

# AES-2230-C4

Intel Apollo Lake Celeron N3350 2.4GHz CPU  
Fanless Industrial Computers, 4COM, 2LAN  
VGA/HDMI, 2USB3/4USB2, wide DC-IN 9-36V



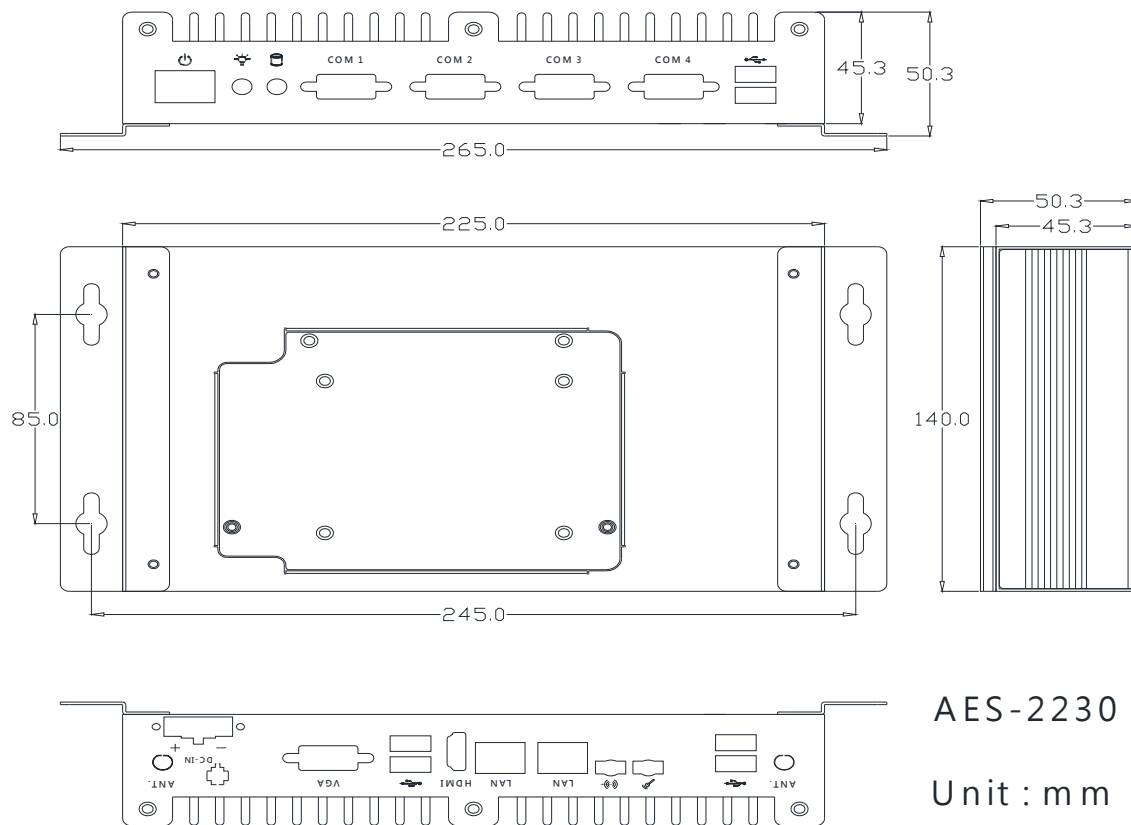
## Features

- With Intel Apollo Lake Celeron Dual-Core N3350 2.4GHz CPU
- Celeron Quad-Core J3455, Pentium Quad-Core N4200 CPU
- Triple display VGA/HDMI/LVDS, 2xUSB 3.0, 4xUSB 2.0
- Dual Gigabit LAN Intel I210
- COM1 by RS-485/422/232, COM2/3/4 by RS-232
- Option 2-pole connector for reset control
- Wide DC 9-36V Input by 2-Pin phoenix connector
- Supports Microsoft Win 10 IoT 64bit (Ent LTSB)
- ATM, Kiosk, self-service, machine automation, IoT gateway platform

## Specifications

|                    | CPU                      | AES-2230L-C4   | *AES-2230J-C4       | *AES-2230D-C4       |
|--------------------|--------------------------|--|---------------------|---------------------|
| Processor System   | CPU Speed & L2 Cache     | 1.1GHz / 2MB   | 1.5GHz / 2MB        | 1.1GHz / 2MB        |
|                    | CPU Max. Speed/Core      | 2.4GHz / Dual Cores  | 2.3GHz / Quad Cores | 2.5GHz / Quad Cores |
|                    | CPU/ TDP                 | Celeron N3350 / 6W   | Celeron J3455 / 10W | Pentium N4200 / 6W  |
|                    | BIOS                     | AMI 16Mb AMI UEFI with GUI support   |                     |                     |
|                    | Graphics Processor       | Intel HD Graphics  |                     |                     |
| Expansion Slot     | Mini-PCIe / mSATA        | 1 x full-size ( shared with mSATA)   |                     |                     |
|                    | Mini-PCIe                | 1 x full-size  |                     |                     |
| Memory             | Specification (SO-DIMM)  | 2 x DDR3L-1867   |                     |                     |
|                    | System Max. Capacity     | 16GB   |                     |                     |
| Graphics           | VGA                      | 1 x VGA(1920x1200)   |                     |                     |
|                    | HDMI                     | 1 x HDMI, max resolution up to 4096x2160@24Hz                                      |                     |                     |
|                    | LVDS(Internal connector) | 1 x Dual channel 24-bit LVDS up to 1920 x 1200, (customized LVDS solution for LCD) |                     |                     |
| Ethernet           | LAN Gigabit Controller   | 2 x Intel I210   |                     |                     |
| Storage            | SATA3                    | 1 x SATA3 for one 2.5" SATA drive  |                     |                     |
|                    | mSATA                    | 1 x full-size Mini-PCIe shared with mSATA  |                     |                     |
|                    | 2.5" Driver              | 1 x 2.5" SATA HDD/SSD space  |                     |                     |
| System Rear I/O    | VGA                      | 1 x DB-15  |                     |                     |
|                    | HDMI                     | 1 x HDMI   |                     |                     |
|                    | Ethernet                 | 2 x RJ45   |                     |                     |
|                    | USB Type A               | 2 x USB 3.0, 2 x USB 2.0   |                     |                     |
|                    | Line-out                 | 1 x Audio jack (Line-out)  |                     |                     |
|                    | Mic-in                   | 1 x Audio jack ( Mic-in)   |                     |                     |
|                    | System Power Input       | 1 x 2-pin phoenix connector 9-36Vdc Input  |                     |                     |
|                    | Antenna / Reset          | 2 x Antenna holes, 1 x 2-pole (options)  |                     |                     |
| System Front Bezel | Power Switch             | 1x Moment button switch to turn-on or turn-off system                              |                     |                     |
|                    | System Power LED         | 1x LED for system power status   |                     |                     |
|                    | HDD LED                  | 1x LED for SATA HDD data access status   |                     |                     |
|                    | COM1 Port                | 1 x DB-9 ( 1 x RS-485/422/232, Pin9 +5/+12V selectable,)                           |                     |                     |
|                    | COM2-4 Ports             | 3 x DB-9 ( 3 x RS-232)   |                     |                     |
|                    | USB Type A               | 2 x USB 2.0  |                     |                     |
| Operation System   | Win 10                   | Win 10 IoT Ent LTSB , 64bit  |                     |                     |
| Watchdog Timer     | Output and Interval      | System reset, programmable 1 ~ 255 sec/min; 1 sec. or 1min. /step                  |                     |                     |
| Power Requirement  | DC Input                 | 9-36Vdc input (option DC12V 60W adapter)   |                     |                     |
| Environment        | Operating Temperature    | -10°C ~60°C(32~140°F)  |                     |                     |
|                    | Air Flow Condition       | 50 ~ 60°C with 0.7m/s flow   |                     |                     |
|                    | Storage Temperature      | -40 ~ 85°C ( -40 ~ 185°F )   |                     |                     |
| Physical Size      | Dimensions               | 225mm(W) x 140mm(D) x 45mm(H)  |                     |                     |
| Packing Size       | Dimensions               | 300mm(W) x 260mm(D) x 130mm(H)   |                     |                     |
| Weight             | N.W / G.W.               | Single packed: 3Kg / 4Kg   |                     |                     |
| Certifications     | EMC                      | N/A  |                     |                     |

## Dimensions Outlook



## Ordering Information

| Part Number            | CPU   | VGA/HDMI | GbE | USB 3.0 / 2.0 |   | COM | RAM    | mSATA    | 2.5" SSD/HDD   | DC Input |
|------------------------|-------|----------|-----|---------------|---|-----|--------|----------|----------------|----------|
| AES-2230L-C4-M0-m00P0  | N3350 | 1/1      | 2   | 2             | 4 | 4   | Option | Disabled | Option         | 9-36Vdc  |
| AES-2230J-C4-M0-m00P0  | J3455 | 1/1      | 2   | 2             | 4 | 4   | Option | Disabled | Option         | 9-36Vdc  |
| AES-2230D-C4-M0-m00P0  | N4200 | 1/1      | 2   | 2             | 4 | 4   | Option | Disabled | Option         | 9-36Vdc  |
| AES-2230L-C4-M4-SD64P0 | N3350 | 1/1      | 2   | 2             | 4 | 4   | 4GB    | Enabled  | 2.5" SSD 64GB  | 9-36Vdc  |
| AES-2230L-C4-M4-HD5P0  | N3350 | 1/1      | 2   | 2             | 4 | 4   | 4GB    | Enabled  | 2.5" HDD 500GB | 9-36Vdc  |
| AES-2230L-C4-M4-HG5P0  | N3350 | 1/1      | 2   | 2             | 4 | 4   | 4GB    | Enabled  | 2.5" HG 500GB  | 9-36Vdc  |

\*AES-2230D and AES-2230J are for projects with MOQ.

## Optional Items

| Part Number                  | Description   |
|------------------------------|---|
| AES-WM-BK                    | AES-1210 Wall Mount Bracket Kits, Black, with Screws  |
| SODIMM-DDR3L-2GB / 4GB / 8GB | 204-Pin SODIMM DDR3L 1867MHz, 2GB / 4GB / 8GB   |
| MSD-M032 / MSD-M064          | mSATA SSD Module MLC, Toshiba TSOP 19mn, 32GB / 64GB  |
| SA-HD500                     | 2.5" SATA HDD 7mm height, 500GB   |
| SA-HG500                     | 2.5" SATA HDD 7mm height, 500GB 7200RPM, for 7x24   |
| SA-SD064 / SD128             | 2.5" SATA SSD 7mm height, 64GB / 128GB  |
| WPEA-121N                    | Wi-Fi Module Atheros AR9382, Mini-PCle Half-size, 2T2R up to 300Mbps, with wire and antenna, LAN 802.11a/b/g/n    |
| WPEA-152GN(BT)               | Wi-Fi / BT, Mini-PCle Half-size Atheros AR9495 + AR3012, wire and antenna, LAN 802.11b/g/n, BT 4.0LE/3.0HS/2.1EDR |
| DBAE1-60W-2P                 | AC-DC 60W Adapter, 90V-264Vac input by C14 socket, DC 12V@5A output with 2-pin phoneix connector                  |