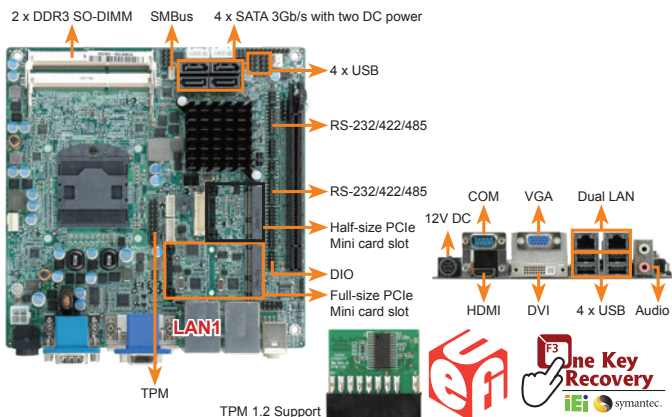


# KINO-HM551

Mini-ITX SBC with Socket G1 for Intel® mobile Core™ i7/i5/i3 and Celeron® CPU, VGA/DVI/LVDS/HDMI, dual PCIe GbE, USB 2.0, dual PCIe Mini, SATA 3Gb/s and audio, RoHS



## Features

- Mini-ITX SBC with Socket G1 for Intel® mobile Core™ i7/i5/i3 and Celeron® processor
- DDR3 800/1066MHz dual-channel SDRAM supported up to 8 GB
- 18/24-bit dual-channel LVDS/Analog CRT/DVI/HDMI output supported
- PCIe x16 slot and dual PCIe Mini card for high speed device expansion
- TPM V1.2 hardware security function supported by TPM module
- IEI One Key Recovery solution allows you to create rapid OS backup and recovery

## Specifications

- ◆ CPU: Socket G1 for Intel® mobile Core™ i7/i5/i3 and Celeron® processor (Socket 988)
- ◆ Chipset: Intel® HM55
- ◆ Memory: Two 204-pin 1066/800 MHz DDR3 SDRAM SO-DIMM slot supports up to 4 GB
- ◆ BIOS: UEFI BIOS
- ◆ Ethernet: Dual LAN: Realtek RTL8111E PCIe GbE controller with ASF 2.0 support
- ◆ Graphics Engine: Gen 5.75 with 12 execution units support DirectX® 10, OpenGL® 2.1
- ◆ Display Output: Dual display supported: 1 x VGA (up to 2048x1536@60Hz), 1 x HDMI (up to 1920x1080@60Hz), 1 x DVI-D (up to 1600x1200@60Hz), 1 x 18/24-bit dual-channel LVDS (up to 1600x1200@60Hz)
- Note: The Intel® quad-core processor is a discrete processor which does not integrate a graphics engine. If a quad-core processor is used on the motherboard, an additional graphics card must be installed in order to support display output. Otherwise, the display will show "No display output" when connected to the on-board display port.
- ◆ TPM: 1 x TPM (2x10 pin)
- ◆ SMBus: 1 x 4-pin wafer connector
- ◆ Digital I/O: 8-bit digital I/O (2x5 pin)
- ◆ External I/O Interface: 1 x RS-232, 4 x USB 2.0
- ◆ Internal I/O Interface: 1 x KB/MS (1x6 pin), 4 x SATA 3Gb/s, 2 x RS-232/422/485 (2x7 pin, P=2.0), 3 x RS-232 (2x5 pin, P=2.0), 4 x USB 2.0 (2x4 pin, P=2.54)
- ◆ Audio: Realtek ALC662 HD codec, 2 x Audio jacks (line-out, mic-in) on rear I/O, 1 x Front Audio (2x5 pin)
- ◆ Expansion: 1 x PCIe Mini card slot, 1 x Half-size PCIe Mini card slot, 1 x PCIe x16 slot
- ◆ Watchdog Timer: Software programmable supports 1~255 sec. system reset
- ◆ Fan Connector: 1 x CPU smart fan (1x4 pin), 1 x System smart fan (1x3 pin)
- ◆ Power Supply: Single voltage 12V DC input, 1 x External 4-pin DIN DC jack, 1 x Internal 4-pin (2x2) power connector AT/ATX power mode selected by jumper
- ◆ Power Consumption: 12V@4.67A (2.66GHz Intel® Core i7 620M CPU with two 1333 MHz 4 GB DDR3 DIMM)
- ◆ Operating Temperature: -10°C ~ 60°C
- ◆ Storage Temperature: -20°C ~ 70°C
- ◆ Operating Humidity: 5% ~ 95%, non-condensing
- ◆ Dimensions: 170mm x 170mm
- ◆ Weight: 900g / NW: 450g
- ◆ CE/FCC compliant

## Packing List

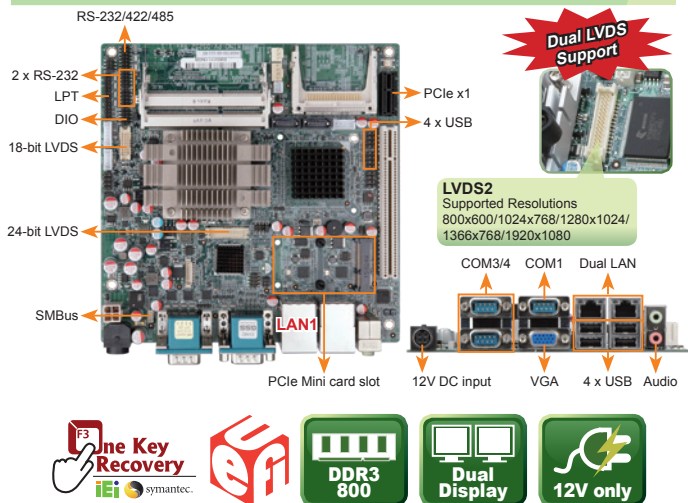
1 x KINO-HM551 single board computer	2 x SATA with power cable
1 x Dual RS-232 cable with bracket	1 x Mini jumper pack
1 x I/O shielding	1 x QIG

## Ordering Information

Part No.	Description
KINO-HM551-R10	Mini-ITX SBC with Socket G1 for Intel® mobile Core i7/i5/i3 and Celeron® CPU, VGA/DVI/LVDS/HDMI, Dual PCIe GbE, USB 2.0, Dual PCIe Mini, SATA 3Gb/s and Audio, RoHS
19800-003100-300-RS	Dual USB cable with bracket
SAIDE-KIT01-R10	SATA to IDE/CF converter board
19800-004300-100-RS	RS-232 cable, 40-pin to RS-232 & RS-422/485 cable with bracket, 14-pin to two DB-9, 250mm, P=2.0
32000-023800-RS	KB/MS Y cable
CF-989A-RS-R12	CPU cooler for mobile socket-G (PGA988) up to 55W processor, copper, 60mm x 60mm x 27.6mm, RoHS
TPM-IN01-R20	20-pin Infineon TPM module, software management tool, firmware v3.17

# KINO-PV-D4252/D5252

Mini-ITX SBC with Intel® Atom™ D425/D525, DDR3, VGA/18+48-bit LVDS, dual GbE, audio, USB 2.0 and SATA 3Gb/s, RoHS



## Features

- Mini-ITX SBC with Intel® Atom™ D525/D425 processor
- Support 800 MHz DDR3 SO-DIMM socket (system max. 4 GB)
- Support 24-bit dual-channel LVDS with up to 1920x1080 resolution
- Complete I/O with eight USB, two SATA 3Gb/s, one CF Type II, six COM and audio
- IEI One Key Recovery solution allows you to create rapid OS backup and recovery

## Specifications

- ◆ CPU: Intel® Atom™ D525 (1.8GHz, dual-core, 1MB cache), Intel® Atom™ D425 (1.8GHz, single-core, 512KB cache)
- ◆ Chipset: ICH8M
- ◆ BIOS: UEFI BIOS
- ◆ Memory: Two 204-pin 800 MHz DDR3 SDRAM SO-DIMM slot supports up to 4 GB (D525/D425) or 2 GB (N455)
- ◆ Graphics Engine: GMA 3150, Graphics core speed 400 MHz for D525/D425
- ◆ Display Output: 1 x VGA (up to 2048x1536@60Hz), 1 x 18-bit single-channel LVDS (up to 1366x768@60Hz), 1 x 24-bit dual-channel LVDS (up to 1920x1080@60Hz)
- ◆ Ethernet: LAN1: Realtek RTL8111E PCIe GbE controller with ASF 2.0 support, LAN2: Realtek RTL8111E PCIe GbE controller
- ◆ External I/O Interface: 3 x RS-232, 4 x USB 2.0
- ◆ Internal I/O Interface: 1 x CF Type II, 1 x KB/MS (1x6 pin), 1 x LPT (2x13 pin, P=2.54), 1 x RS-232/422/485 (2x7 pin, P=2.0), 2 x RS-232 (2x5 pin, P=2.0), 2 x SATA 3Gb/s, 4 x USB 2.0 (2x4 pin, P=2.54)
- ◆ SMBus: 1 x SMBus (1x4 pin)
- ◆ Audio: Realtek ALC662 HD codec, 2 x Audio jacks (line-out, mic-in) on rear I/O
- ◆ Digital I/O: 8-bit digital I/O (2x5 pin)
- ◆ Expansion: 1 x PCI slot, 1 x PCIe x1 slot, 1 x PCIe Mini card slot
- ◆ 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), 12V only DC input, support AT/ATX mode
- ◆ TPM: On-board Infineon SLB9635TT1.2 (Optional)
- ◆ Fan Connector: 1 x CPU smart fan (1x4 pin), 1 x System fan (1x3 pin)
- ◆ Power Consumption: 12V@1.95A (Intel® Atom™ D525 1.8GHz with two 1 GB DDR3)
- ◆ Operating Temperature: -10°C ~ 60°C
- ◆ Storage Temperature: -20°C ~ 70°C
- ◆ Operating Humidity: 5% ~ 95%, non-condensing
- ◆ Weight: 800g / NW: 340g
- ◆ CE/FCC compliant

## Packing List

1 x KINO-PV-D4252/D5252 single board computer	1 x SATA with power cable
1 x I/O shielding	1 x Mini jumper pack
1 x RS-232 cable with bracket	1 x QIG

## Ordering Information

Part No.	Description
KINO-PV-D5252-L2-R11	Mini-ITX SBC with Intel® Atom™ D525 1.8GHz, DDR3, VGA/18+48 bit LVDS, dual GbE, audio, USB 2.0 and SATA 3Gb/s, RoHS
KINO-PV-D4252-R11	Mini-ITX SBC with Intel® Atom™ D425 1.8GHz, DDR3, VGA/18-bit LVDS, dual GbE, audio, USB 2.0 and SATA 3Gb/s, RoHS
19800-003100-300-RS	Dual port USB cable with bracket, 30mm, 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
19FFD124010HB2A7-000001-RS	CPU fan
32000-023800-RS	PS/2 KB/MS 135mm, P=2.0
32100-192900-RS	One 4-pin (2x2) to one 4-pin (1x4) DC power cable with terminal block
32200-015100-RS	LPT cable, 280mm, P=2.0
34000-000510-RS	30mm higher heatsink
PCIER-K101L-R10	PCIe x1 riser card