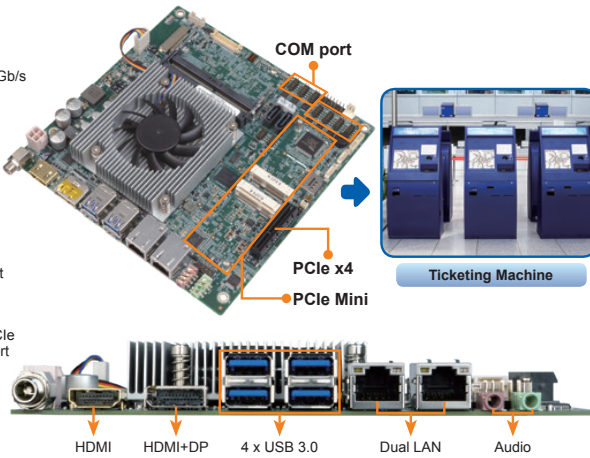
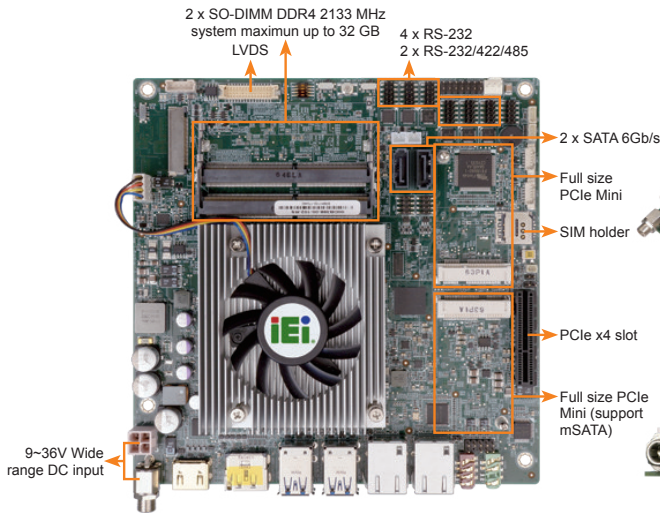


## Mini-ITX Board

### Multiple expansion with COM port, PCIe x4, and PCIe Mini.



## Specifications

- CPU**
  - 6th generation Intel® mobile ULT on-board processor
  - Intel® Core™ i7-6600U (up to 3.4GHz, dual-core, 4M Cache, TDP=15W)
  - Intel® Core™ i5-6300U (up to 3.0GHz, dual-core, 3M Cache, TDP=15W)
  - Intel® Core™ i3-6100U (up to 2.3GHz, dual-core, 3M Cache, TDP=15W)
  - Intel® Celeron® 3955U (up to 2.0GHz, dual-core, 2M Cache, TDP=15W)
  - Intel® Celeron® 3855U (up to 1.6GHz, dual-core, 2M Cache, TDP=15W)
- BIOS**
  - UEFI BIOS
- Memory**
  - 2 x SO-DIMM DDR4 2133MHz, system maximum up to 32GB
- Graphics Engine**
  - Intel® HD graphic
- Display Output**
  - 1 x HDMI 1.4 (up to 4096x2160@24Hz)
  - 1 x HDMI/DP (up to 4096x2160@24Hz)
  - 1 x LVDS/eDP (select by switch)
- Ethernet**
  - LAN1: Intel® I219LM (with Intel® AMT11.0 support)
  - LAN2: Intel® I211AT PCIe controller with NCSI support
- External I/O Interface**
  - 4 x USB 3.0
- Internal I/O Interface**
  - 1 x eMMC 5.0 (optional, up to 32G)
  - 4 x RS-232 (2x5 pin, P=2.0)
  - 2 x RS-232/422/485 (2x5 pin, P=2.0)
  - 4 x USB 2.0 (2x4 pin, P=2.0)
  - 2 x SATA with 5V output
- Audio**
  - Realtek ALC662 HD Audio Codec support 5.1 Channel
  - 2 x Audio jacks (line-out, mic-in) on rear IO
  - 1 x Front audio (2x5-pin)
- Front Panel**
  - 1 x Front panel (2x7 pin, power LED, HDD LED, power button, reset button)
- LAN LED**
  - 2 x LAN LED (1x2 pin)
- SMBUS: 1 x SMBus (1x4 pin)**
- PC: 1 x PC (1x4 pin)**
- Digital I/O: 8-bit digital I/O (2x5 pin)**
- Expansion**
  - 1 x PCIe x4 slot
  - 1 x Full-size PCIe Mini card slot (support mSATA, colay SATA2)
  - 1 x Full-size PCIe Mini card slot (with SIM holder)
  - \*3855U belongs to Skylake ULT Base series CPU, PCIe signal support only PCIe Gen 2*
- Watchdog Timer**
  - Software programmable, supports 1~255 sec. system reset by Super I/O
- Power Supply**
  - 9~36V DC input
  - 1 x Internal power connector (2x2 pin)
  - 1 x External DC power Jack (Ø5.5mm)
  - Support AT/ATX mode
- Fan Connector**
  - 1 x CPU smart fan (1x4 pin)
  - 1 x System fan (1x3 pin)
- Chassis Intrusion Detection: 1 x Chassis intrusion connector (1x2 pin)**
- Power Consumption**
  - 12V@4.68A (Intel® Core™ i7-6600U up to 3.4GHz CPU with 16GB (8GB x 2) DDR4-2133 memory running in 3.2GHz)
- Operating Temperature: -20°C ~ 60°C**
- Operating Humidity: 5% ~ 95%, non-condensing**
- Dimensions: 170mm x 170 mm**
- Weight: GW: 900g / NW: 375g**
- CE/FCC compliant**



## Features

- Mini ITX form factor with Intel® Skylake-U processor support DDR4-2133 memory
- Wide range 9~36V DC Input
- Support dual HDMI (one HDMI/DP combo support), LVDS/eDP
- Intel® GbE LAN with Intel® AMT 11.0 supported
- SATA 6Gb/s, mSATA and eMMC 5.0 (option) supported
- High speed I/O for USB 3.0, PCIe x4, full-size PCIe Mini support

## Packing List

1 x tKINO-ULT3 single board computer with CPU cooler
2 x SATA cable
1 x I/O shielding
1 x One key Recovery CD
1 x QIG
1 x Utility CD

## Ordering Information

Part No.	Description
tKINO-ULT3-i7-R10	Thin Mini-ITX SBC supports Intel® 6th Generation Mobile Core™ i7-6600U (15W) on-board Processor (ULT), 9~36V DC input, Dual HDMI, LVDS, eDP, SATA 6 Gb/s, Dual Intel® GbE, USB 3.0, PCIe Mini, eMMC 5.0, HD audio and RoHS
tKINO-ULT3-i5-R10	Thin Mini-ITX SBC supports Intel® 6th Generation Mobile Core™ i5-6300U (15W) on-board processor (ULT), 9~36V DC input, Dual HDMI, LVDS, eDP, SATA 6 Gb/s, Dual Intel® GbE, USB 3.0, PCIe Mini, eMMC 5.0, HD audio and RoHS
tKINO-ULT3-i3-R10	Thin Mini-ITX SBC supports Intel® 6th Generation Mobile Core™ i3-6100U (15W) on-board processor (ULT), 9~36V DC input, Dual HDMI, LVDS, eDP, SATA 6 Gb/s, Dual Intel® GbE, USB 3.0, PCIe Mini, eMMC 5.0, HD audio and RoHS
tKINO-ULT3-C-R10	Thin Mini-ITX SBC supports Intel® 6th Generation Mobile Celeron® 3955U (15W) on-board processor (ULT), 9~36V DC input, Dual HDMI, LVDS, eDP, SATA 6 Gb/s, Dual Intel® GbE, USB 3.0, PCIe Mini, eMMC 5.0, HD audio and RoHS
tKINO-ULT3-CE-R10	Thin Mini-ITX SBC supports Intel® 6th Generation Mobile Celeron® 3855U (15W) on-board processor (ULT), 9~36V DC input, Dual HDMI, LVDS, eDP, SATA 6 Gb/s, Dual Intel® GbE, USB 3.0, PCIe Mini, eMMC 5.0, HD audio and RoHS
32205-002700-200-RS	RS-232/422/485, 200mm, P=2.0
34000-000645-RS	Fanless heatsink module, 93.5 x 84 x 30mm