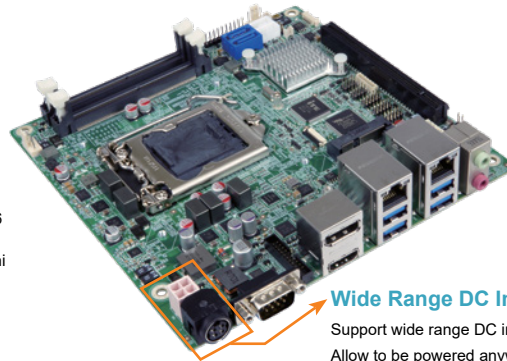
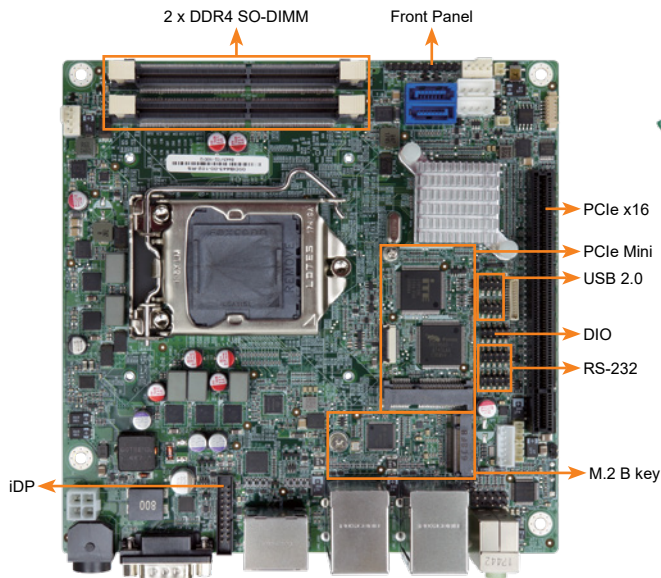


# KINO-DH110

Mini-ITX SBC supports 14nm 6th/7th Generation LGA1151 Intel® Core™ i7/i5/i3, Celeron® and Pentium® Processor, DDR4, Dual Independent Display, Dual GbE LAN, USB 3.2 Gen 1 (5Gb/s), SATA 6Gb/s, M.2, HD Audio and RoHS



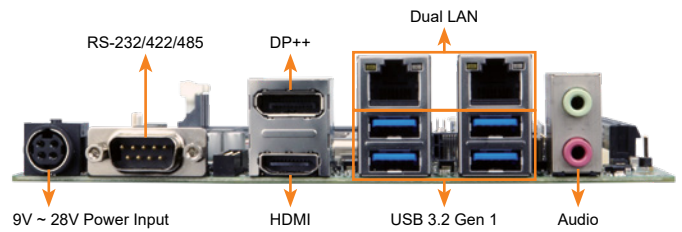
### Wide Range DC Input Support

Support wide range DC input from 9V to 28V. Allow to be powered anywhere, no matter if a 12V/24V DC source or 19V power adapter is available.



## Specifications

- ◆ CPU
  - LGA1151 socket supports 6th/7th generation Intel® Core™ i7/i5/i3, Celeron® and Pentium® processor
- ◆ System Chipset
  - Intel® H110
- ◆ Memory
  - Two 260-pin 2133MHz dual-channel DDR4 SDRAM unbuffered SO-DIMM support up to 32GB
- ◆ BIOS
  - UEFI BIOS
- ◆ Graphic Engine
  - Intel® HD Graphics Gen 9 engines with 16 low-power execution units, support DX2015, OpenGL 5.X, OpenCL2.x, ES 2.0
- ◆ Display Output
  - Dual independent display
    - 1 x HDMI (up to 4096x2160@30Hz)
    - 1 x DP++ (up to 4096x2160@60Hz)
    - 1 x iDP interface for HDMI, LVDS, VGA, DVI, DP (up to 4096x2160@60Hz)
- ◆ Ethernet
  - LAN1: Intel® I219LM PCIe controller
  - LAN2: Intel® I211 PCIe controller
- ◆ External I/O Interface
  - 4 x USB 3.2 Gen 1 (5Gb/s)
  - 1 x RS-232/422/485
- ◆ Internal I/O Interface
  - 1 x KB/MS (1x6 pin) 2 x SATA 6Gb/s
  - 2 x RS-232 (2x5 pin, P=2.0) 4 x USB 2.0 (2x4 pin, P=2.0)
- ◆ SMBus: 1 x SMBus (1x4 pin)
- ◆ I<sup>2</sup>C: 1 x I<sup>2</sup>C (1x4 pin)
- ◆ Audio
  - Realtek ALC888S HD Audio codec supports 7.1-channel
  - 2 x Audio jacks (line-out, mic-in) on rear IO
  - 1 x Front audio (2x5 pin)
- ◆ Front Panel
  - 1 x Front panel (1x10 pin, power LED, HDD LED, power button, reset button)
- ◆ LAN LED: 2 x LAN LED (1x2 pin)
- ◆ Expansion
  - 1 x Full-size PCIe Mini card slot (PCIe & USB)
  - 1 x M.2 B key (SATA)
  - 1 x PCIe x16 slot (Gen2)
- ◆ Watchdog Timer
  - Software programmable, supports 1~255 sec. system reset
- ◆ Digital I/O: 8-bit digital I/O (2x5 pin)
- ◆ Fan Connector
  - 1 x CPU smart fan (1x4 pin)
  - 1 x System smart fan (1x4 pin)
- ◆ Power Supply
  - 9V ~ 28V DC input Support ATX/AT mode
  - 1 x External DC jack (4-pin DIN) 1 x Internal power connector (2x2 pin)
- ◆ Power Consumption
  - 12V@12.16A (3.4GHz Intel® Core i7-6700 with two 2133MHz 16GB DDR4 memory)
- ◆ Operating Temperature: -20°C~60°C
- ◆ Storage Temperature: -30°C ~ 70°C
- ◆ Operating Humidity: 5% ~ 95%, non-condensing
- ◆ Dimensions: 170mm x 170mm
- ◆ Weight: GW: 900g / NW: 400g
- ◆ CE/FCC compliant



## Features

- LGA1151 Intel® 6th/7th Generation Core™ i7/i5/i3, Celeron® and Pentium® processor
- Dual-channel DDR4 2133MHz
- Support HDMI, DP++
- Support M.2 B key, PCIe Mini
- Support USB 3.2 Gen 1 (5Gb/s) and SATA 6Gb/s

## Packing List

1 x KINO-DH110 single board computer	1 x SATA cable
1 x I/O shielding	1 x QIG

## Ordering Information

Part No.	Description
KINO-DH110-R10	Mini-ITX Motherboard supports 14nm LGA1151 Intel® 6th/7th Generation Core™ i7/i5/i3, Celeron® and Pentium® processor, DDR4, dual independent displays, dual GbE LAN, M.2, USB 3.2 Gen 1 (5Gb/s), SATA 6Gb/s, HD Audio and RoHS
32000-070301-RS	Dual USB Cable
32200-000049-RS	RS232 cable, 200mm
CF-1156C-R20	LGA1155/1156 kit, 1U chassis compatible, 45W
CF-1156D-R30	LGA1155/1156 kit, 1U chassis compatible, 65W
CF-115XE-R10	High performance LGA1155/LGA1156 cooler kit, 95W
DP-DP-R10	DisplayPort to DP converter board (for IEI connector)
DP-DVI-R10	DisplayPort to DVI-D converter board (for IEI connector)
DP-HDMI-R10	DisplayPort to HDMI converter board (for IEI connector)
DP-LVDS-R10	DisplayPort to 24 bit dual-channel LVDS converter board (for IEI connector)
DP-VGA-R10	DisplayPort to VGA converter board (for IEI connector)