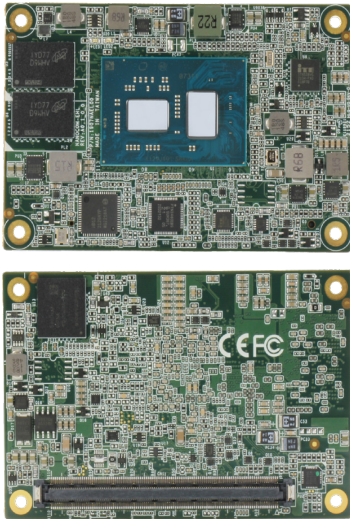


# NanoCOM-EHL

COM Express Type 10 with Intel Atom® X/Pentium® Processor J/Celeron® Processor J & N Series Processors

COM Express CPU Modules



## Features

- Onboard LPDDR4, up to 16GB
- SATA III x 2, Onboard eMMC, up to 64GB (Optional)
- LVDS/eDP x 1, DDI x 1
- USB 2.0 x 8, USB 3.2 Gen 2 x 2
- PCIe Gen3 [x1] x4
- Intel® I226 2.5GbE x 1
- COM Express Type 10, 3.31" x 2.17" (84mm x 55mm)
- Supports Wide Temperature -40°F ~ 185°F (-40°C ~ 85°C)



## Specifications

| System                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|-----------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Form Factor                 | COM Express Mini Size, Type 10                                                                                                                                                                                                                                                                                                                                                                                                                  |
| CPU                         | Intel Atom® Processor X Series:<br>Intel Atom® x6413E (4C/4T, 1.50 GHz, 9W)<br>Intel Atom® x6425E (4C/4T, 2.20 GHz, 12W)<br>Intel Atom® x6425RE (4C/4T, 1.90 GHz, 12W)<br><br>Intel® Celeron® Processor J & N Series:<br>Intel® Celeron® Processor J6412 (4C/4T, 2.00 GHz, 10W)<br>Intel® Celeron® Processor N6211 (2C/2T, 1.20 GHz, 6.5W)<br><br>Intel® Pentium® Processor J Series:<br>Intel® Pentium® Processor J6426 (4C/4T, 2.00 GHz, 10W) |
| Chipset                     | Integrated with Intel® SoC                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Memory                      | Onboard LPDDR4 3733MHz, up to 16GB                                                                                                                                                                                                                                                                                                                                                                                                              |
| 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 Atom® x6425E, 1.44A @+12V                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Display                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Graphics Controller         | Intel® UHD Graphics for 10th Gen Intel® Processors                                                                                                                                                                                                                                                                                                                                                                                              |
| Video Output                | Dual Display:<br>DDI x 1, up to 3840 x 2160<br>18/24-bit Single-Channel LVDS x 1, up to 1920 x 1080<br>or eDP x 1, up to 3840 X 2160                                                                                                                                                                                                                                                                                                            |
| 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 2 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)<br>WITAS 2: -40°F ~ 185°F (-40°C ~ 85°C) on selected CPU SKU |
| 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-EHL

## Optional Accessories

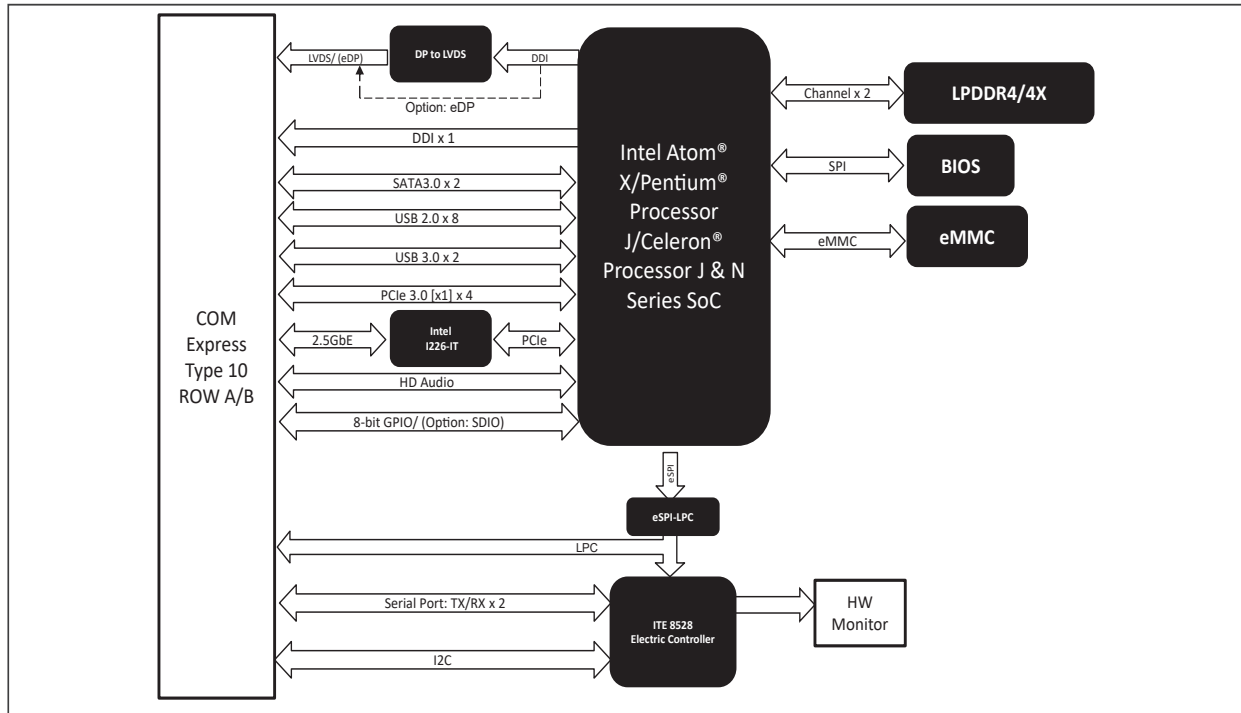
| Part Number       | Description                                                                           |
|-------------------|---------------------------------------------------------------------------------------|
| ECB-920A-A11-0001 | COMe Type 6/10 Carrier Board. ATX. 2.5GbE. 8USB. 2COM. 4SATA. PCIe. AT/ATX. Rev. A1.1 |
| NanoCOM-EHL-FAN01 | Cooler. 84 x 55 x 18mm. 4pin. NanoCOM-EHL for x6000E series                           |
| NanoCOM-EHL-FAN02 | Cooler. 84 x 55 x 18mm. 4pin. NanoCOM-EHL for N, J series                             |
| NANOCOM-EHL-HSP01 | Heat Spreader. 84*55*11mm. NanoCOM-EHL for X series                                   |
| NANOCOM-EHL-HSP02 | Heat Spreader. 84*55*11mm. NanoCOM-EHL N, J series                                    |

# NanoCOM-EHL

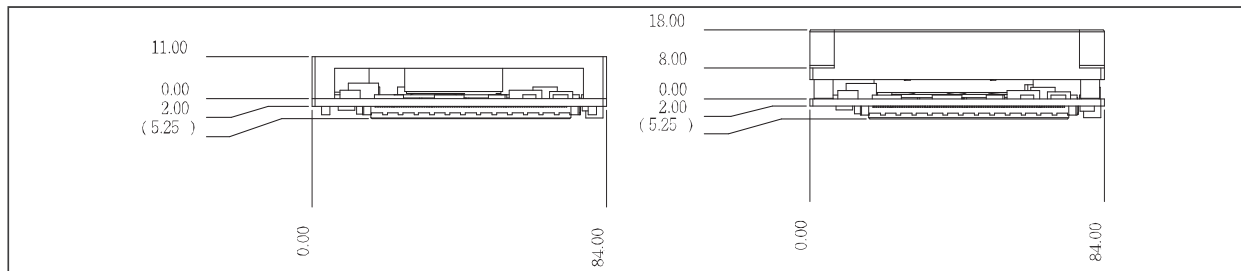
04

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-EHL-A11-0002   | Type 10          | Intel® Celeron® Processor J6412 | 8GB Onboard DDR4  | —           | LVDS x 1, DDI x 1 | SATA III x 2, 32GB eMMC | Intel® I226-IT x 1 | USB 3.2 Gen 2 x 2<br>USB 2.0 x 8 | 2-Wire UART x 2 (Tx/Rx) | PCIe 3.0 [x1] x 4 | 12V   | 0°C ~ 60°C   | LPC, GPIO 8-bit, I2C, SMBus |
| NANOCOM-EHL-A11-0003   | Type 10          | Intel® Pentium® Processor J6426 | 16GB Onboard DDR4 | —           | LVDS x 1, DDI x 1 | SATA III x 2, 64GB eMMC | Intel® I226-IT x 1 | USB 3.2 Gen 2 x 2<br>USB 2.0 x 8 | 2-Wire UART x 2 (Tx/Rx) | PCIe 3.0 [x1] x 4 | 12V   | 0°C ~ 60°C   | LPC, GPIO 8-bit, I2C, SMBus |
| NANOCOM-EHL-A11-0005   | Type 10          | Intel Atom® x6413E              | 8GB Onboard DDR4  | —           | LVDS x 1, DDI x 1 | SATA III x 2, 64GB eMMC | Intel® I226-IT x 1 | USB 3.2 Gen 2 x 2<br>USB 2.0 x 8 | 2-Wire UART x 2 (Tx/Rx) | PCIe 3.0 [x1] x 4 | 12V   | 0°C ~ 60°C   | LPC, GPIO 8-bit, I2C, SMBus |
| NANOCOM-EHL-A11-0006   | Type 10          | Intel Atom® x6425E              | 8GB Onboard DDR4  | —           | LVDS x 1, DDI x 1 | SATA III x 2, 64GB eMMC | Intel® I226-IT x 1 | USB 3.2 Gen 2 x 2<br>USB 2.0 x 8 | 2-Wire UART x 2 (Tx/Rx) | PCIe 3.0 [x1] x 4 | 12V   | 0°C ~ 60°C   | LPC, GPIO 8-bit, I2C, SMBus |
| NANOCOM-EHLW2-A11-0006 | Type 10          | Intel Atom® x6425E              | 8GB Onboard DDR4  | —           | LVDS x 1, DDI x 1 | SATA III x 2, 64GB eMMC | Intel® I226-IT x 1 | USB 3.2 Gen 2 x 2<br>USB 2.0 x 8 | 2-Wire UART x 2 (Tx/Rx) | PCIe 3.0 [x1] x 4 | 12V   | -40°C ~ 85°C | LPC, GPIO 8-bit, I2C, SMBus |

## Assured Systems

Assured Systems is a leading technology company with over 1,500 regular clients in 80 countries, deploying over 85,000 systems to a diverse customer base in 12 years of business. We offer high-quality and innovative rugged computing, display, networking and data collection solutions to the embedded, industrial, and digital-out-of-home market sectors.

### US

[sales@assured-systems.com](mailto:sales@assured-systems.com)

Sales: +1 347 719 4508

Support: +1 347 719 4508

1309 Coffeen Ave  
Ste 1200  
Sheridan  
WY 82801  
USA

### EMEA

[sales@assured-systems.com](mailto:sales@assured-systems.com)

Sales: +44 (0)1785 879 050

Support: +44 (0)1785 879 050

Unit A5 Douglas Park  
Stone Business Park  
Stone  
ST15 0YJ  
United Kingdom

VAT Number: 120 9546 28

Business Registration Number: 07699660