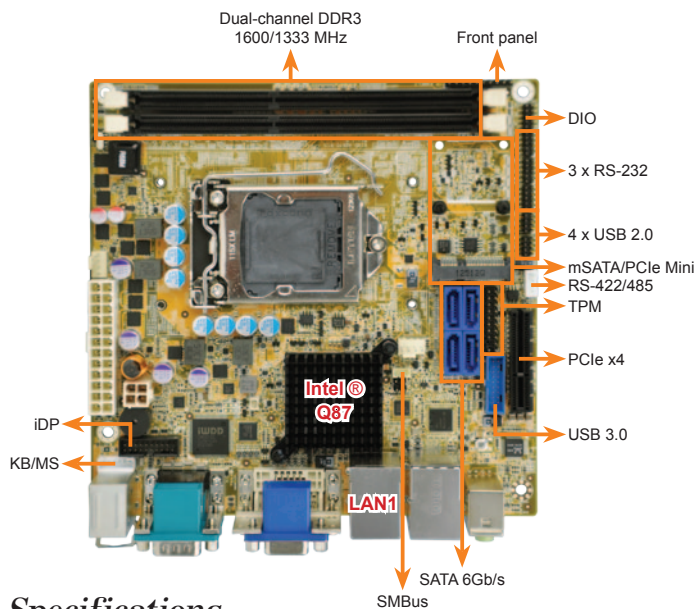
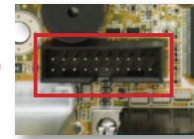


# KINO-AQ870

Mini-ITX SBC with LGA1150 socket supports 4th Gen Intel® Core™ i7/i5/i3 processor, DVI-D/VGA/DP, dual Intel® PCIe GbE, USB 3.0, SATA 6Gb/s, HD Audio and RoHS

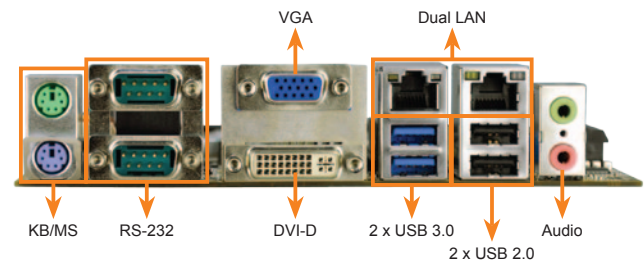


## Flexible Display Function through IEI Display Port Connector



### iDP Module Selection

|             |
|-------------|
| DP-HDMI-R10 |
| DP-VGSA-R10 |
| DP-DVI-R10  |
| DP-LVDS-R10 |



## Specifications

- ◆ CPU  
LGA1150 socket supports 4th Gen Intel® Core™ i7/i5/i3 processor
- ◆ PCH  
Intel® Q87
- ◆ Memory  
Two 240-pin 1066/1333/1600 MHz dual-channel DDR3 SDRAM unbuffered DIMM supported (system max. 16 GB)
- ◆ BIOS  
UEFI BIOS
- ◆ Ethernet  
LAN1: Intel® I211 PCIe controller  
LAN2: Intel® I217LM with Intel® AMT 9.0 support
- ◆ Graphics Engine  
Support for DX11.1 and OpenGL3.2  
Full MPEG2, VC1, AVC Decode
- ◆ Display Output  
DVI-D integrated in the CPU  
VGA integrated in Intel® Q87  
DisplayPort integrated in the CPU (pin header for changing to HDMI, LVDS, VGA)
- ◆ Audio  
Realtek ALC662 HD Audio codec (line-out, mic-in)
- ◆ External I/O Interface
 

|            |             |
|------------|-------------|
| 1 x KB/MS  | 2 x USB 2.0 |
| 2 x RS-232 | 2 x USB 3.0 |
- ◆ Internal I/O Interface
 

|                                  |                                |
|----------------------------------|--------------------------------|
| 1 x KB/MS (1x6 pin)              | 3 x RS-232 (2x5 pin, P=2.00)   |
| 1 x RS-422/485 (1x4 pin, P=2.00) | 4 x SATA 6Gb/s (RAID 0/1/5/10) |
| 2 x USB 3.0 (2x10 pin, P=2.00)   | 4 x USB 2.0 (2x4 pin, P=2.00)  |
- ◆ Front Panel
 

|                                                                                     |
|-------------------------------------------------------------------------------------|
| 1 x Front panel (1x10 pin, power LED, HDD LED, speaker, power button, reset button) |
|-------------------------------------------------------------------------------------|
- ◆ LAN LED
 

|                       |
|-----------------------|
| 2 x LAN LED (1x2 pin) |
|-----------------------|
- ◆ SMBus
 

|                     |
|---------------------|
| 1 x SMBus (1x4 pin) |
|---------------------|
- ◆ TPM
 

|                              |
|------------------------------|
| 1 x TPM connector (2x10 pin) |
|------------------------------|
- ◆ Expansion
 

|             |                                                                  |
|-------------|------------------------------------------------------------------|
| 1 x PCIe x4 | 1 x PCIe Mini card slot (supports mSATA, SATA 3Gb/s signal only) |
|-------------|------------------------------------------------------------------|
- ◆ 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  
ATX Power Supply
- ◆ Power Consumption  
3.3V@1.11A, 5V@3.01A, 12V@0.12A, Vcore@6.32A, 5VSB@0.15A  
(Intel® 2.60GHz CPU with two 1600 MHz 2 GB DDR3 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: 450g



## Features

- LGA1150 socket supports 4th Gen Intel® Core™ i7/i5/i3 processor
- DDR3 1066/1333/1600 MHz dual-channel SDRAM
- 3D micro-architecture enhancements for DX11.1, OCL 1.2 and OGL3.2
- Rich media acceleration for hardware decode and encode acceleration
- Intel® GbE LAN with Intel® AMT 9.0 support
- High speed I/O interface for USB 3.0, SATA 6Gb/s and mSATA
- IEI jumper-less function

## Packing List

|                            |                              |
|----------------------------|------------------------------|
| 1 x KINO-AQ870 motherboard | 1 x Mini jumper pack (P=2.0) |
| 1 x I/O shielding          | 1 x QIG                      |
| 4 x SATA cable             | 1 x Utility CD               |

## Ordering Information

| Part No.            | Description                                                                                                                                                    |
|---------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|
| KINO-AQ870-R10      | Mini-ITX SBC with LGA1150 socket supports 4th Gen Intel® Core™ i7/i5/i3 processor, DVI-D/VGA/ DP, dual Intel® PCIe GbE, USB 3.0, SATA 6Gb/s, HD Audio and RoHS |
| 32000-070301-RS     | Dual USB cable                                                                                                                                                 |
| 32200-000049-RS     | RS-232 cable, 200mm                                                                                                                                            |
| 32205-003800-300-RS | RS-422/485 cable, 200mm                                                                                                                                        |
| CF-1150SA-R10       | Special cooler kit for LGA1150, high-performance compatible, 95W                                                                                               |
| CF-1150SB-R11       | Special cooler kit for LGA1150, high-performance compatible, 65W                                                                                               |
| CF-1150SC-R20       | Special cooler kit for LGA1150, 1U chassis compatible, 65W                                                                                                     |
| CF-1150SE-R10       | Special cooler kit for LGA1150, 1U chassis compatible, 35W                                                                                                     |
| DP-DVI-R10          | DisplayPort to DVI-D converter board (for IEI iDP connector)                                                                                                   |
| DP-HDMI-R10         | DisplayPort to HDMI converter board (for IEI iDP connector)                                                                                                    |
| DP-LVDS-R10         | DisplayPort to 24-bit dual-channel LVDS converter board (for IEI iDP connector)                                                                                |
| DP-VGA-R10          | DisplayPort to VGA converter board (for IEI iDP connector)                                                                                                     |
| TPM-IN01-R11        | 20-pin Infineon TPM module, software management tool, firmware v3.17                                                                                           |