

# KINO-DAL

Mini-ITX SBC supports Intel® 14nm Atom™, Pentium® or Celeron® on-board SoC with HDMI/LVDS/VGA, Dual PCIe GbE, USB 3.0, PCIe Mini, M.2, SATA 6Gb/s, COM, Audio and RoHS



## Features

- » Mini-ITX SBC supports Intel® 14nm Atom™, Pentium® or Celeron® on-board SoC supports dual-channel DDR3L SO-DIMMs
- » Triple independent display support
- » Optional wide range 9V~30V DC input design
- » Full size PCIe Mini slot with SIM sockets for 3G/LTE expansion
- » COM, USB 3.0, SATA 6Gb/s, M.2, eMMC 5.0 and audio support

## Specifications

| System                   |   |
|--------------------------|---|
| CPU                      | Intel® Atom® x7-E3950 on-board SoC (up to 2.0GHz, quad-core, 2M Cache, TDP=12W)<br>Intel® Atom® x5-E3940 on-board SoC (up to 1.8GHz, quad-core, 2M Cache, TDP=9W)<br>Intel® Atom® x5-E3930 on-board SoC (up to 1.8GHz, dual-core, 2M Cache, TDP=6W)<br>Intel® Pentium® N4200 on-board SoC (up to 2.5GHz, quad-core, 2M Cache, TDP=6W)<br>Intel® Celeron® N3350 on-board SoC (up to 2.4GHz, dual-core, 2M Cache, TDP=6W) |
| Memory                   | Two 204-pin 1866/1600MHz Dual-channel DDR3L SO-DIMMs  |
| Memory Max.              | 8GB   |
| Physical Characteristics |   |
| Dimensions (LxWxH) (mm)  | 170 X 170   |
| Net Weight               | 700g  |
| Storage                  |   |
| Storage                  | 2 x SATA :6Gb/s with 5V SATA power connector<br>1 x SD/MicroSD card optional<br>1 x eMMC :5.0(optional, up to 32GB)   |
| I/O Interface            |   |
| Display Output           | 1 x VGA :up to 1920x1200@60Hz<br>1 x HDMI :up to 3840x2160@30Hz<br>1 x LVDS :18/24-bit dual-channel (up to 1920x1200@60Hz)  |
| Ethernet                 | 2 x LAN :PCIe GbE LAN Intel® i211 AT controller   |
| Audio                    | Description: Realtek ALC662 HD codec<br>1 x Line out :on rear IO<br>1 x Mic :on rear IO<br>Front Audio :2x5 pin   |
| I/O Interface            | 2 x External RS-232/422/485<br>4 x Internal RS-232 :2x5 pin, P=2.0  |

|                       |   |
|-----------------------|---|
|                       | 5 x Internal USB 2.0 :1 x A type, 4 X 2x4 pin, p=2.0                    |
|                       | 4 x Internal USB 3.2 Gen1x1   |
|                       | 1 x PS/2 :1x6 pin   |
| Expansion             | 1 x PCIe x1   |
|                       | 1 x PCIe mini Card Slot :Full/Half-size PCIe Mini slot                  |
|                       | 1 x M.2(NGFF) :B key(2242/2260/2280, USB 2.0 & colay SATA2)             |
| <b>Other Features</b> |   |
| TPM                   | 2x10 pin  |
| <b>Power</b>          |   |
| Power Consumption     | 12V@3.64A (Intel® Pentium® N4200 CPU with two 8GB 1600MHz DDR3L memory) |
| Power Supply          | 12V only DC input as Default/ 9V~30V DC input (optional)                |
|                       | 1 x Internal power connector (2x2 pin)                                  |
|                       | 1 x External DC power Jackc (Ø5.5mm)                                    |
|                       | Support AT/ATX mode   |
| <b>Environment</b>    |   |
| Operating Temperature | -20°C ~ 70°C / -40°C ~ 85°C (KINO-DAL-ExW2)                             |
| Storage Temperature   | -40°C ~ 85°C  |
| Humidity              | 5% ~ 95%, non-condensing  |
| <b>Certifications</b> |   |
| Safety & EMC          | CE/FCC compliant  |

## Ordering Information

|                 |  |
|-----------------|--|
| KINO-DAL-N1-R10 | Mini-ITX SBC supports Intel® 14nm dual-core Celeron® N3350 2.3GHz on-board SoC with HDMI/LVDS/VGA, Dual PCIe GbE, USB 3.0, PCIe Mini, M.2, SATA 6Gb/s, COM, Audio and RoHS |
| KINO-DAL-J2-R10 | Mini-ITX SBC supports Intel® 14nm quad-core Celeron® J3455 2.3GHz on-board SoC with HDMI/LVDS/VGA, Dual PCIe GbE, USB 3.0, PCIe Mini, M.2, SATA 6Gb/s, COM, Audio and RoHS |

## Packing List

|  |                   |
|--|-------------------|
| 1 x KINO-DAL single board computer with heatsink | 1 x I/O Shielding |
| 1 x SATA with power cable kit                    | 1 x QIG           |