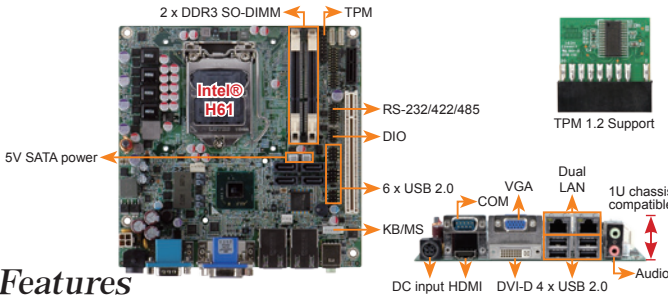


# KINO-DH610

Mini-ITX SBC supports LGA1155 Intel® Core™ i7/i5/i3/Pentium®/Celeron® CPU, DDR3, VGA/DVI-D/HDMI, dual PCIe GbE, USB 2.0, SATA 3Gb/s, HD Audio and RoHS



## Features

- LGA1155 socket for 2nd generation Intel® Core™ i3/Pentium®/Celeron® processor supported
- Up to 16 GB 1333/1066 MHz dual-channel DDR3 SDRAM
- Supports dual display by DVI/VGA/HDMI
- SATA 3Gb/s, PCI and PCIe x1 expansion slots supported
- Wide range 9 ~ 28V DC input support with either adaptor or 4-pin (2x2) ATX power connector
- IEI One Key Recovery solution allows you to create rapid OS backup and recovery

## Specifications

- ◆ CPU: LGA1155 socket supports Intel® Core™ i7/i5/i3/Pentium®/Celeron® dual-core processor (TDP 65W max.)
- ◆ Chipset: Intel® H61
- ◆ Memory: Two 204-pin 1066/1333 MHz dual-channel unbuffered DDR3L SDRAM SO-DIMM support up to 16 GB
- ◆ BIOS: UEFI BIOS
- ◆ Ethernet: LAN1: Realtek RTL8111E PCIe GbE controller with ASF 2.0 support; LAN2: Realtek RTL8111E PCIe GbE controller
- ◆ Graphics Engine: Supports DX10.1 and OpenGL 3.0; Full MPEG2, VC1, AVC Decode
- ◆ Display Output: Dual display supported; 1 x VGA (up to 2048x1536@75Hz); 1 x HDMI (up to 1920x1200@60Hz); 1 x DVI-D (up to 1920x1200@60Hz)
- ◆ External I/O Interface: 1 x RS-232; 4 x USB 2.0
- ◆ Internal I/O Interface: 1 x KB/MS (1x6 pin); 1 x RS-232/422/485 (2x7 pin, P=2.0); 2 x SATA power connector; 4 x SATA 3Gb/s; 6 x USB 2.0 (2x4 pin, P=2.54)
- ◆ TPM: 1 x TPM (2x10 pin)
- ◆ Audio: Realtek ALC662 HD codec; 2 x Audio jacks (line-out, mic-in) on rear IO
- ◆ Expansions: 1 x PCI slot; 1 x PCIe x1 slot
- ◆ Watchdog Timer: Software programmable supports 1~255 sec. system reset
- ◆ Fan Connector: 1 x CPU smart fan (1x4 pin); 1 x System fan (1x3 pin)
- ◆ Power Supply: Maximum input voltage range: 9V ~ 28V; Recommended operating input voltage range: 12V ~ 24V; 1 x External DC jack (4-pin DIN); 1 x Internal power connector (2x2 pin)
- ◆ Power Consumption: 12V@5.07A (2.2GHz Intel® G620T with two 1066 MHz 2 GB DDR3 memory running 3DMark06 burn in); 12V@8.85A (2.8GHz Intel® Core™ i7-2600S with two 1066 MHz 2 GB DDR3 memory running 3DMark06 burn in)
- ◆ Operating Temperature: -10°C ~ 60°C
- ◆ Storage Temperature: -20°C ~ 70°C
- ◆ Operating Humidity: 5% ~ 95%, non-condensing
- ◆ Dimensions: 170 mm x 170 mm
- ◆ Weight: GW: 1100g / NW: 700g

## Packing List

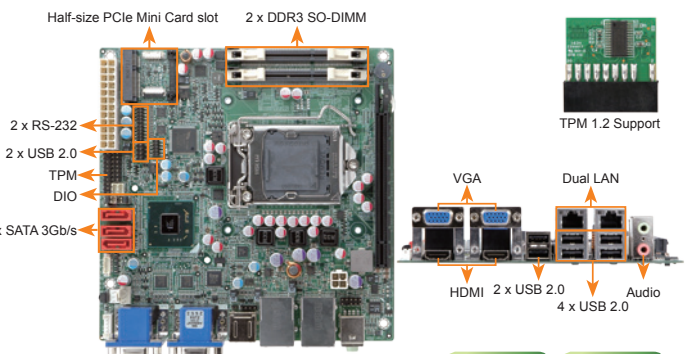
|                                      |                         |
|--------------------------------------|-------------------------|
| 1 x KINO-DH610 single board computer |                         |
| 1 x I/O shielding                    | 1 x One Key Recovery CD |
| 2 x SATA with 5V power cable         | 1 x QIG                 |
| 1 x Mini jumper pack                 | 1 x Utility CD          |

## Ordering Information

| Part No.            | Description   |
|---------------------|---|
| KINO-DH610-R10      | Mini-ITX SBC supports LGA1155 Intel® Core™ i5/i3/Pentium®/Celeron® CPU, DDR3, VGA/DVI-D/HDMI, dual PCIe GbE, USB 2.0, SATA 3Gb/s, HD Audio and RoHS |
| CPU-DT-i5-2500T     | Intel® Core™ i5-2500T processor, LGA1155, quad core 2.3GHz, 6M cache, 45W, compatible with CF-1156C-RS CPU cooler                                   |
| CPU-DT-i5-2390T     | Intel® Core™ i5-2390T processor, LGA1155, dual core 2.7GHz, 3M cache, 35W, AMT, compatible with CF-1156C-RS CPU cooler                              |
| CPU-DT-i3-2120T     | Intel® Core™ i3-2120T processor, LGA1155, dual core 2.6GHz, 3M cache, 35W, compatible with CF-1156C-RS CPU cooler                                   |
| CPU-DT-C-G440       | Intel® Celeron® G440 processor, LGA1155, single core 1.6GHz, 1M cache, 35W, compatible with CF-1156C-RS CPU cooler                                  |
| CPU-DT-P-G630T      | Intel® Pentium® G630T processor, LGA1155, dual core 2.3GHz, 3M cache, 35W, compatible with CF-1156C-RS CPU cooler                                   |
| 19800-003100-300-RS | Dual port USB cable with bracket, 300mm, P=2.54   |
| 19800-004300-100-RS | RS-232 & RS-422/485 cable with bracket, 14-pin to two DB-9, 250mm, P=2.0  |
| 32000-023800-RS     | PS/2 KB/MS cable, 135mm, P=2.0  |
| 63040-010060-110-RS | 12V 60W power adaptor with 4-pin DIN lock, 90 ~ 264VAC input, ErP   |
| CF-1156A-RS-R11     | High-performance LGA1155/LGA1156 cooler kit, 1U chassis compatible, 73W   |
| CF-1156C-RS         | LGA1155/LGA1156 cooler kit, 1U chassis compatible, 45W  |
| CF-1156D-RS         | LGA1155/LGA1156 cooler kit, 1U chassis compatible, 65W  |
| CF-1156E-R11        | High-performance LGA1155/LGA1156 cooler kit, 95W  |
| SACF-KIT01-R10      | SATA to CF converter board  |
| TPM-IN01-R20        | 20-pin Infineon TPM module, software management tool, firmware v3.17  |

# KINO-AH611

Mini-ITX SBC supports LGA1155 Intel® Core™ i7/i5/i3/Pentium®/Celeron® CPU, DDR3, dual HDMI/dual VGA, Dual PCIe GbE, SATA 3Gb/s, HD Audio and RoHS



## Features

- LGA1155 for Intel® Core™ i7/i5/i3/Pentium®/Celeron® processor
- Up to 16 GB 1333/1066 MHz dual-channel DDR3 SDRAM
- Supports dual independent display by dual VGA and dual HDMI
- Two COM ports and three SATA 3Gb/s connectors supported
- IEI One Key Recovery solution allows you to create rapid OS backup and recovery

## Specifications

- ◆ CPU: LGA1155 socket supports Intel® Core™ i7/i5/i3/Pentium®/Celeron® processor
- ◆ Chipset: Intel® H61
- ◆ Memory: Two 204-pin 1066/1333 MHz dual-channel unbuffered DDR3L SDRAM SO-DIMM support up to 16 GB
- ◆ BIOS: UEFI BIOS
- ◆ Ethernet: Dual LAN: Realtek RTL8111E PCIe GbE controller with ASF 2.0 support
- ◆ Graphics Engine: Supports DX10.1 and OpenGL 3.0; Full MPEG-2, VC1, AVC Decode
- ◆ Display Output: Dual display supported; 2 x VGA (up to 2048x1536@75Hz); 2 x HDMI (up to 1920x1200@60Hz)
- ◆ External I/O Interface: 6 x USB 2.0
- ◆ Internal I/O Interface: 1 x KB/MS (1x6 pin); 3 x SATA 3Gb/s; 2 x RS-232 (2x5 pin, P=2.0); 2 x USB 2.0 (2x4 pin, P=2.54)
- ◆ TPM: 1 x TPM (2x10 pin)
- ◆ Audio: Realtek ALC662 HD codec; 2 x Audio jacks (line-out, mic-in) on rear IO; 1 x Front Audio (2x5 pin)
- ◆ Expansion: 1 x PCIe x16 slot; 1 x Half-size PCIe Mini card slot
- ◆ 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 fan (1x3 pin)
- ◆ Power Supply: ATX power supply
- ◆ Power Consumption: 5V@3.47A, 12V@0.11A, Vcore\_12V@6.73A, 3.3V@1.01A, 5VSB@0.15A (3.4GHz Intel® Core™ i7-2600K with two 1333 MHz 2 GB DDR3 SO-DIMMs)
- ◆ Operating Temperature: -10°C ~ 60°C
- ◆ Storage Temperature: -20°C ~ 70°C
- ◆ Operating Humidity: 5% ~ 95%, non-condensing
- ◆ Dimensions: 170 mm x 170 mm
- ◆ Weight: GW: 1100g / NW: 700g

## Packing List

|                                      |                         |
|--------------------------------------|-------------------------|
| 1 x KINO-AH611 single board computer | 1 x Mini jumper pack    |
| 1 x Dual RS-232 cable                | 1 x One Key Recovery CD |
| 1 x I/O shielding                    | 1 x QIG                 |
| 3 x SATA cable                       | 1 x Utility CD          |

## Ordering Information

| Part No.            | Description   |
|---------------------|---|
| KINO-AH611-R10      | Mini-ITX SBC supports LGA1155 Intel® Core™ i7/i5/i3/Pentium®/Celeron® CPU, DDR3, dual HDMI/dual VGA, dual PCIe GbE, SATA 3Gb/s, HD Audio and RoHS |
| CPU-DT-i5-2500T     | Intel® Core™ i5-2500T processor, LGA1155, quad core 2.3GHz, 6M cache, 45W, compatible with CF-1156C-RS CPU cooler                                 |
| CPU-DT-i5-2390T     | Intel® Core™ i5-2390T processor, LGA1155, dual core 2.7GHz, 3M cache, 35W, AMT, compatible with CF-1156C-RS CPU cooler                            |
| CPU-DT-i3-2120T     | Intel® Core™ i3-2120T processor, LGA1155, dual core 2.6GHz, 3M cache, 35W, compatible with CF-1156C-RS CPU cooler                                 |
| CPU-DT-C-G440       | Intel® Celeron® G440 processor, LGA1155, single core 1.6GHz, 1M cache, 35W, compatible with CF-1156C-RS CPU cooler                                |
| CPU-DT-P-G630T      | Intel® Pentium® G630T processor, LGA1155, dual core 2.3GHz, 3M cache, 35W, compatible with CF-1156C-RS CPU cooler                                 |
| 19800-003100-300-RS | Dual port USB cable with bracket, 300mm, P=2.54   |
| 32000-023800-RS     | PS/2 KB/MS cable, 135mm, P=2.0  |
| 32102-000100-200-RS | SATA power cable, MOLEX 5264-4P to SATA15P  |
| CF-1156A-RS-R11     | High-performance LGA1155/LGA1156 cooler kit, 1U chassis compatible, 73W   |
| CF-1156C-RS         | LGA1155/LGA1156 cooler kit, 1U chassis compatible, 45W  |
| CF-1156D-RS         | LGA1155/LGA1156 cooler kit, 1U chassis compatible, 65W  |
| CF-1156E-R11        | High-performance LGA1155/LGA1156 cooler kit, 95W  |
| SACF-KIT01-R10      | SATA to CF converter board  |
| TPM-IN01-R20        | 20-pin Infineon TPM module, software management tool, firmware v3.17  |