# PBC 1000

VHub

Intel Atom® x6211E Processor (Elkhart Lake)
Ultra-compact Fanless Embedded Box PC



Intelligent Control







- Intel Atom® x6000 Series Processor delivers up to 40% faster compute and up to 2X better 3D graphics performance than the former generation solution
- Small form factor, ultra-compact design
- Fanless, -40°C to 70°C Operating Temperature
- 2 GigE LAN, 2 USB 3.0, 2 COM, M.2 Key B, M.2 Key E
- SIM Socket for WiFi/5G/4G/LTE/GPRS/UMTS
- Optional VHub AIoT Solution Service supports OpenVINO based AI accelerator and advanced Edge AI applications

Energy Managment





M2M

intel partner Gold IoT Solutions

SIM M.2 12V -40° 70° 5G

Vecow

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# Specifications

## System

| | |
|---|---|
| Processor | Intel Atom® x6211E Processor (Elkhart Lake) |
| BIOS | AMI |
| SIO | IT8659E |
| Memory | 1 DDR4 3200MHz SO-DIMM, up to 32GB |
| OS | Windows 10, Linux |

## Graphics

| | |
|---|---|
| Graphics Processor | Intel® UHD Graphics for 10th Gen Intel® Processors |
| Interface | 1 DisplayPort : Up to 4096 x 2160 @60Hz |

## Ethernet

| | |
|---|---|
| LAN 1 | Realtek RTL8119I supports GigE LAN |
| LAN 2 | Realtek RTL8119I supports GigE LAN |

## Audio

| | |
|---|---|
| Audio Codec | Realtek ALC888S-VD, 7.1 Channel HD Audio |
| Audio Interface | 1 Mic-in, 1 Line-out |

## Storage

| | |
|---|---|
| SATA | 1 SATA III (6Gbps) |

## I/O Interface

| | |
|---|---|
| Serial | - 1 COM RS-232/422/485<br>- 1 COM RS-232 |
| USB | 2 USB 3.0 |
| LED | Power, HDD, WLAN, WWAN |
| SIM Card | 1 External SIM Card Socket |

## Expansion

| | |
|---|---|
| M.2 | - 1 M.2 Key B (2280, PCIe x2/SATA/USB3(Default)/USB2)<br>- 1 M.2 Key E (2230, PCIe/USB) |

## Power

| | |
|---|---|
| Power Input | 12V DC-in |
| Power Interface | 2-pin Terminal Block : V-, V+ |

## Others

| | |
|---|---|
| Watchdog Timer | Reset : 1 to 255 sec./min. per step |
| HW Monitor | Monitoring temperature, voltages. Auto throttling control when CPU overheats. |

## Mechanical

| | |
|---|---|
| Dimensions | 126.0mm x 43.5mm x 78.5mm (4.96" x 1.74" x 3.09") |
| Weight | 0.5 kg (1.1 lbs) |
| Mounting | - Wallmount by mounting bracket<br>- DIN Rail Mount (Optional) |

## Environment

| | |
|---|---|
| Operating Temperature | -40°C to 70°C (-40°F to 158°F) |
| Storage Temperature | -40°C to 85°C (-40°F to 185°F) |
| Humidity | 5% to 95% Humidity, Non-condensing |
| Relative Humidity | 95% @70°C |
| Shock | - IEC 60068-2-27<br>- SSD : 50G @wallmount, Half-sine, 11ms |
| Vibration | - IEC 60068-2-64<br>- SSD : 5Grms, 5Hz to 500Hz, 3 Axis |
| EMC | CE, FCC, EN50155, EN50121-3-2 |

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EN50155 CE FC RoHS

# Order Information

| Model | GigE LAN | USB 3.0 | COM | DisplayPort | SIM Socket |
|---|---|---|---|---|---|
| PBC-1000 | 2 | 2 | 2 | 1 | 1 |

## Optional Software

| | |
|---|---|
| VHub AI Developer | AI Development Kit |
| VHub ROS | AMR Development Kit |
| VHub EtherCAT | I/O Control Platform |

## Accessories

| | |
|---|---|
| DDR4 32G | Certified DDR4 32GB 3200MHz RAM |
| DDR4 16G | Certified DDR4 16GB 3200MHz RAM |
| DDR4 8G | Certified DDR4 8GB 3200MHz RAM |
| DDR4 4G | Certified DDR4 4GB 3200MHz RAM |
| PWA-60W-12V | 60W, 12V, 90V AC to 264V AC Power Adapter with 2-pin Terminal Block |
| DIN-RAIL | DIN Rail Mounting Kit |
| 5G Module | 5G Module with Antenna |
| 4G Module | 4G/GPS Module with Antenna |
| WiFi & Bluetooth | WiFi & Bluetooth Module with Antenna |

# Dimensions & Drawing

## Unit : mm (inch)

