# Single Board Computer

***Industrial Motherboard***

***w w w . i ei w or l d .c om***

**eKINO-BT**

RS-422/485

***Mini-ITX SBC supports AUPS sub-system, 22nm Intel® Atom™/Celeron® on-board SoC, wide-range 9V ~ 26V DC input, VGA/dual LVDS, SATA, dual GbE, USB 3.1 Gen 1 (5Gb/s), audio, CFast and RoHS***

**AUPS Battery Kit**

**• B**

2 x USB 2.0

9V ~ 26V DC-in

## BATKIT-2S2P3800-R10

**ATKIT-4S2P3800-R10**

1 x PCIe x1

Full-size PCIe Mini card slot

TPM

**Intel® Bay Trail SoC**

2 x SATA 3Gb/s 2 x DDR3 SO-DIMM

**P/N: BAT-LI-2S2P3800 2S2P 7.4V 3800mAh**

**P/N: BAT-LI-4S2P3800 4S2P 14.8V 3800mAh**

# *Battery Specifications*

COM COM LAN1 LAN2



|  |  |  |
| --- | --- | --- |
| **Battery Model** | **BAT-LI-2S2P3800** | **BAT-LI-4S2P3800** |
| **Battery type** | Li-Ion 2S2P 7.4V | Li-Ion 4S2P 14.8V |
| **Battery capacity** | 7.4V 3800mAh | 14.8V, 3800mAh |
| **Maximum charge voltage** | 8.4V | 16.8V |
| **The end of discharging voltage** | 5.6V | 11.2V |
| **Battery charge time (Power off)** | 2.5hrs | 5hrs |
| **Battery charge time (Power on)** | 6.5hrs | 13hrs |
| **Operating temp.** | 0°C ~ 40°C | 0°C ~ 40°C |
| **Storage temp.** | -20°C ~ 60°C | -20°C ~ 60°C |
| **Cycle life** | 300 charge/discharge cycles |
| **Backup** | 60W/10Min | 100W/10Min |
| **Safety class** | CE |

9V~26V

COM

VGA

2 x USB 2.0

Audio

DC-in 2 x USB 3.1 Gen 1

eKINO-BT-2019-V10

# *Specifications*

DDR3L

1333

Fanless

Display

Dual

***USB***

USB 3.1 SATA 3Gb/s Dual GbE

CPU

Intel® Atom™ E3845 on-board SoC (1.91GHz, quad-core, 2MB cache, TDP=10W) Intel® Atom™ E3827 on-board SoC (1.75GHz, dual-core, 1MB cache, TDP=8W) Intel® Atom™ E3826 on-board SoC (1.46GHz, dual-core, 1MB cache, TDP=7W) Intel® Atom™ E3825 on-board SoC (1.33GHz, dual-core, 1MB cache, TDP=6W)

Intel® Atom™ E3815 on-board SoC

(1.46GHz, single-core, 512KB cache, TDP=5W)

Intel® Celeron® J1900 on-board SoC (2GHz, quad-core, 2MB cache, TDP=10W)

Intel® Celeron® N2930 on-board SoC (1.83GHz, quad-core, 2MB cache, TDP=7.5W) Intel® Celeron® N2807 on-board SoC (1.58GHz, dual-core, 2MB cache, TDP=4.3W) BIOS

UEFI BIOS

Memory

Two 204-pin 1066/1333 MHz dual-channel unbuffered DDR3L SDRAM SO-DIMM support up to 8 GB (J1900, N2930, E3845, E3827, E3826)

One 204-pin 1066/1333 MHz dual-channel unbuffered DDR3L SDRAM SO-DIMM supports up to 8 GB (E3825, E3815) or 4 GB (N2807)

Graphics Engine

Intel® HD Graphics Gen 7 Engines with 4 execution units, supporting DX11.1, OpenGL 4.2 and OpenCL1.2

Display Output

1 x VGA (up to2560x1600@60Hz)

2 x 18/24-bit dual-channel LVDS (up to 1920x1200@60Hz)

External I/O Interface 2 x USB 2.0

2 x USB 3.1 Gen 1 (5Gb/s)

3 x RS-232

Internal I/O Interface 1 x CFast slot

1. x KB/MS (1x6 pin) 1 x MicroSD card slot

1 x RS-232 (2x5 pin, P=2.0)

1 x RS-422/485 (1x4 pin, P=2.0)

1. x SATA 3Gb/s with 5V SATA power connector 2 x USB 2.0 (2x4 pin, P=2.0)

Ethernet

Dual LAN: Realtek RTL8111E PCIe controller TPM

1 x TPM (2x10 pin)

SMBus

1 x SMBus (1x4 pin) Front Panel

1. x Front panel (2x7 pin, power LED, HDD LED,

speaker, power button, reset button) LAN LED

1. x LAN LED (1x2 pin)

Digital I/O

8-bit digital I/O (2x5 pin) Expansion

1 x PCIe x1 slot

1. x Full-size PCIe Mini card slot Audio

Realtek ALC662 HD Audio codec

1. x Audio jacks (line-out, mic-in) on rear IO 1 x Front audio (2x5 pin)

Watchdog Timer

Software programmable supports 1~255 sec. system reset

Power Supply

1 x External DC power jack (4-pin DIN) 1 x Internal power connector (2x2 pin) Input voltage range: 9V ~ 26V

Recommended operating input voltage range: 12V~24V

Fan Connector

1 x CPU smart fan (1x4 pin) 1 x System fan (1x3 pin) Power Consumption

+12V@1.55A

(Intel® Celeron® J1900 CPU with two 4 GB 1333 MHz DDR3L memory)

Operating Temperature

0°C ~ 40°C with AUPS sub-system

-20°C ~ 60°C without AUPS sub-system Storage Temperature

-10°C ~ 50°C with AUPS sub-system

-30°C ~ 70°C without AUPS sub-system Operating Humidity

5% ~ 95%, non-condensing

Weight

GW: 1100g / NW: 400g

CE/FCC compliant

# *Features*

* Mini ITX supports Intel® 22nm Atom™ or Celeron® on-board SoC

* Wide-range 9V ~ 26V DC input design
* Supports dual independent display with dual LVDS and VGA
* Equipped with AUPS sub-system, acts as a simple UPS system
* Supports four USB 2.0, two USB 3.1 Gen 1 (5Gb/s), two SATA and four COM
* IEI jumper-less function

# *Packing List*

|  |
| --- |
| 1 x eKINO-BT single board computer |
| 2 x SATA with 5V output cable kit |
| 1 x I/O shielding |
| 1 x QIG |

***Ordering Information***

|  |  |
| --- | --- |
| Part No. | Description |
| EKINO-BT-J19001-R10 | Mini-ITX SBC supports AUPS sub-system, Intel® Celeron® quad-core processor J1900 (10W), wide-range 9V ~ 26V DC input, VGA/dual LVDS, SATA, USB 3.1 Gen 1 (5Gb/s),dual GbE, audio, CFAST and RoHS |
| EKINO-BT-N29301-R10 | Mini-ITX SBC supports AUPS sub-system, Intel® Celeron® quad-core processor N2930 (7.5W), wide-range 9V ~ 26V DC input, VGA/dual LVDS, SATA, USB 3.1 Gen 1 (5Gb/s),dual GbE, audio, CFast and RoHS |
| EKINO-BT-N28071-R10 | Mini-ITX SBC supports AUPS sub-system, Intel® Celeron® dual-core processor N2807 (4.3W), wide-range 9V ~ 26V DC input, VGA/dual LVDS, SATA, USB 3.1 Gen 1 (5Gb/s),dual GbE, audio, CFast and RoHS |
| EKINO-BT-E38XX1-R10\*\* | Mini-ITX SBC supports AUPS sub-system, Intel® Atom™ E38XX on-board SoC, wide-range 9V ~ 26V DC input, VGA/dual LVDS, SATA, dual GbE, USB 3.1 Gen 1 (5Gb/s),audio, CFast and RoHS (by request MOQ: 100pcs/lot) |
| BATKIT-2S2P3800-R10 | 2S2P 7.4V 3800mAh AUPS battery kit |
| BAT-LI-2S2P3800 | 2S2P 7.4V 3800mAh smart battery |
| BATKIT-4S2P3800-R10 | 4S2P 14.8V 3800mAh AUPS battery kit |
| BAT-LI-4S2P3800 | 4S2P 14.8V 3800mAh smart battery |
| 19800-000075-RS | PS/2 KB/MS cable with bracket, 220mm, P=2.0 |
| 32001-008600-200-RS | Dual-port USB 2.0 cable, 210mm, P=2.0 |
| 32205-003800-300-RS | RS-422/485 cable, 200mm, P=2.0 |
| 63040-010060-110-RS | 60W/12V power adaptor, 90VAC~260VAC, 4-pin DIN |
| 63040-010120-210-RS | 120W/19V power adapter, 90VAC~264VAC, 4-pin DIN |
| CB-USB02A-RS | Dual-port USB 2.0 cable with bracket, 300mm, P=2.0 |

\*\*By order production, MOQ: 100