



## AAEON NANOCOM-APL-B10-0004 Intel Atom x5-E3940 COM Express Type 10 CPU Module

### Key Features:

- Onboard LPDDR4, up to 8GB
- Onboard eMMC, up to 64GB (Optional)
- LVDS x 1, DDI x 1
- USB 2.0 x 8, USB 3.2 Gen 1 x 2
- PCIe [x1] x 4
- Intel I226-IT 2.5GbE x 1
- COM Express Type 10, 3.31" x 2.17" (84mm x 55mm)

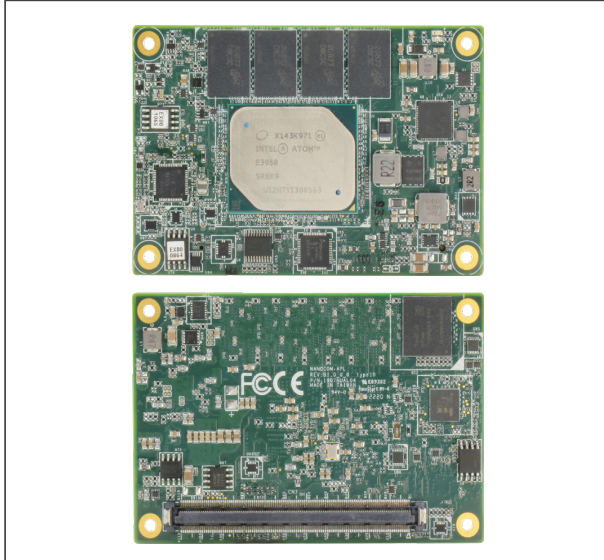
## Description

The NANOCOM-APL-B10-0004 COM Express Type 10 CPU Module is powered by Intel Atom x7-E3950 processor. The NANOCOM-APL-B10-0004 provides up to 4GB memory alongside supporting 1x LAN port and 10x USB ports.

# NanoCOM-APL-B10

COM Express Type 10 CPU Module with Onboard Intel® Atom®/Celeron®/Pentium® Processor

COM Express CPU Modules



## Features

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- Onboard eMMC, up to 64GB (Optional)
- LVDS x 1, DDI x 1
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## Specifications

| System                      |  |
|-----------------------------|--|
| Form Factor                 | COM Express Mini Size, Type 10   |
| CPU                         | Intel Atom® Processor X Series:<br>Intel Atom® x7-E3950 (4C/4T, 1.60 GHz, 12W)<br>Intel Atom® x5-E3940 (4C/4T, 1.60 GHz, 9.5W)<br>Intel Atom® x5-E3930 (2C/2T, 1.30 GHz, 6.5W)<br><br>Intel® Celeron® Processor N Series:<br>Intel® Celeron® Processor N3350 (2C/2T, 1.10 GHz, 6W)<br><br>Intel® Pentium® Processor N Series:<br>Intel® Pentium® Processor N4200 (4C/4T, 1.10 GHz, 6W) |
| Chipset                     | Integrated with Intel® SoC   |
| Memory                      | Onboard LPDDR4 1866MHz, up to 8GB  |
| Onboard Storage             | eMMC, up to 64GB (Optional)  |
| BIOS                        | AMI UEFI   |
| Wake on LAN                 | Yes  |
| Watchdog Timer              | 255 Levels   |
| Dimension                   | 3.31" x 2.17" (84mm x 55mm)  |
| Security                    | fTPM   |
| Power                       |  |
| Power Requirement           | +12V and +5VSB for ATX, +12V for AT  |
| Power Type                  | AT/ATX   |
| Power Consumption (Typical) | Intel® Pentium® Processor N4200, 0.6A @+12V  |
| Display                     |  |
| Graphics Controller         | Intel® HD Graphics 500<br>Intel® HD Graphics 505   |
| Video Output                | Dual Display:<br>DDI x 1, up to 3840 x 2160<br>18/24-bit Single-Channel LVDS/eDP x 1, up to 1920 x 1080  |
| I/O                         |  |
| Ethernet                    | Intel® I226-IT 2.5GbE x 1  |
| Audio                       | High Definition Audio Interface  |

| USB Port              | USB 2.0 x 8, USB 3.2 Gen 1 x 2                             |
|-----------------------|--|
| Serial Port           | 2-Wire UART x 2 (Tx/Rx)                                    |
| HDD Interface         | SATA III x 2   |
| Expansion             | PCIe 3.0 [x1] x 4<br>LPC x 1                               |
| GPIO                  | 8-bit  |
| SMBus/I2C             | I2C x 1, SMBus x 1   |
| Environment           |  |
| Operating Temperature | 32°F ~ 140°F (0°C ~ 60°C)                                  |
| Storage Temperature   | -40°F ~ 185°F (-40°C ~ 85°C)                               |
| Operating Humidity    | 0% ~ 90% relative humidity, non-condensing                 |
| EMC                   | CE/FCC Class A   |
| OS Support            | Windows® 10 (64-bit)<br>Linux Ubuntu 20.04.3/Kernel 5.13.0 |
| Weight                | 0.15 lb. (0.07Kg)  |

## Packing List

- NANOCOM-APL-B10

## Optional Accessories

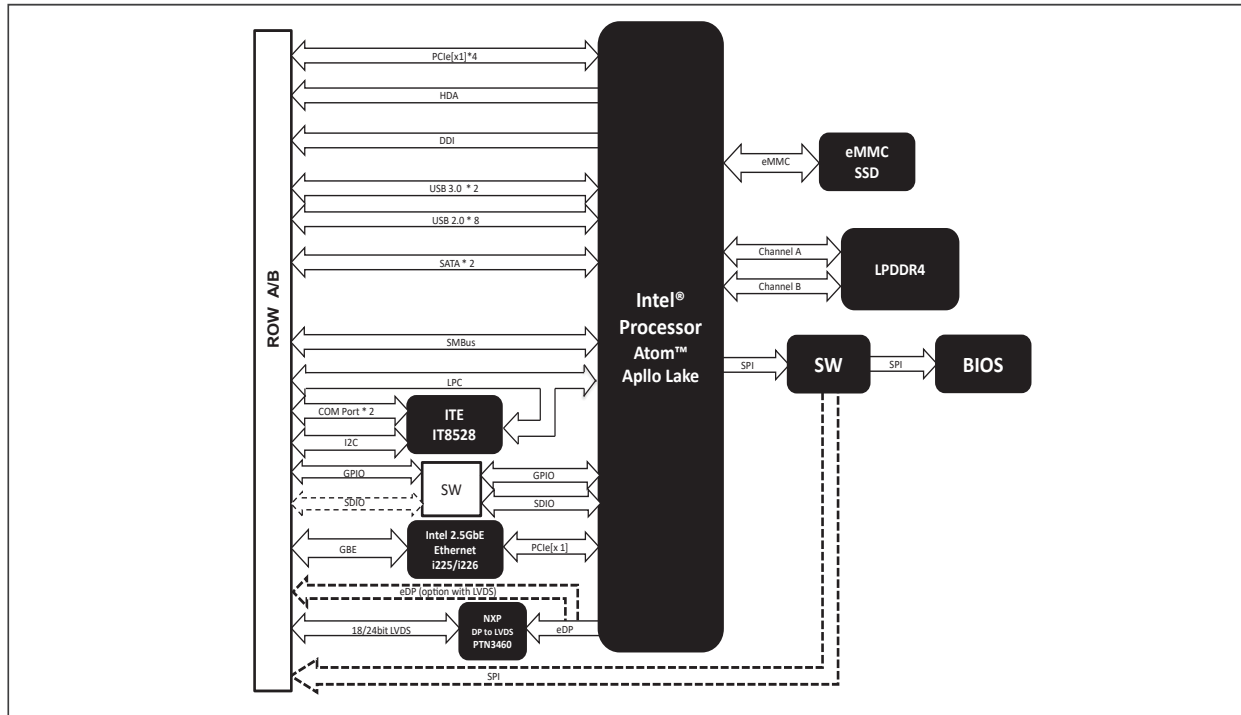
| Part Number         | Description  |
|---------------------|--|
| ECB-920A-A11-0001   | COM Express Type 10 Carrier Board. ATX. 2.5GbE. 8USB. 2COM. 4SATA. PCIe. AT/ATX. Rev. A1.1 |
| NanoCOM-APL-E-HSP01 | Heat Spreader. 84 x 55 x 11 mm. Black. NanoCOM-APL For E39xx CPU only                      |
| NanoCOM-APL-N-HSP01 | Heat Spreader. 84 x 55 x 11 mm. Black. NanoCOM-APL For Nxxx CPU only                       |
| NANOCOM-APL-E-FAN01 | Cooler. 84 x 55 x 18mm. 4pin. NanoCOM-APL E39XX Series                                     |

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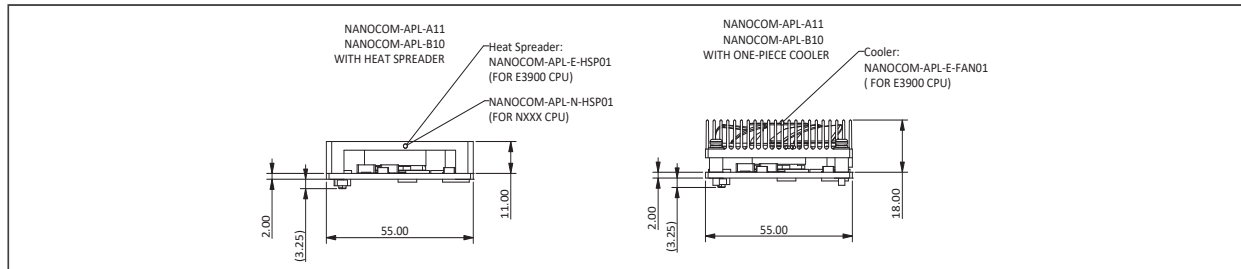
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COM Express CPU Modules

## Block Diagram Unit: mm



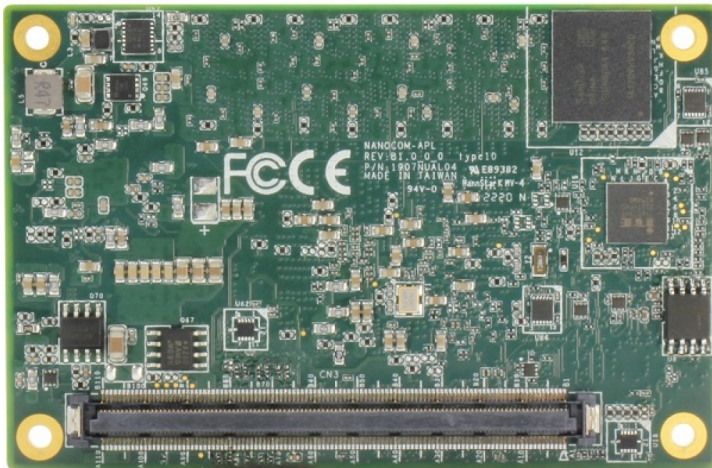
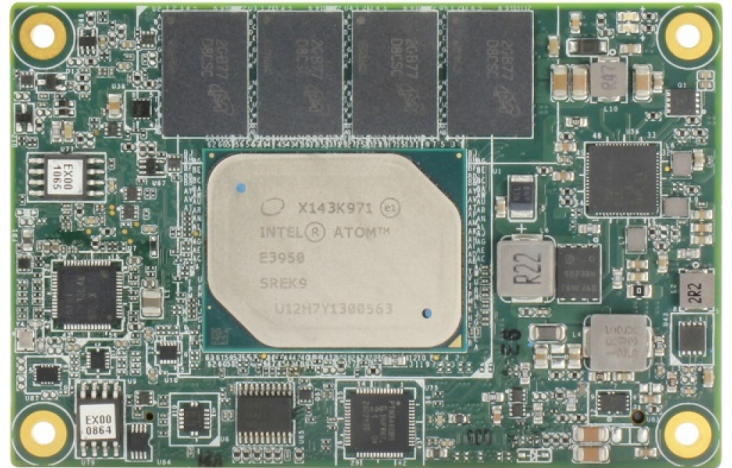
## Dimension Unit: mm



## Ordering Information

| Part Number          | COM Express Type | CPU                             | Memory             | ECC support | Display           | Storage                 | LAN                | USB                              | UART                    | Expansion     | Power | Temperature | Others                      |
|----------------------|------------------|---------------------------------|--------------------|-------------|-------------------|-------------------------|--------------------|----------------------------------|-------------------------|---------------|-------|-------------|-----------------------------|
| NANOCOM-APL-B10-0001 | Type 10          | Intel® Pentium® Processor N4200 | 8GB Onboard LPDDR4 | —           | LVDS x 1, DDI x 1 | SATA III x 2, 64GB eMMC | Intel® I226-IT x 1 | USB 3.2 Gen 1 x 2<br>USB 2.0 x 8 | 2-Wire UART x 2 (Tx/Rx) | PCIe [x1] x 4 | 12V   | 0°C ~ 60°C  | LPC, GPIO 8-bit, I2C, SMBus |
| NANOCOM-APL-B10-0002 | Type 10          | Intel® Celeron® Processor N3350 | 4GB Onboard LPDDR4 | —           | LVDS x 1, DDI x 1 | SATA III x 2, 64GB eMMC | Intel® I226-IT x 1 | USB 3.2 Gen 1 x 2<br>USB 2.0 x 8 | 2-Wire UART x 2 (Tx/Rx) | PCIe [x1] x 4 | 12V   | 0°C ~ 60°C  | LPC, GPIO 8-bit, I2C, SMBus |
| NANOCOM-APL-B10-0003 | Type 10          | Intel Atom® x7-E3950            | 8GB Onboard LPDDR4 | —           | LVDS x 1, DDI x 1 | SATA III x 2, 64GB eMMC | Intel® I226-IT x 1 | USB 3.2 Gen 1 x 2<br>USB 2.0 x 8 | 2-Wire UART x 2 (Tx/Rx) | PCIe [x1] x 4 | 12V   | 0°C ~ 60°C  | LPC, GPIO 8-bit, I2C, SMBus |
| NANOCOM-APL-B10-0004 | Type 10          | Intel Atom® x5-E3940            | 4GB Onboard LPDDR4 | —           | LVDS x 1, DDI x 1 | SATA III x 2, 32GB eMMC | Intel® I226-IT x 1 | USB 3.2 Gen 1 x 2<br>USB 2.0 x 8 | 2-Wire UART x 2 (Tx/Rx) | PCIe [x1] x 4 | 12V   | 0°C ~ 60°C  | LPC, GPIO 8-bit, I2C, SMBus |
| NANOCOM-APL-B10-0005 | Type 10          | Intel Atom® x5-E3930            | 4GB Onboard LPDDR4 | —           | LVDS x 1, DDI x 1 | SATA III x 2, 16GB eMMC | Intel® I226-IT x 1 | USB 3.2 Gen 1 x 2<br>USB 2.0 x 8 | 2-Wire UART x 2 (Tx/Rx) | PCIe [x1] x 4 | 12V   | 0°C ~ 60°C  | LPC, GPIO 8-bit, I2C, SMBus |

## Images



## Assured Systems

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