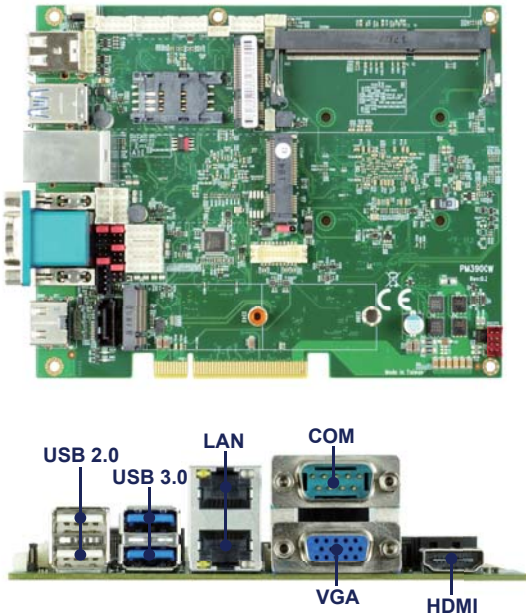


# PM390CW

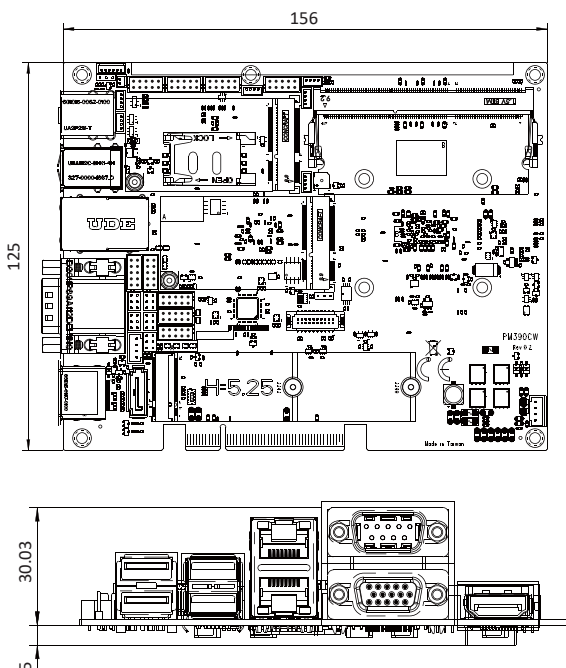
Half size CPU board supports Intel® Apollo Lake Pentium / Celeron / Atom CPU  
VGA, HDMI, eDP, 2 x Intel Gb Ethernet, 5 x USB, 8DI / 8DO,  
5 x COM, 2 x Mini PCIe, 1 x SIM, 1 x M.2, 1 x PCIe, SMBus



## Features:

- Intel® Apollo Lake Pentium® N4200 2.5 GHz (Quad Core)  
Celeron® N3350 2.4 GHz (Dual Core)  
Atom™ E3950 2.0 GHz (Quad Core)
- 1 x DDR3L SODIMM socket, Max. 8GB
- Multiple Independent display: VGA, HDMI & eDP
- 2 x Intel GbE, 2 x USB 3.0, 3 x USB 2.0, 5 x COM
- 8DI / 8DO, 2 x Mini PCIe, 1 x M.2, 1 x PCIe, SMBus
- TPM 2.0 (Optional)

## Dimensions: (Unit:mm)



## Specifications :

- CPU**  
Intel® Apollo Lake Pentium® N4200 2.5 GHz (Quad Core)  
Celeron® N3350 2.4 GHz (Dual Core)  
Atom™ E3950 2.0 GHz (Quad Core)
- MB Chipset**  
Intel® Apollo Lake SoC
- Graphics**  
Intel Gen9 Graphic engine  
DirectX11, OpenGL3.2, OpenCL1.2, Full HW acceleration,  
decode: H.264, MPEG 2 / 4, VC-1, WMV9, Encode: H.264, MPEG2
- System Memory**  
1 x DDR3L 1600 MHz SODIMM, Max. 8GB
- Storage**  
1 x M.2 B Key, Type 2242 / 2280 (SATA / PCIe)  
1 x mini card socket for mSATA  
1 x SATA ports 3.0 Data transfer rates up to 6.0 Gb/s (600 MB/s), Share with mSATA
- BIOS**  
Insyde UEFI BIOS
- Display**  
1 x VGA, 1 x HDMI, eDP
- TPM**  
TPM 2.0 (Option)
- LAN**  
2 x Intel GbE (external)
- Audio (OEM)**  
High Definition Audio Specification, Support Line-out / Mic-in / Line-in  
(Option) Two channel Class D Audio Amplifier
- Expansion Interface**  
1 x Full size Mini PCIe (PCIe / USB), 1 x Full size Mini PCIe (PCIe / mSATA / USB)  
1 x PCIe x 8 golden finger (PCIe x 4 + PCIe x 1 Signal)  
1 x M.2 B Key, Type 2242 / 2280 (SATA / PCIe)  
1 x SIM

### Expansion Module

PCIe Card via riser Card 2 x USB 3.1, 2 x 10 GbE LAN, 4 x PoE, 4 x GbE

**Converter Card** CN066: Mini PCIe to M.2 E key 2230, WiFi 6 + BT

**Mini Card** GPS, 3G / 4G, WiFi, 2 / 4 x LAN, 4 x COM, CANBus, SDI / AHD Video

**By Cable** Bluetooth, Digital I/O, 2 / 4 PoE, 4 x USB mini card

### USB

2 x USB 3.0 (external) ; 2 x USB 2.0 (external) ; 1 x USB 2.0 (internal)

### USB Expansion

USB to COM, Mini Card, M.2, Audio board

### Serial IO

1 x RS232 / 422 / 485 (external), 4 x RS232 / 422 / 485 (internal)

\*COM1~COM5 pin9 5V / 12V selectable by jumper

### GPIO

Hardware digital Input & Output, 8 x DI / 8 x DO

### SMBus

1 x SMBus

### WDT

Hardware Watch Dog Timer, 0~255 sec programmable

### Power Input

Wide Range +9~36V

### Dimension

156 x 125 mm

### Operation Temperature

-20°C~70°C (100 % CPU Usage)

### Operation Humidity

5~95%, non-condensing

### Chassis (OEM I/O Expansion by request)

Box PC: APOLLO-Compact

### OS Support

Windows® 10 IOT (64bit), Ubuntu 16.04.1 above, Fedora 25 above

Specification are subject to change without prior notice. ODM / OEM is available.