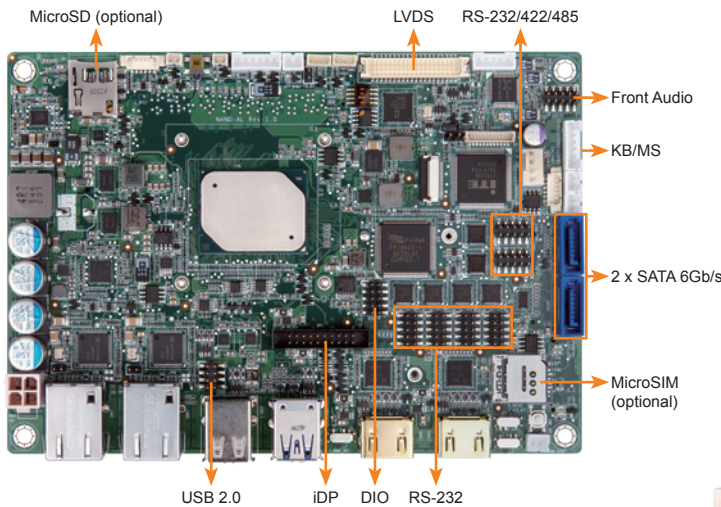


# NANO-AL

EPIC SBC supports 14nm Intel® Pentium®/Celeron®/Atom™ on-board SoC with Dual HDMI/LVDS/iDP, Dual PCIe GbE, USB 3.1 Gen 1 (5Gb/s), PCIe Mini, M.2, SATA 6Gb/s, COM, Audio and RoHS, -40°C ~ 85°C



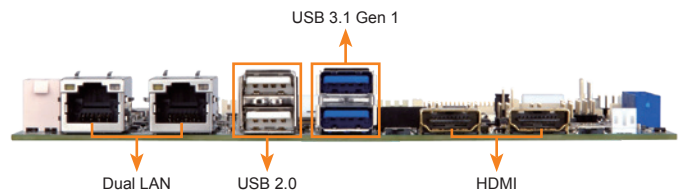
## Support Triple Display Configuration



**New**

## Specifications

- ◆ SoC
  - Intel® Pentium® N4200 on-board SoC (up to 2.5GHz, quad-core, 2M Cache, TDP=6W)
  - Intel® Celeron® N3350 on-board SoC (up to 2.4GHz, dual-core, 2M Cache, TDP=6W)
  - Intel® Atom® x7-E3950 on-board SoC (up to 2.0GHz, quad-core, 2M Cache, TDP=12W)
  - Intel® Atom® x5-E3940 on-board SoC (up to 1.8GHz, quad-core, 2M Cache, TDP=9W)
  - Intel® Atom® x5-E3930 on-board SoC (up to 1.8GHz, dual-core, 2M Cache, TDP=6W)
- ◆ BIOS
  - AMI UEFI BIOS
- ◆ Memory
  - One 204-pin 1866/1600MHz Single-channel DDR3L SO-DIMM supports up to 8GB
- ◆ Graphics Engine
  - Intel® HD Graphics Gen9 Low Power, 18 Execution Units
  - 4K Codec Decode & Encode for HEVC 4, H.264, VP8, SVC, MVC
- ◆ Display Output
  - Triple independent display
  - 1 x 18/24-bit dual-channel LVDS (up to 1920x1200@60Hz)
  - 2 x HDMI (up to 3840x2160 @ 30Hz)
  - 1 x iDP interface for HDMI, LVDS, VGA, DVI, DP (up to 4096x2304@60Hz) (colay with HDMI1)
- ◆ Ethernet
  - Intel® I211-AT PCIe controller
- ◆ External I/O Interface
  - 2 x USB 3.1 Gen 1 (5Gb/s)
  - 2 x USB 2.0
- ◆ Internal I/O Interface
  - 1 x KB/MS (1x6 pin) 2 x USB 2.0 (2x4 pin, P=2.0)
  - 2 x RS-232/422/485 (2x5 pin, P=2.0) 4 x RS-232 (2x5 pin, P=2.0)
  - 2 x SATA 6Gb/s with 5V SATA power connector (no RAID)
- ◆ SMBus
  - 1 x SMBus (1x4 pin)
- ◆ I²C
  - 1 x I²C (1x4 pin)
- ◆ Audio
  - Realtek ALC662 HD codec
  - 1 x Front audio (2x5 pin)
- ◆ Front Panel
  - 1 x Power LED & HDD LED (1x6 pin)
  - 1 x Power button (1x2 pin)
  - 1 x Reset button (1x2 pin)
- ◆ LAN LED
  - 2 x LAN LED (1x2 pin)
- ◆ Expansion
  - 1 x Full/Half-size PCIe Mini slot with SIM holder (optional)
  - 1 x M.2 2242 (B key, SATA, USB 2.0, USB 3.1 Gen 1 (5Gb/s) signal only)
  - 1 x Micro SD (Optional)
- ◆ Digital I/O
  - 8-bit digital I/O (2x5 pin)
- ◆ Fan Connector
  - 1 x Smart fan connector (1x4 pin)
- ◆ Power Supply
  - 9V~30V DC input
  - 1 x Internal power connector (2x2 pin)
  - Support AT/ATX mode
- ◆ Watchdog Timer
  - Software programmable, supports 1~255 sec. system reset
- ◆ Power Consumption
  - 12V@2.13A (Intel® Pentium® N4200 CPU with one 8GB 1600MHz DDR3L memory)
  - 12V@2.81A (Intel® Atom™ x7-E3950 CPU with one 8GB 1600MHz DDR3L memory)
- ◆ Operating Temperature: -20°C ~ 70°C / -40°C ~ 85°C (NANO-AL-ExW2)
- ◆ Storage Temperature: -40°C ~ 85°C
- ◆ Operating Humidity: 5% ~ 95%, non-condensing
- ◆ Dimensions: 115mm x 165mm
- ◆ Weight: GW: 850g / NW: 350g
- ◆ CE/FCC compliant



## Features

- EPIC SBC supports Intel® 14nm Generation Atom®, Celeron® or Pentium® on-board SoC supports single-channel DDR3L SO-DIMMs
- Triple independent display support
- Wide range 9V~30V DC input design
- COM, USB 3.1 Gen 1 (5Gb/s), SATA 6Gb/s, M.2 and audio support
- Support temperature operation: -20°C ~ 70°C / -40°C ~ 85°C (NANO-AL-ExW2)

## Packing List

|   |                  |
|---|------------------|
| 1 x NANO-AL single board computer with Heatsink | 1 x RS-232 cable |
| 1 x SATA with power cable kit                   | 1 x Power cable  |
| 1 x Screw set (for half-size PCIe Mini card)    | 1 x QIG          |

## Ordering Information

| Part No.            | Description   |
|---------------------|---|
| NANO-AL-N2-R10**    | EPIC SBC supports Intel® 14nm quad-core Pentium® N4200 2.5GHz on-board SoC with Dual HDMI/LVDS/iDP, Dual PCIe GbE, USB 3.1 Gen 1 (5Gb/s), PCIe Mini, M.2, SATA 6Gb/s, COM, Audio and RoHS               |
| NANO-AL-N1-R10      | EPIC SBC supports Intel® 14nm dual-core Celeron® N3350 2.4GHz on-board SoC with Dual HDMI/LVDS/iDP, Dual PCIe GbE, USB 3.1 Gen 1 (5Gb/s), PCIe Mini, M.2, SATA 6Gb/s, COM, Audio and RoHS               |
| NANO-AL-E3W2-R10**  | EPIC SBC supports Intel® 14nm quad-core Atom® x7-E3950 2.0GHz on-board SoC with Dual HDMI/LVDS/iDP, Dual PCIe GbE, USB 3.1 Gen 1 (5Gb/s), PCIe Mini, M.2, SATA 6Gb/s, COM, Audio and RoHS, -40°C ~ 85°C |
| NANO-AL-E2W2-R10**  | EPIC SBC supports Intel® 14nm quad-core Atom® x5-E3940 1.8GHz on-board SoC with Dual HDMI/LVDS/iDP, Dual PCIe GbE, USB 3.1 Gen 1 (5Gb/s), PCIe Mini, M.2, SATA 6Gb/s, COM, Audio and RoHS, -40°C ~ 85°C |
| NANO-AL-E1W2-R10**  | EPIC SBC supports Intel® 14nm dual-core Atom® x5-E3930 1.8GHz on-board SoC with Dual HDMI/LVDS/iDP, Dual PCIe GbE, USB 3.1 Gen 1 (5Gb/s), PCIe Mini, M.2, SATA 6Gb/s, COM, Audio and RoHS, -40°C ~ 85°C |
| 32000-070301-RS     | Dual-port USB cable, 210mm, P=2.0   |
| 32006-001100-201-RS | PS/2 KB/MS cable, 135mm, P=2.0  |
| DP-DP-R10           | DisplayPort to DisplayPort converter board (for IEI iDP connector)  |
| DP-DVI-R10          | DisplayPort to DVI-D converter board (for IEI iDP connector)  |
| DP-HDMI-R10         | DisplayPort to HDMI converter board (for IEI iDP connector)   |
| DP-LVDS-R10         | DisplayPort to 24-bit dual-channel LVDS converter board (for IEI iDP connector)   |
| DP-VGA-R10          | DisplayPort to VGA converter board (for IEI iDP connector)  |

\*\*By order production, MOQ: 100