B)TERMINAL BLOCK:3P P=3.5;SHANGHAI YING YU;RoHS   |
| Power Cord              | 32702-000400-200-RS   | European power cord   |
| Wireless Kit            | EMB-WIFI-KIT01-R20    | 1T1R Wi-Fi module kit for embedded system, IEEE802.11a/b/g/n/ac Wi-Fi with Bluetooth 4.0/3.0+HS, 1 x Wi-Fi module, 2 x 250mm RF cable, 2 x Antenna, RoHS      |
| TPM Module              | TPM-IN02-R20          | 20-pin Infineon TPM2.0 module, software mangement tool, firmware v5.5   |
| DIN-Rail Mounting Kit   | DK-DRPC-R10           | Rugged DIN-rail mounting kit for DPRC series only   |
| OS: Windows Embedded 10 | DRPC-130-W10E64-E-R10 | OS Image with Windows® 10 IoT Enterprise Entry 64-bit for DRPC-130-AL Series, with DVD-ROM, RoHS  |

\*It is required to order Power Cable together with Adapter for power usage

Packing List

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

# DRPC-120-BT

- Fanless DIN-Rail Embedded System
- Intel® E3845 1.91 GHz Solution



## Features

- Intel® Atom® E3845 1.91 GHz
- 1 x 2.5" SATA HDD/SSD drive bay
- DDR3L 1.35V SO-DIMM support
- 8-bit digital I/O (4-bit inputs/outputs)
- IEI iRIS-2400 solution

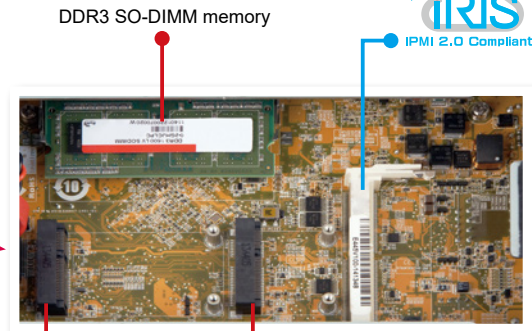
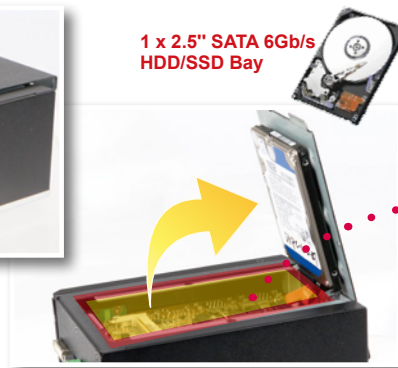


## User Friendly Installation

The DRPC-120 is designed with an easy removable back cover for users to install SATA HDD, PCIe Mini cards, DDR3 memory modules or iRIS-2400 modules conveniently.



1 x 2.5" SATA 6Gb/s HDD/SSD Bay

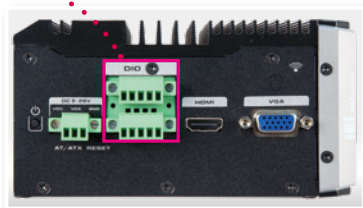
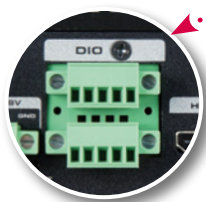


Full-size PCIe Mini

Half-size PCIe Mini

## 8-Channel Digital I/O

The DRPC-120 is outfitted with 8-channel (4-bit input and 4-bit output) digital I/O to provide digital input and output signals for control of industrial devices.



## Fanless

The DRPC-120 series provides the best components for generating less heat, while maintaining high system performance. With the fanless design, the DRPC-120 reduces system failure caused by fans and extends the lifetime of the device.





**iRIS Solution**

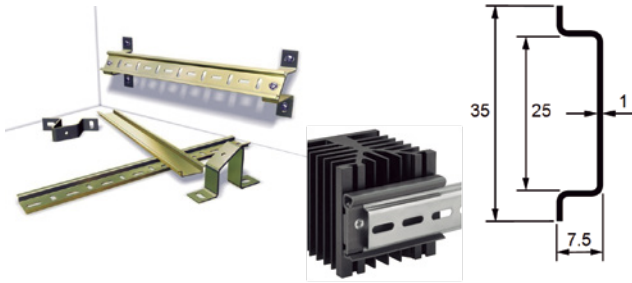


IPMI 2.0 Compliant

By installing the IEI iRIS-2400 module, the DRPC-120 is capable to complete your IoT application through the advanced remote control features, such as power management and control, remote KVM for device status monitoring, sending active alerts and warning messages by e-mail or SMS.

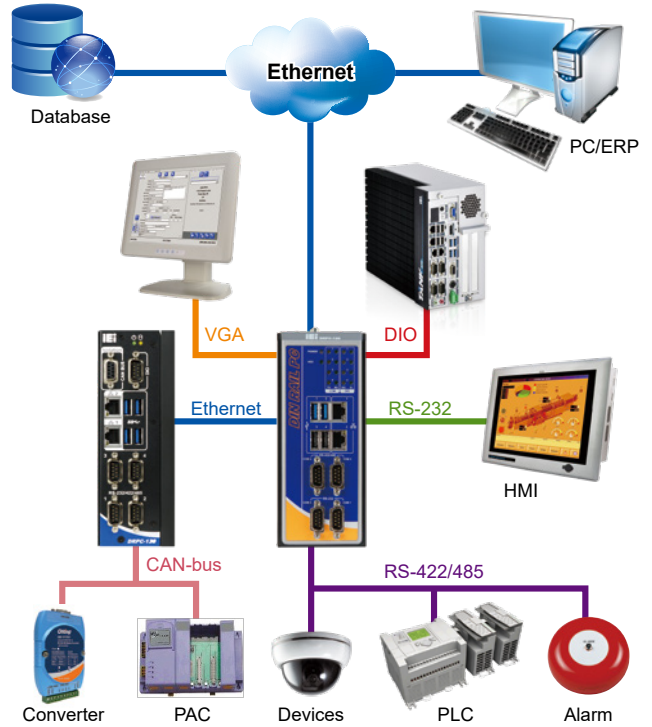
**DIN Rail Standard**

A DIN rail is a metal rail of a standard type widely used for mounting circuit breakers and industrial control equipment inside equipment racks. These products are typically made from cold rolled carbon steel sheet with a zinc-plated and chromated bright surface finish. The term derives from the original specifications having been published by Deutsches Institut für Normung (DIN) in Germany, which have since been adopted as European (EN) and international (ISO) standards.



**Communication Gateway**

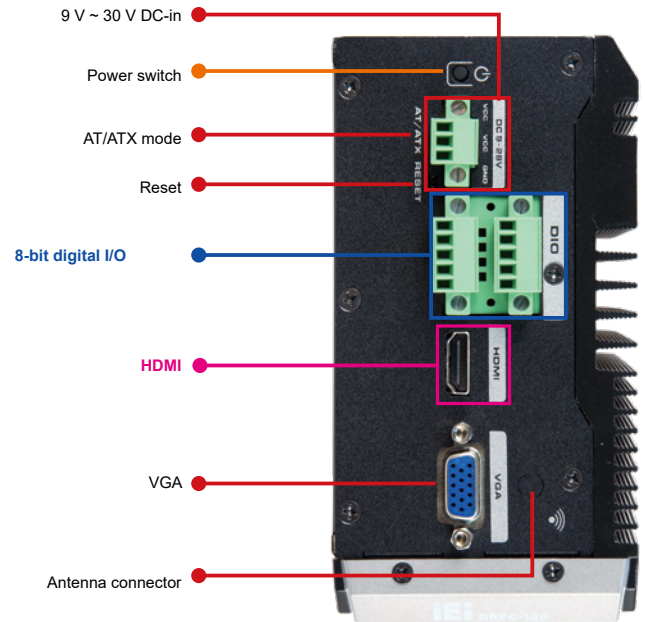
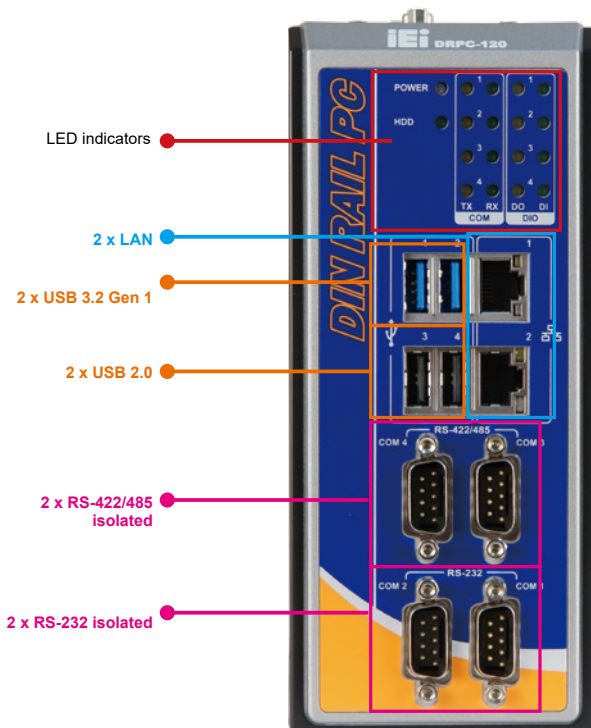
For high surge ESD automation environments, the DRPC series provides isolated digital IO, CAN-bus and serial communication ports.



**Fully Integrated I/O**

Front View

Top Side View





## Specifications

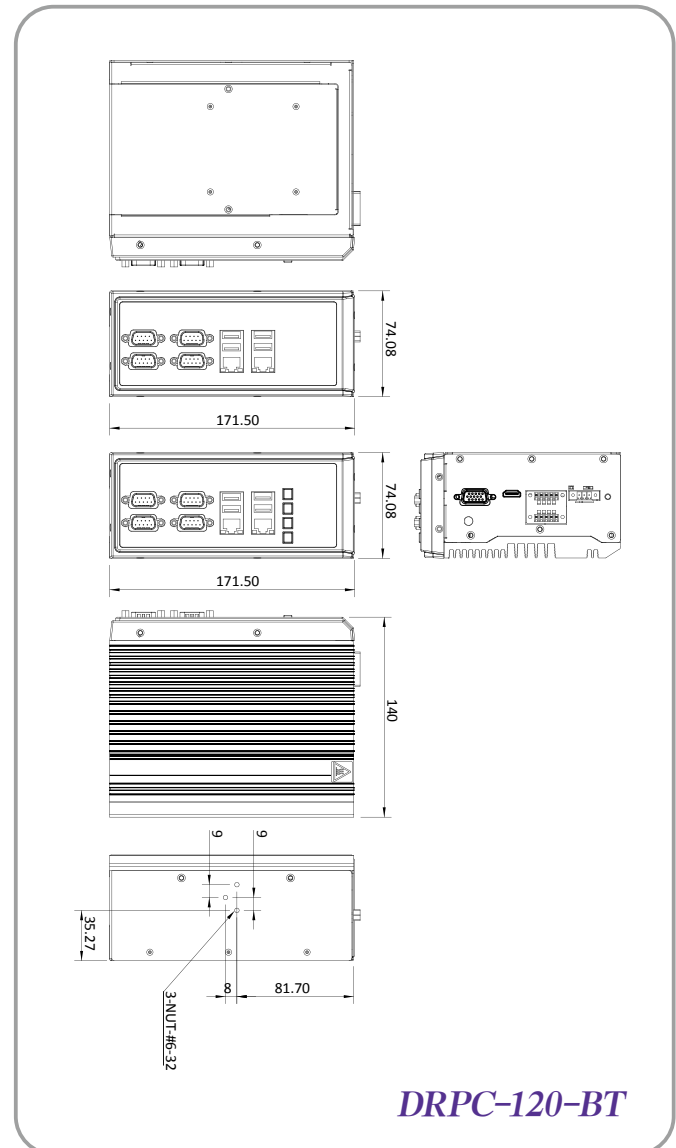
| Model Name     |                         | DRPC-120-BT   |
|----------------|-------------------------|---|
| Chassis        | Color                   | Black   |
|                | Dimensions (WxDxH) (mm) | 74.08 x 140 x 171.5   |
|                | System Fan              | Fanless   |
|                | Chassis Construction    | Extruded aluminum alloy   |
| Motherboard    | CPU                     | Intel® Atom® E3845 1.91 GHz (quad-core, TDP 10W)  |
|                | Chipset                 | SoC   |
|                | System Memory           | 1 x SO-DIMM DDR3L 1066 (up to 8GB)  |
| IPMI           | iRIS Solution           | 1 x iRIS-2400 (optional)  |
| Storage        | Hard Drive              | 1 x 2.5" SATA 3Gb/s HDD/SSD bay   |
| I/O Interfaces | USB                     | 2 x USB 3.2 Gen 1<br>2 x USB 2.0  |
|                | Ethernet                | 2 x RJ-45:<br>1 x GbE by Intel® I211<br>1 x GbE by Intel® I210                                |
|                | COM Port                | 2 x RS-232/422/485 with AFC (DB9 with 3kV isolation*)<br>2 x RS-232 (DB9 with 3kV isolation*) |
|                | Digital I/O             | 8-bit Digital I/O (4-in/ 4-out)   |
|                | Display                 | 1 x HDMI (up to 1920 x 1200@60Hz)<br>1 x VGA (up to 1920 x 1200@60Hz)                         |
|                | Wireless                | 1 x 802.11a/b/g/n/ac (optional)   |
|                | Other                   | 1 x Power Button, 1 x Reset Button, 1 x AT/ATX Switch   |
| Expansions     | PCIe Mini               | 1 x Half-size (PCIe)<br>1 x Full-size (PCIe/USB 2.0/SATA)                                     |
|                | Power Input             | Terminal block: 9 ~ 30V DC  |
| Power          | Power Consumption       | 12V @ 2.1A<br>(Intel® Atom® E3845 with 2GB memory)  |
|                | Mounting                | DIN-Rail  |
| Reliability    | Operating Temperature   | -20°C ~ 60°C with air flow (SSD), 10% ~ 95% non-condensing                                    |
|                | Storage Temperature     | -40°C ~ 85°C with air flow (SSD), 10% ~ 95% non-condensing                                    |
|                | Operating Shock         | Half-sine wave shock 5G, 11ms, 100 shocks per axis (SSD)                                      |
|                | Operating Vibration     | MIL-STD-810G 514.6C-1 (SSD)   |
|                | Weight (Net/ Gross)     | 1.4 kg/ 2.5 kg  |
|                | Safety/EMC              | CE/ FCC   |
|                | Watchdog Timer          | Programmable 1 ~ 255 sec/min  |
| OS             | Supported OS            | Microsoft® 8, Microsoft® Windows® Embedded Standard 7 E                                       |

\*COM port isolation: 3kV for 1 sec, 2.5kV for 1 minute

## Ordering Information

| Part No.                   | Description  |
|----------------------------|--|
| DRPC-120-BTI-E5-LED/2G-R11 | Fanless embedded system, Intel® Bay-Trail E3845 1.91 GHz, TDP 10W, 2GB DDR3L pre-installed memory, one VGA, one HDMI, 8 CH DIO, iRIS-2400 optional, 9 V ~ 28 V DC, LED indicators, R11, RoHS |

## Dimensions (Unit: mm)



## Options

| Item                   | Part No.                    | Description  |
|------------------------|-----------------------------|--|
| Adapter*               | 63040-010036-210-RS         | Adapter Power;FSP;FSP060-DHAN3;9NA0 608010;Vin:90~264VAC;60W;Dim:62.0*110 *31.5mm;Plug=7.5mm;Cable=1200mm;Erp (NO LOAD 0.21W);Vout:12VDC;Φ2.5/Φ5.5/lock;CCL;RoHS |
| Power Cable*           | 32102-026500-100-RS         | WIRE CABLE:POWER CABLE;;2;200MM;18AWG;(A)DC JACK 5.5X2.5, NUT+WASHER ,(B)TERMINAL BLOCK:3P P=3.5;SHANGHAI YING YU;RoHS   |
| Power Cord             | 32702-000400-200-RS         | European power cord  |
| Wireless Kit           | EMB-WIFI-KIT01-R20          | 1T1R Wi-Fi module kit for embedded system, IEEE802.11a/b/g/n/ac Wi-Fi with Bluetooth 4.0/3.0+HS, 1 x Wi-Fi module, 2 x 250mm RF cable, 2 x Antenna, RoHS         |
| DIN-Rail Mounting Kit  | DK-DRPC-R10                 | Rugged DIN-rail mounting kit for DRPC series only  |
| OS: Windows Embedded 7 | DRPC-120-WES7E-R10 (CD-ROM) | OS Image with Windows® Embedded Standard 7 E for DRPC-120 Series, CDROM, RoHS  |

\*It is required to order Power Cable together with Adapter for power usage

## Packing List

|                                   |                      |
|-----------------------------------|----------------------|
| 1 x Screw kit                     | 1 x Mounting bracket |
| 1 x SATA cable & SATA power cable |                      |

# Compact Size Embedded System



| Model Name     | ITG-100-AL              | uIBX-250-BW   |  |
|----------------|-------------------------|---|--|
| Chassis        | Color                   | Blue & Silver   | Black  |
|                | Dimensions (WxDxH) (mm) | Single layer: 137 x 102.8 x 36.2<br>Dual layer: 137 x 102.8 x 56.2  | 137 x 102.8 x 52   |
|                | System Fan              | Fanless   | Fanless  |
|                | Chassis Construction    | Extruded aluminum alloy   | Extruded aluminum alloy  |
| Motherboard    | CPU                     | Intel® Atom® x5-E3930 1.3 GHz<br>(up to 1.8 GHz, dual-core, TDP 6.5W)   | Intel® Celeron® N3160 1.6 GHz<br>(up to 2.24 GHz, quad-core, TDP 6W)           |
|                | Chipset                 | SoC   | SoC  |
|                | System Memory           | 1 x SO-DIMM DDR3L 1600/1867<br>(2GB pre-installed)(up to 8GB)   | 1 x SO-DIMM DDR3L 1600<br>(2GB pre-installed)(up to 8GB)                       |
| Storage        | Hard Drive              | 1 x 2.5" SATA 6Gb/s HDD/SSD bay   | 1 x 2.5" SATA 6Gb/s HDD/SSD bay  |
|                | SATADOM                 | N/A   | N/A  |
|                | eMMC                    | 1 x eMMC5.0 (up to 32GB)(optional)  | N/A  |
|                | Micro SD                | 1 x Micro SD slot (optional)  | N/A  |
| I/O Interfaces | USB                     | 2 x USB 3.2 Gen 1<br>2 x USB 2.0 (optional)   | 4 x USB 3.2 Gen 1  |
|                | Ethernet                | 2 x RJ-45:<br>2 x GbE by Intel® I211  | 2 x RJ-45:<br>2 x GbE by Intel® I211   |
|                | COM Port                | 2 x RS-232/422/485 with AFC (DB9/RJ-45)<br>2 x RS-232 (optional)  | 2 x RS-232/422/485 with AFC (RJ-45)  |
|                | Digital I/O             | 8-bit Digital I/O (4-in/ 4-out)(optional)   | N/A  |
|                | Display                 | 1 x VGA (up to 1920 x 1080@60Hz)  | 1 x HDMI (up to 3840 x 2160@30Hz)<br>1 x VGA (up to 1920 x 1080@60Hz)          |
|                | Audio                   | N/A   | 1 x Line-out, 1 x Line-in  |
|                | Wireless                | 1 x 802.11a/b/g/n/ac (optional)   | 1 x 802.11a/b/g/n/ac (optional)  |
|                | Other                   | 1 x Power Button, 1 x Reset Button, 1 x AT/ATX Switch, 1 x LED for Power (Green),<br>1 x LED for HDD (Yellow) | 1 x Power Button, 1 x Reset Button, 1 x AT/ATX Switch, 1 x LED for HDD (Green) |
| Expansions     | PCIe Mini               | 1 x Full-size (PCIe/USB 2.0/SATA)   | 1 x Full-size (PCIe/USB 2.0/SATA)  |
|                | M.2                     | 1 x 2230 A-key (PCIe x 1/USB 2.0)   | N/A  |
| Power          | Power Input             | Terminal block: 12 V DC   | DC Jack: 12V DC  |
|                | Power Consumption       | 12V @ 1A<br>(Intel® Atom® E3930 with 2GB memory)  | 12V @ 2A<br>(Intel® Celeron® N3160 with 2GB memory)                            |
| Reliability    | Mounting                | DIN-Rail/ Wall-mount  | Wall-mount/ VESA 75  |
|                | Operating Temperature   | -20°C ~ 60°C with air flow (SSD), 10% ~ 95% noncondensing   | -20°C ~ 60°C with air flow (SSD), 10% ~ 95% non-condensing                     |
|                | Storage Temperature     | -30°C ~ 70°C with air flow (SSD), 10% ~ 90% non-condensing  | -20°C ~ 80°C with air flow (SSD), 10% ~ 90% non-condensing                     |
|                | Operating Shock         | Half-sine wave shock 5G, 11ms, 100 shocks per axis (SSD)  | Half-sine wave shock 5G, 11ms, 100 shocks per axis (SSD)                       |
|                | Operating Vibration     | MIL-STD-810G 514.6C-1 (SSD)   | MIL-STD-810G 514.6C-1 (SSD)  |
|                | Weight (Net/ Gross)     | Single layer: 0.67g/ 1.03 kg<br>Dual layer: 0.86g/ 1.22 kg  | 470g/ 1.4 kg   |
|                | Safety/EMC              | CE/ FCC   | CE/ FCC  |
|                | Watchdog Timer          | Programmable 1 ~ 255 sec/min  | Programmable 1 ~ 255 sec/min   |
| OS             | Supported OS            | Microsoft Windows 10 / Windows 11, Linux  | Microsoft® Windows 8, Microsoft® Embedded Standard 7 E                         |

# ITG-100-AL

- Ultra Compact Size
- Fanless DIN-Rail Embedded System
- Intel® Atom® x5-E3930 1.3 GHz (up to 1.8 GHz) Solution



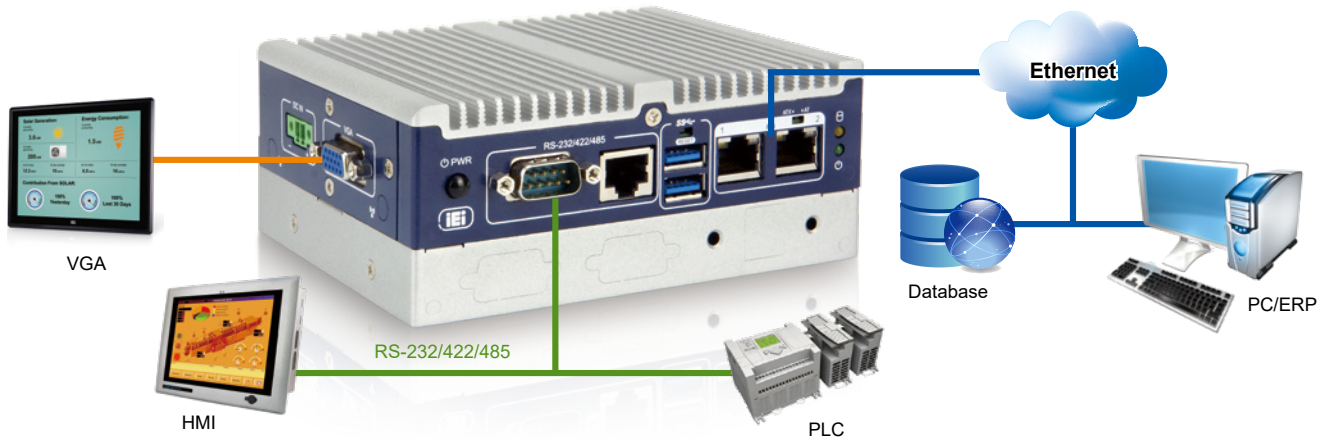
## Features

- Intel® Atom® x5-E3930 1.3 GHz (up to 1.8 GHz)
- Two GbE LAN ports
- Two RS-232/422/485
- Full-size PCIe Mini slot and M.2 A-key slot for expansion



## Intelligent Gateway

The ITG-100-AL equips with basic I/O ports and supports a wide range of operating temperature, making it suitable for acting the role as a data collection gateway in smart factory environments.



## A Wide Range of Applications

Given its practical features, the ITG-100-AL can be applied to a variety of application fields, such as military, industrial automation, and traffic control.

Military

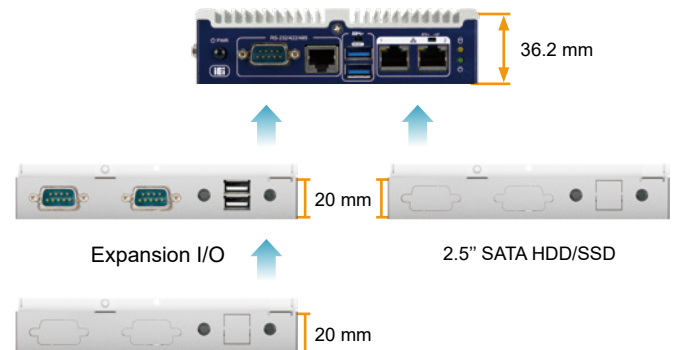
Industrial Automation

Traffic control



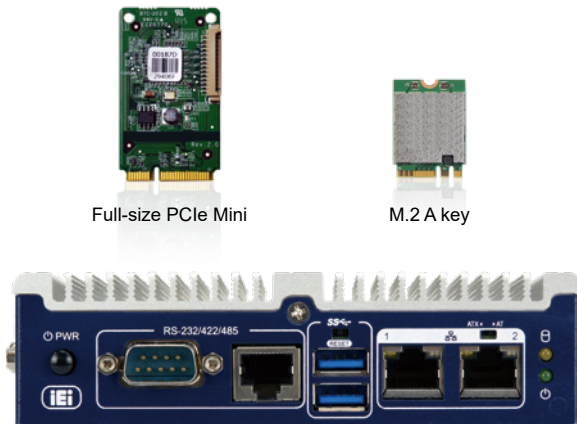
## Multi-layer Feature

Additional block layers can be assembled to achieve I/O interface expansion and data storage requirement. With choices of adding a 2.5" SATA HDD/SSD bay, a knockout-hole layer with selectable I/O interface, or both of above-mentioned options, the ITG-100-AL could be modularized to what best fit users' preferences and still remaining its compact size.



### Functionality Expansions

In order to respond the demand of adding more functions to the system, the ITG-100-AL is designed with a full-size PCIe Mini slot reserved for 3G/4G and a M.2 A-key slot reserved for Wi-Fi to provide function expansions with easy access.



### Ultra-compact Size

Space limitation is one of the constraints commonly seen in today's industrial environment. Under tight restrictions, the ITG-100-AL not only provides palm-sized design to meet the space requirement, but also comes with adequate basic I/O interfaces for various applications.

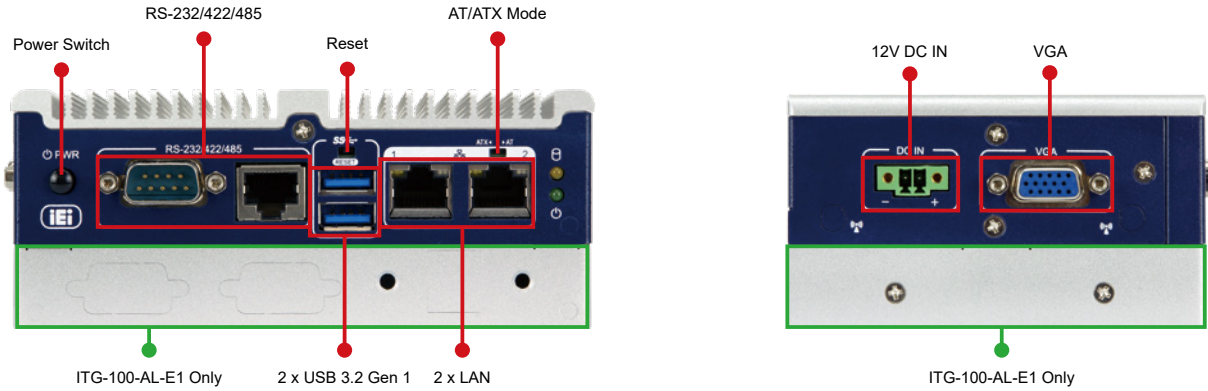


### Specifications

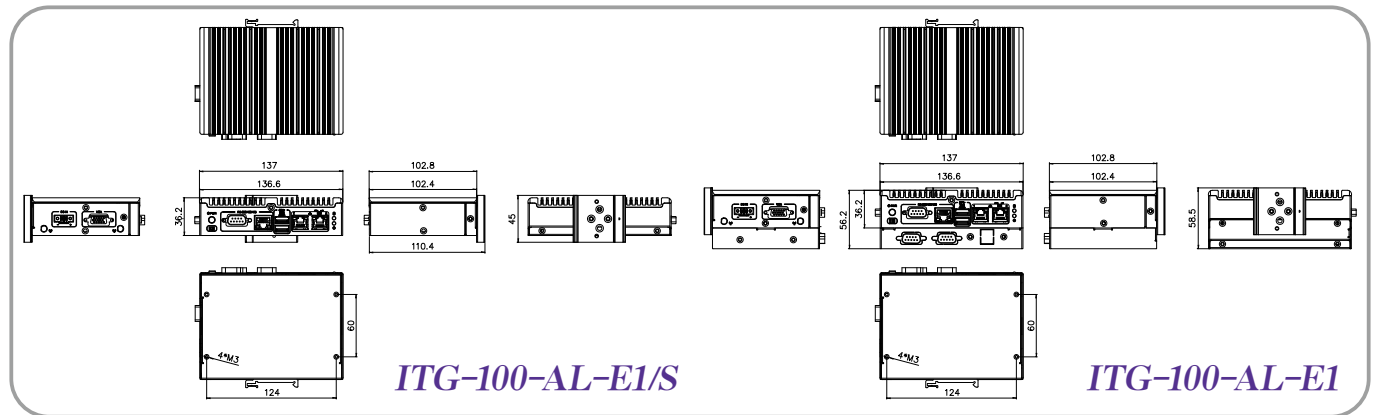
| Model Name     |                              | ITG-100-AL   |
|----------------|------------------------------|--|
| Chassis        | Color                        | Blue & Silver  |
|                | Dimensions (WxDxH) (mm)      | Single layer: 137 x 102.8 x 36.2<br>Dual layer: 137 x 102.8 x 56.2   |
|                | System Fan                   | Fanless  |
|                | Chassis Construction         | Extruded aluminum alloy  |
| Motherboard    | CPU                          | Intel® Atom® x5-E3930 1.3 GHz<br>(up to 1.8 GHz, dual-core, TDP 6.5W)                                      |
|                | Chipset                      | SoC  |
|                | System Memory                | 1 x SO-DIMM DDR3L 1600/1867 (2GB pre-installed)(up to 8GB)   |
| Storage        | Hard Drive                   | 1 x 2.5" SATA 6Gb/s HDD/SSD bay  |
|                | eMMC                         | 1 x eMMC5.0 (up to 32GB)(optional)   |
|                | Micro SD                     | 1 x Micro SD slot (optional)   |
| I/O Interfaces | USB                          | 2 x USB 3.2 Gen 1<br>2 x USB 2.0 (optional)  |
|                | Ethernet                     | 2 x RJ-45:<br>2 x GbE by Intel® I211   |
|                | COM Port                     | 2 x RS-232/422/485 with AFC (DB9/RJ-45)<br>2 x RS-232 (optional)   |
|                | Digital I/O                  | 8-bit Digital I/O (4-in/ 4-out)(optional)  |
|                | Display                      | 1 x VGA (up to 1920 x 1080@60Hz)   |
|                | Wireless                     | 1 x 802.11a/b/g/n/ac (optional)  |
|                | Other                        | 1 x Power Button, 1 x Reset Button, 1 x AT/ATX Switch, 1 x LED for Power (Green), 1 x LED for HDD (Yellow) |
| Expansions     | PCIe Mini                    | 1 x Full-size (PCIe/USB 2.0/SATA)  |
|                | M.2                          | 1 x 2230 A-key (PCIe x 1/USB 2.0)  |
| Power          | Power Input                  | Terminal block: 12 V DC (9 ~ 36V DC BOM optional) <sup>1</sup>   |
|                | Power Consumption            | 12V @ 1A<br>(Intel® Atom® E3930 with 2GB memory)   |
| Reliability    | Mounting                     | DIN-Rail/ Wall-mount   |
|                | Operating Temperature        | -20°C ~ 60°C with air flow (SSD), 10% ~ 95% non-condensing   |
|                | Storage Temperature          | -30°C ~ 70°C with air flow (SSD), 10% ~ 90% non-condensing   |
|                | Operating Shock              | Half-sine wave shock 5G, 11ms, 100 shocks per axis (SSD)   |
|                | Operating Vibration          | MIL-STD-810G 514.6C-1 (SSD)  |
|                | Weight (Net/Gross)           | Single layer: 0.67 g/ 1.03 kg<br>Dual layer: 0.86 g/ 1.22 kg   |
|                | Safety/EMC                   | CE/ FCC  |
| Watchdog Timer | Programmable 1 ~ 255 sec/min |  |
| OS             | Supported OS                 | Microsoft Windows 10 / Windows 11, Linux   |

1. By order production, MOQ:100

Fully Integrated I/O



Dimensions (Unit: mm)



Ordering Information

| Part No.                | Description   |
|-------------------------|---|
| ITG-100-AL-E1/S-R10     | Fanless embedded system, Intel® Apollo Lake x5-E3930 1.3 GHz (up to 1.8 GHz, dual core), VGA, M.2, COM, 12V DC and RoHS   |
| ITG-100-AL-E1/2GB/S-R10 | Fanless embedded system, Intel® Apollo Lake x5-E3930 1.3 GHz (up to 1.8 GHz, dual core), 2GB DDR3L pre-installed memory, VGA, M.2, COM, 12V DC and RoHS                         |
| ITG-100-AL-E1-R10       | Fanless embedded system, Intel® Apollo Lake x5-E3930 1.3 GHz (up to 1.8 GHz, dual core), VGA, M.2, COM, 12V DC, flexible I/O expansion and RoHS                                 |
| ITG-100-AL-E1/2GB-R10   | Fanless embedded system, Intel® Apollo Lake x5-E3930 1.3 GHz (up to 1.8 GHz, dual core), 2GB DDR3L pre-installed memory, VGA, M.2, COM, 12V DC, flexible I/O expansion and RoHS |

Options

| Item                   | Part No.                 | Description  |
|------------------------|--------------------------|--|
| 4GB Memory             | 79B00-G004-XXX-RS*       | DDR3L (204 PIN);4GB;1.35V;0° ~ 85°;RoHS  |
| 8GB Memory             | 79B00-G008-XXX-RS*       | DDR3L (204 PIN);8GB;1.35V;0° ~ 85°;RoHS  |
| Wi-Fi Module           | 27319-000009-RS**        | Wireless LAN Module;Wireless LAN & Bluetooth M.2 Module;Sparklan;R9701810011;IEEE802.11a/b/g/n/ac;2.412 GHz~2.4835 GHz, 5.15 GHz~5.85 GHz;M.2 2230;;3.3V;22*30*2.15mm;QCNFA364A;QCA6174A-5;2x2 MIMO;Dual Band;WCBN808A-Q2;CCL;CCL;RoHS |
| Antenna                | 32505-000900-100-RS**    | External Antenna;WLAN;RG 178;108MM;TANK-700-QM67-R10;PEAK GAIN 2.0DBI;Exceltek;2.4-2.5 GHz/5.15-5.85 GHz;REVERSE SMA PLUG;RoHS   |
| RF Cable               | 32501-004000-100-RS**    | RF;RF CABLE;LINE DIAMETER:0.81mm;250MM;;;50Ω;Sparklan;0-6 GHz;VSWR≤1.3;I-PEX MHF-4 Plug;REVERSE SMA JACK;NUT*1;WASHER*1;;RoHS  |
| DIO Cable              | 32231-000300-100-RS      | FLAT CABLE;DIO CABLE;;2;50MM;28AWG;(A)D-SUB 9P FEMALE;(B)DU PONT 2*5P P=2.0 FEMALE, RoHS   |
| COM Cable              | 32205-007500-200-RS      | FLAT CABLE;RS-232/422/485;COM CABLE;;2;50mm;28AWG;(A)D-SUB 9P MALE;(B)DU PONT 2*5P P=2.0 FEMALE, RoHS  |
| USB Cable              | 32001-000800-300-RS***   | ROUND CABLE;USB CABLE;;2;150MM;28AWG;(A)DOUBLE LAYER USB A TYPE FEMALE(WITH EAR);(B)DU PONT 2*4P P=2.0 FEMALE, RoHS  |
| HDD Drive Bay          | ITG-HB-R10***            | HDD Bay for ITG-100 only   |
| Exp. Chassis           | ITG-EXP-R10              | Expansion Chassis for ITG-100 only   |
| Adapter                | 63040-010036-210-RS****  | Adapter Power;FSP;FSP036-RHBN3;9NA0362707;;Vin:90 ~ 264VAC;36W;Dim:37.8*89.8*27.0mm;Plug=7.5mm;Cable=1500mm;Erp( NO LOAD 0.075W);Vout:12VDC;Φ2.5/Φ5.5/lock;CCL;RoHS  |
| Power Cable            | 32102-045700-100-RS **** | WIRE CABLE;POWER CABLE;;2;200mm;18AWG;(A)DC JACK 5.5*2.5;(B)TERMINAL BLOCK 2P P=3.5 180°, RoHS   |
| Power Cord             | 32702-000400-200-RS      | European power cord  |
| OS:Windows Embedded 10 | ITG-100-W10E64-E-R10     | OS Image with Windows® 10 IoT Enterprise Entry 64-bit for ITG-100-AL Series, with DVD-ROM, RoHS  |

\* It is just a general P/N. Please contact your sales representatives to assist you in ordering.  
 \*\* Each Wi-Fi module needs two antennas and two RF cables to fully support Wi-Fi function.  
 \*\*\* This USB cable cannot be used at the layer where the HDD drive bay is located.  
 \*\*\*\* It is required to order Power Cable together with Adapter for power usage.

Packing List

|  |               |                      |                                  |
|--|---------------|----------------------|----------------------------------|
| 1 x SATA cable & SATA power cable (for ITG-100-AL-E1 only) | 1 x Screw kit | 1 x Mounting bracket | 1 x RJ-45 to DB-9 COM port cable |
|--|---------------|----------------------|----------------------------------|



# uIBX-250-BW

Ultra Compact Size

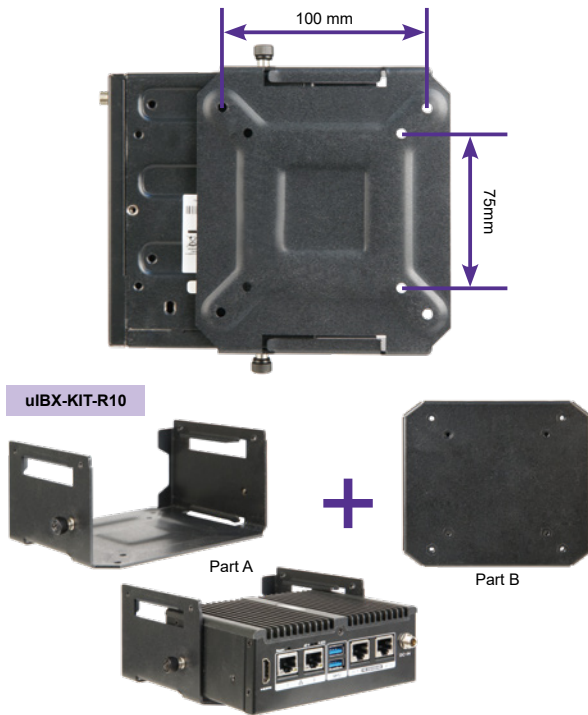


## Features

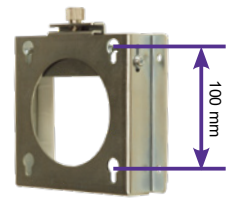
- Fanless system with Intel® Celeron® N3160 processor
- Dual display
- Two RS-232/422/485
- Full-size PCIe Mini slot for expansion
- Four USB 3.2 Gen 1 (5Gb/s) ports
- Two GbE LAN ports



## Smart Mounting Design

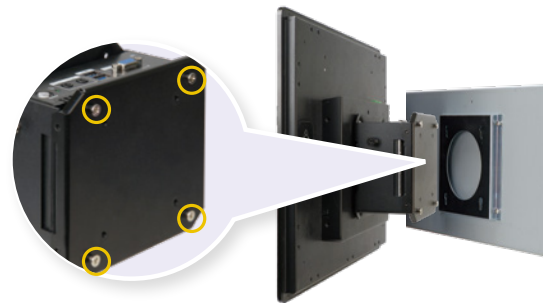


### A. Wall mount



Assemble the uIBX-250 with the uIBX-KIT-R10 on the back of monitor.

AFLWK-12/AFLWK-19



The monitor with the uIBX-250 can be mounted on the wall easily and support VESA 75/100.

### B. VESA mount 75/100

#### Step.1



Install the part A of the uIBX-KIT on the back of the monitor compliant with VESA 75/100.

#### Step.2



Assemble the uIBX-250 and the part B of the uIBX-KIT. Then, it can be mounted onto any devices with VESA 75/100 interface.

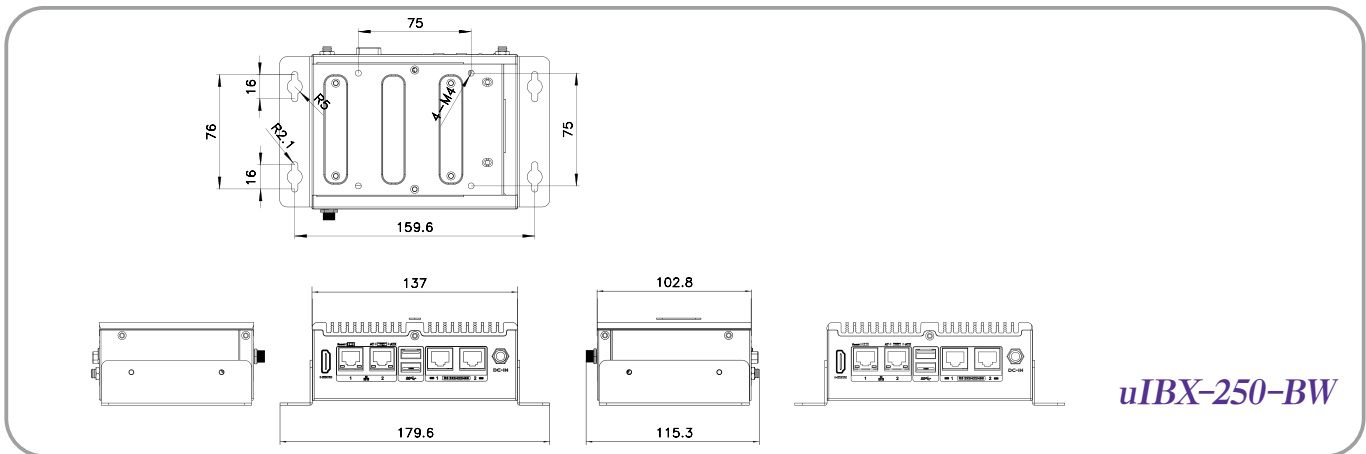


The position of the uIBX-250 could be adjusted to best fit your applications. Space can be greatly saved by mounting on the back of monitor.

## Specifications

| Model Name     |                         | uIBX-250-BW  |
|----------------|-------------------------|--|
| Chassis        | Color                   | Black  |
|                | Dimensions (WxDxH) (mm) | 137 x 102.8 x 52   |
|                | System Fan              | Fanless  |
|                | Chassis Construction    | Extruded aluminum alloy  |
| Motherboard    | CPU                     | Intel® Celeron® N3160 1.6 GHz (up to 2.24 GHz, quad-core, TDP 6W)              |
|                | Chipset                 | SoC  |
|                | System Memory           | 1 x 204-pin DDR3L SO-DIMM slot (2 GB pre-installed, system max: 8GB)           |
| Storage        | Hard Drive              | 1 x 2.5" SATA 6Gb/s HDD/SSD bay  |
| I/O Interfaces | USB                     | 4 x USB 3.2 Gen 1  |
|                | Ethernet                | 2 x RJ-45: 2 x GbE by Intel® I211  |
|                | COM Port                | 2 x RS-232/422/485 with AFC (RJ-45)  |
|                | Display                 | 1 x HDMI (up to 3840 x 2160@30Hz)<br>1 x VGA (up to 1920 x 1080@60Hz)          |
|                | Audio                   | 1 x Line-out, 1 x Line-in  |
|                | Wireless                | 1 x 802.11a/b/g/n/ac (optional)  |
|                | Other                   | 1 x Power Button, 1 x Reset Button, 1 x AT/ATX Switch, 1 x LED for HDD (Green) |
|                | Expansions              | PCIe Mini  |
| Power          | Power Input             | DC Jack: 12V DC  |
|                | Power Consumption       | 12V @ 2A (Intel® Celeron® N3160 with 2GB memory)                               |
| Reliability    | Mounting                | Wall-mount/ VESA 75  |
|                | Operating Temperature   | -20°C ~ 60°C with air flow (SSD), 10% ~ 95% non-condensing                     |
|                | Storage Temperature     | -20°C ~ 80°C with air flow (SSD), 10% ~ 90% non-condensing                     |
|                | Operating Shock         | Half-sine wave shock 5G, 11ms, 100 shocks per axis (SSD)                       |
|                | Operating Vibration     | MIL-STD-810G 514.6C-1 (SSD)  |
|                | Weight (Net/Gross)      | 470g/ 1.4 kg   |
|                | Safety/EMC              | CE/ FCC  |
|                | Watchdog Timer          | Programmable 1 ~ 255 sec/min   |
| OS             | Supported OS            | Microsoft® Windows 8, Microsoft® Embedded Standard 7 E                         |

## Dimensions (Unit: mm)



## Ordering Information

| Part No.              | Description  |
|-----------------------|--|
| uIBX-250-BW-N3/2G-R21 | Fanless embedded system with Intel® Celeron® N3160 1.6 GHz (up to 2.24 GHz, quad core, TDP 6 W), 2 GB DDR3L pre-installed memory, 12V DC, with RS-232/422/485, USB 3.2 Gen 1 (5Gb/s), VGA/HDMI, dual Intel® PCIe GbE, RoHS |

## Options

| Part No.                | Description   |
|-------------------------|---|
| EMB-WIFI-KIT01-R20      | 1T1R Wi-Fi module kit for embedded system, IEEE802.11a/b/g/n/ac WiFi with Bluetooth 4.0/3.0+HS, 1 x Wi-Fi module, 2 x 250mm RF cable, 2 x Antenna, RoHS |
| DK-75-R10               | VESA 75 to DIN-Rail mounting kit  |
| uIBX-KIT-R10            | uIBX smart mounting kit for monitor and stand   |
| uIBX-250-BW-WES7E64-R10 | OS image with Windows® Embedded Standard 7 E 64-bit for uIBX-250, DVD-ROM, RoHS   |

## Packing List

|                   |                      |                                |
|-------------------|----------------------|--------------------------------|
| 1 x Power Adapter | 1 x Mounting Bracket | 2 x RS-232/422/485 Round Cable |
|-------------------|----------------------|--------------------------------|

# Digital Signage Solution



## IDS Series

Multiple screens can be connected to IEI digital signage series to display information like flight information at airports, in-store advertising, restaurant menu or movie showtimes. These digital signage players are in compact size with high resolution, stable and easy to install. They are equipped with multiple HDMI ports for a variety of video display monitors. It's the best choice for you to implement it in digital signage and video wall applications.



### Key Features

#### ■ Ultra HD

Display approaching 4K2K resolution. Best for high-definition screen.  
Triple display port:

- 3 x HDMI 3840 x 2160 @30Hz



#### ■ Thin Appearance

The minimum dimension of IDS-310 is 137 x 102.8 x 38.1 (mm) which can be installed in a limited space and saves more space.

**Slim size**

38.1mm



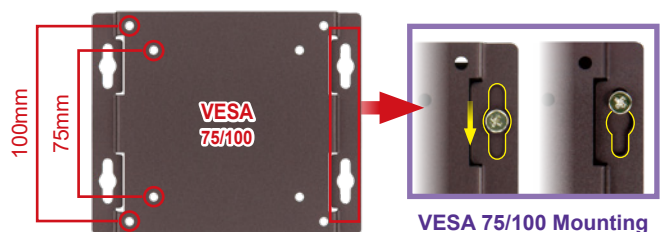
#### ■ Hardware Expansion

The M.2 A-key & PCIe Mini slots are reserved for Wi-Fi, 3G/4G or mSATA modules, and also support SATA DOM for storage to achieve flexible application. Users can quickly replace the modules inside by simply opening the bottom panel of the chassis. Such a design can produce huge benefits for those who need quick response and efficient services.



#### ■ Mounting Method

The series has passed shock and vibration test based on the MIL-STD-810G standard.



VESA 75/100 Mounting

# Digital Signage Embedded System



| Model Name     |                            | IDS-310-AL-N1  | IDS-310-AL-J1   |
|----------------|----------------------------|--|---|
| Chassis        | Color                      | Brown & Silver   | Brown & Silver  |
|                | Dimensions (WxDxH)(mm)     | 137 x 102.8 x 38.1   | 137 x 102.8 x 52.1  |
|                | System Fan                 | Fanless  | Fanless   |
|                | Chassis Construction       | Extruded aluminum alloy  | Extruded aluminum alloy   |
| Motherboard    | CPU                        | Intel® Celeron® N3350 1.1 GHz (up to 2.4 GHz, dual-core, TDP 6W) | Intel® Celeron® J3455 1.5 GHz (up to 2.3 GHz, quad-core, TDP 10W) |
|                | Chipset                    | SoC  | SoC   |
|                | System Memory              | 1 x SO-DIMM DDR3L (4GB pre-installed)(up to 8GB)                 | 1 x SO-DIMM DDR3L (4GB pre-installed)(up to 8GB)                  |
| Storage        | Hard Drive                 | 1 x SATA 6Gb/s connector   | 1 x SATA 6Gb/s connector  |
|                | Micro SD                   | 1 x Micro SD slot (optional)                                     | 1 x Micro SD slot (optional)                                      |
| I/O Interfaces | USB                        | 3 x USB 3.2 Gen 1  | 3 x USB 3.2 Gen 1   |
|                | Ethernet                   | 2 x RJ-45:<br>2 x GbE by RTL8111                                 | 2 x RJ-45:<br>2 x GbE by RTL8111                                  |
|                | RS-232/422/485             | 1 x RS-232/422/485 with AFC                                      | 1 x RS-232/422/485 with AFC                                       |
|                | Display                    | 3 x HDMI 1.4b (3840 x 2160@30Hz)                                 | 3 x HDMI 1.4b (3840 x 2160@30Hz)                                  |
|                | Audio                      | 1 x Line-out, 1 x Mic-in   | 1 x Line-out, 1 x Mic-in  |
|                | Wireless                   | 1 x 802.11 a/b/g/n/ac (optional)                                 | 1 x 802.11 a/b/g/n/ac (optional)                                  |
|                | TPM                        | Optional   | Optional  |
| Expansions     | PCIe Mini                  | 1 x Full-size with SIM card slot (PCIe/USB 2.0/SATA)             | 1 x Full-size with SIM card slot (PCIe/USB 2.0/SATA)              |
|                | M.2                        | 1 x 2230 A-key (PCIe x1/USB 2.0)                                 | 1 x 2230 A-key (PCIe x1/USB 2.0)                                  |
| Power          | Power Input                | DC Jack: 12V DC  | DC Jack: 12V DC   |
|                | Power Consumption          | 12V @ 1.9A (Intel® Celeron® N3350 with 4GB memory)               | 12V @ 2.2A (Intel® Celeron® J3455 with 4GB memory)                |
| Reliability    | Mounting                   | VESA 75/100/Wall mount (optional)                                | VESA 75/100/Wall mount (optional)                                 |
|                | Operating Temperature      | -20°C ~ 60°C with air flow (mSATA), 10% ~ 95% non-condensing     | -20°C ~ 60°C with air flow (mSATA), 10% ~ 95% non-condensing      |
|                | Storage Temperature        | -30°C ~ 80°C with air flow, 10% ~ 90% non-condensing             | -30°C ~ 80°C with air flow, 10% ~ 90% non-condensing              |
|                | Operating Shock            | Half-sine wave shock 5G, 11ms, 100 shocks per axis (mSATA)       | Half-sine wave shock 5G, 11ms, 100 shocks per axis (mSATA)        |
|                | Operation Vibration        | MIL-STD-810G 514.6C-1 (mSATA)                                    | MIL-STD-810G 514.6C-1 (mSATA)                                     |
|                | Weight ( Net/ Gross)       | 680g/1.4 kg  | 950g/1.7 kg   |
| Safety / EMC   | CE/FCC Class A/BSMI        | CE/FCC Class A/BSMI  |   |
| Watchdog timer | Programmable 1~255 sec/min | Programmable 1~255 sec/min                                       |   |
| OS             | Supported OS               | Microsoft® Windows® 10, Linux                                    | Microsoft® Windows® 10, Linux                                     |



# IDS-310-AL

■ Digital Signage System

■ Ultra Compact Size

## Features

- Triple HDMI displays up to 4K resolution
- Two GbE LAN ports
- Full-size PCIe Mini slot and M.2 A-key slot for expansion



## Specifications

| Model Name     |                              | IDS-310-AL-N1   | IDS-310-AL-J1  |
|----------------|------------------------------|---|--|
| Chassis        | Color                        | Brown & Silver  |  |
|                | Dimensions (WxDxH)(mm)       | 137 x 102.8 x 38.1  | 137 x 102.8 x 52.1   |
|                | System Fan                   | Fanless   |  |
|                | Chassis Construction         | Extruded aluminum alloys  |  |
| Motherboard    | CPU                          | Intel® Celeron® N3350 1.1 GHz<br>(up to 2.4 GHz, dual-core, TDP 6W) | Intel® Celeron® J3455 1.5 GHz<br>(up to 2.3 GHz, quad-core, TDP 10W) |
|                | Chipset                      | SOC   |  |
|                | System Memory                | 1 x SO-DIMM DDR3L (4GB pre-installed)(up to 8GB)                    |  |
| Storage        | Hard Drive                   | 1 x SATA 6Gb/s connector  |  |
|                | Micro SD                     | 1 x Micro SD slot (optional)  |  |
| I/O Interfaces | USB                          | 3 x USB 3.2 Gen 1   |  |
|                | Ethernet                     | 2 x RJ-45:<br>2 x GbE by RTL8111                                    |  |
|                | COM Port                     | 1 x RS-232/422/485 with AFC   |  |
|                | Display                      | 3 x HDMI 1.4b (3840x2160@30Hz) <sup>1,2</sup>                       |  |
|                | Audio                        | 1 x Line-out, 1 x Mic-in  |  |
|                | Wireless                     | 1 x 802.11 a/b/g/n/ac (optional)                                    |  |
|                | TPM                          | 1 x TPM 2.0 (optional)  |  |
| Expansions     | PCIe Mini                    | 1 x Full-size with SIM card slot (PCIe/USB 2.0/SATA)                |  |
|                | M.2                          | 1 x 2230 A-key (PCIe x1/USB 2.0)                                    |  |
| Power          | Power Input                  | DC Jack: 12V DC (9 ~ 36V DC BOM optional) <sup>3</sup>              |  |
|                | Power Consumption            | 12V @ 1.9A (Intel® Celeron® N3350 with 4GB memory)                  | 12V @ 2.2A (Intel® Celeron® J3455 with 4GB memory)                   |
| Reliability    | Mounting                     | VESA 75/100/Wall mount(optional)                                    |  |
|                | Operating Temperature        | -20°C ~ 60°C with air flow (mSATA), 10% ~ 95% non-condensing        |  |
|                | Storage Temperature          | -30°C ~ 80°C with air flow (mSATA), 10% ~ 95% non-condensing        |  |
|                | Operating Shock              | Half-sine wave shock 5G, 11ms, 100 shocks per axis (mSATA)          |  |
|                | Operation Vibration          | MIL-STD-810G 514.6C-1 (mSATA)                                       |  |
|                | Weight ( Net/Gross)          | 680 g / 1.4 kg  | 950 g / 1.7 kg   |
|                | Safety / EMC                 | CE/FCC Class A/BSMI   |  |
| Watchdog Timer | Programmable 1 ~ 255 sec/min |   |  |
| OS             | Supported OS                 | Microsoft® Windows® 10, Linux                                       |  |

1. Due to chipset limitation, audio is not supported over the HDMI3 connector.

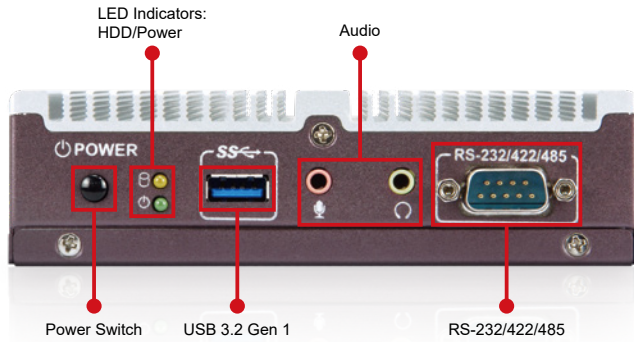
2. Fully support of triple 4K display output may vary in different system environment setting. Contact an IEI sales representative for detailed information.

3. By order production, MOQ:100

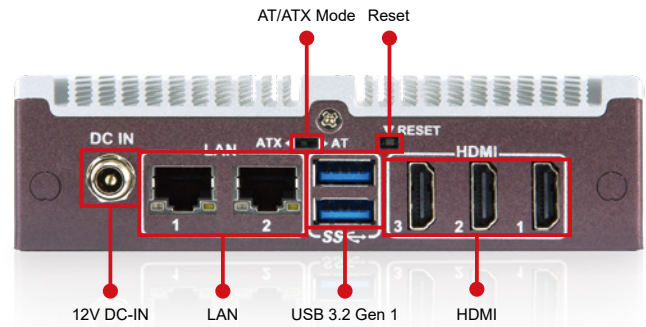


Fully Integrated I/O

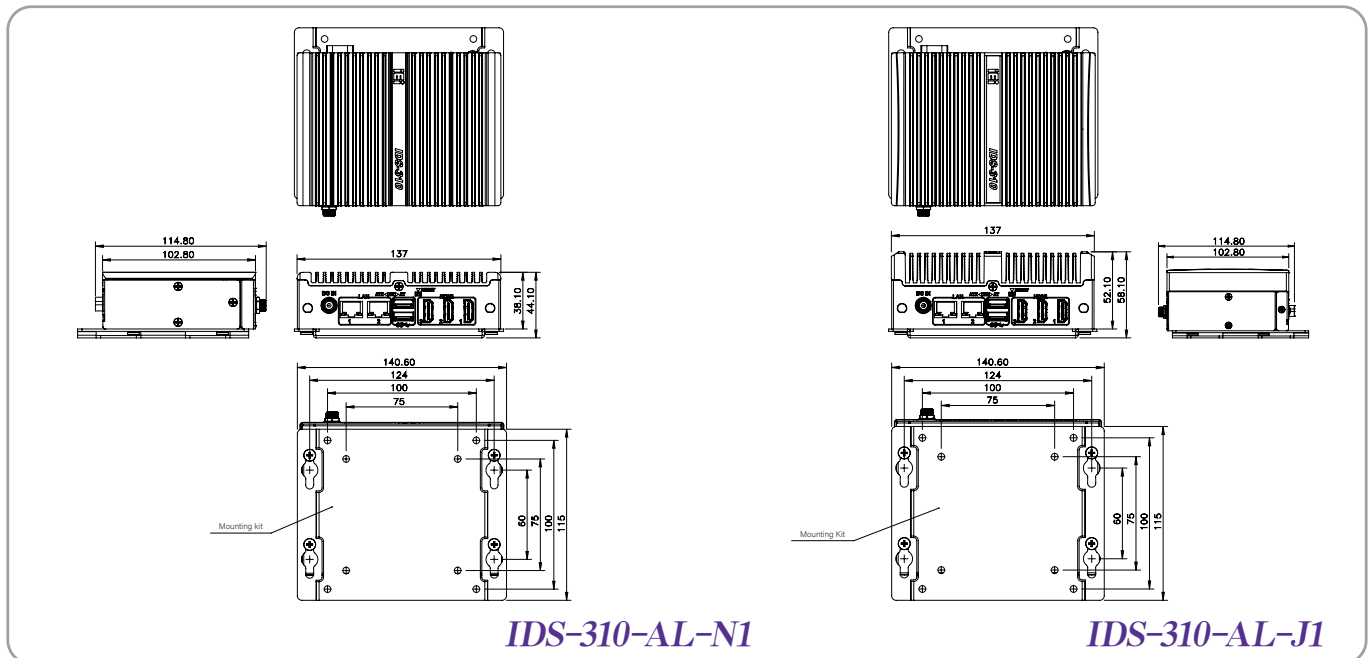
Front View



Rear View



Dimensions (Unit: mm)



Ordering Information

| Part No.              | Description  |
|-----------------------|--|
| IDS-310-AL-J1/4GB-R10 | Fanless embedded system with Intel® Celeron® J3455 1.5 GHz (up to 2.3 GHz, quad core, TDP 10W), pre-installed 4GB DDR3L memory, triple HDMI display, 12V DC and RoHS |
| IDS-310-AL-N1/4GB-R10 | Fanless embedded system with Intel® Celeron® N3350 1.1 GHz (up to 2.4 GHz, dual core, TDP 6W), pre-installed 4GB DDR3L memory, triple HDMI display, 12V DC and RoHS  |

Options

| Part No.               | Description  |
|------------------------|--|
| Wi-Fi Module           | 27319-000009-RS*<br>Wireless LAN Module;Wireless LAN & Bluetooth M.2 Module;Sparklan;R9701810011;IEEE802.11a/b/g/n/ac;2.412 GHz~2.4835 GHz, 5.15 GHz~5.85 GHz;M.2 2230;;3.3V;22*30*2.15mm;QCNFA364A;QCA6174A-5;2x2 MIMO;Dual Band;WCBN808A-Q2;CCL;CCL;RoHS |
| Antenna                | 32505-000900-100-RS*<br>External Antenna;WLAN;RG 178;108MM;TANK-700-QM67-R10;PEAK GAIN 2.0DBI;Exceltek;2.4-2.5 GHz/5.15-5.85 GHz;REVERSE SMA PLUG;RoHS   |
| RF Cable               | 32501-004000-100-RS*<br>RF;RF CABLE;LINE DIAMETER:0.81mm;250MM;;50Ω;Sparklan;0-6 GHz;VSWR≤1.3;I-PEX MHF-4 Plug;REVERSE SMA JACK;NUT x 1;WASHER x 1;;RoHS   |
| OS:Windows Embedded 10 | IDS-310-AL-W10E64-E-R10<br>OS Image with Windows® 10 IoT Enterprise Entry 64-bit 2019 for IDS-310-AL Series, with DVD-ROM, RoHS  |

\* Each Wi-Fi module needs two antennas and two RF cables to fully support Wi-Fi function.

Packing List

|                              |                   |               |
|------------------------------|-------------------|---------------|
| 1 x VESA 75/100 Mounting Kit | 1 x Power Adapter | 1x Power Cord |
|------------------------------|-------------------|---------------|