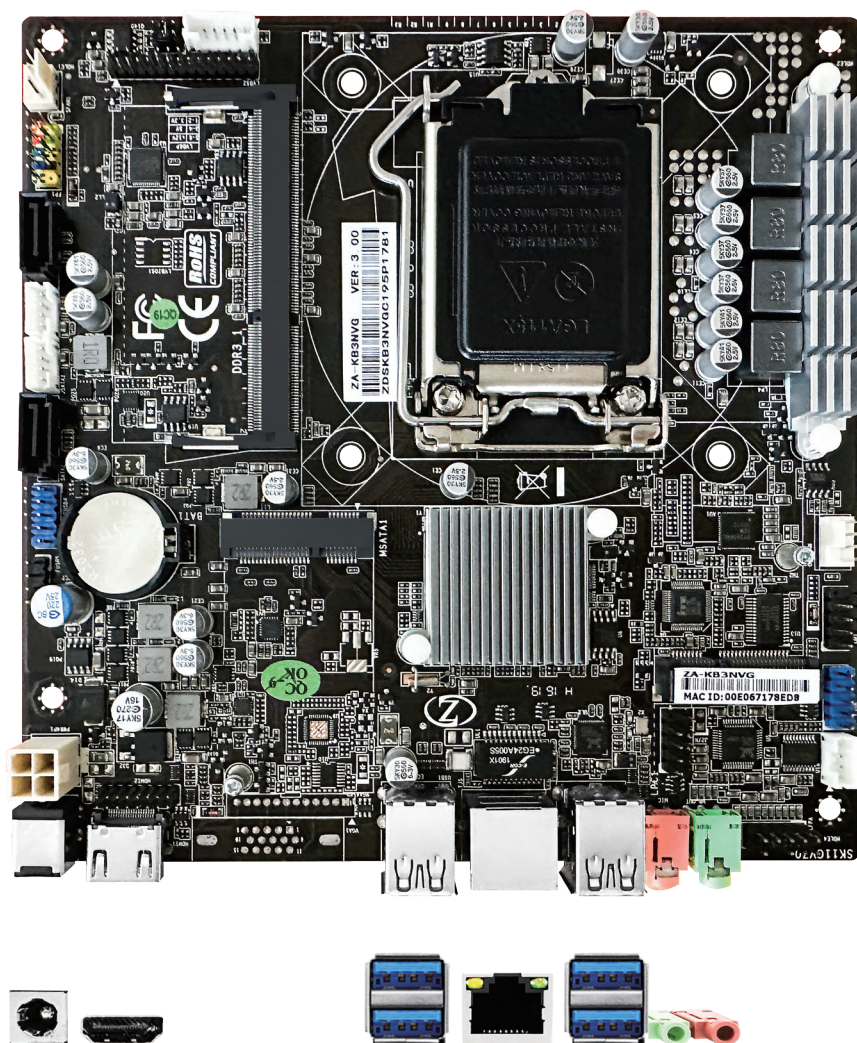


# ZA-KB3NVG Motherboard

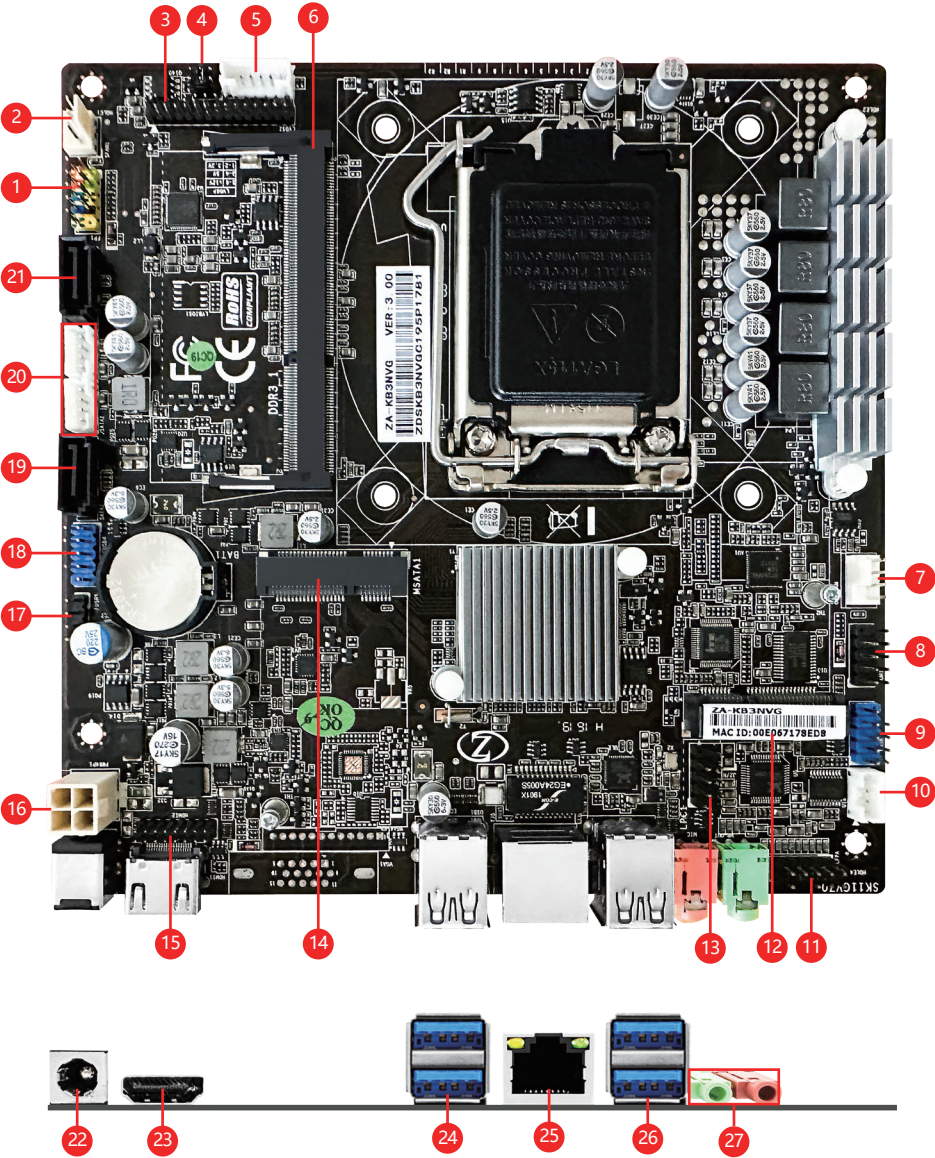
## Product characteristics:

- Intel® 6/7 Generation Core™ Corei7/ Corei5/Corei3 CPU
- Support 9\*USB(4\*USB3.0 interface/ 5\*USB2.0 Pin)
- Support 1\*LAN(Realtek 8111E,1Gbps/ 100Mbps/10Mbps Ethernet Controller)



# ZA-KB3NVG Motherboard Specifications

|                  |                                                                                                                                                                                                                                                                                                            |
|------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Size             | 170mm*170mm                                                                                                                                                                                                                                                                                                |
| CPU              | Intel® 6/7 Generation Core™ Corei7/Corei5/Corei3 CPU                                                                                                                                                                                                                                                       |
| RAM              | Support 1*DDR3 1333/1600MHZ Maximum support 8GB                                                                                                                                                                                                                                                            |
| BIOS             | AMIBIOS 64Mbit Flash                                                                                                                                                                                                                                                                                       |
| Internal I/O     | 1*Front panel Pin<br>1*SYS_FAN Pin<br>1*LVDS Pin<br>1*LVDSP Jumper<br>1*INVERT Pin<br>1*CPU_FAN Pin<br>1*COM Pin<br>3*FUSB2/4/5 Pin (Support 5*USB2.0 interface)<br>1*SPEAK Pin<br>1*CFPA Pin<br>1*LPC Pin<br>1*HDMI Pin<br>1*4Pin Power outlet<br>2*SATA Data interface<br>2*JSATA Power supply interface |
| Rear I/O         | 1*DC 12V-19V interface<br>1*HDMI interface<br>4*USB3.0 interface<br>1*LAN interface<br>2*AUDIO interface (1*LINE OUT、1*MIC)                                                                                                                                                                                |
| LAN              | 1*Realtek 8111E, 1Gbps/100Mbps/10Mbps Ethernet Controller                                                                                                                                                                                                                                                  |
| Expansion slot   | 1*MINI PCIE Slot(MSATA)/1*MINI PCIE Slot(WIFI)                                                                                                                                                                                                                                                             |
| Operating System | Windows7/8, Linux                                                                                                                                                                                                                                                                                          |



|    |                              |
|----|------------------------------|
| 1  | Front panel Pin              |
| 2  | SYS_FAN Pin                  |
| 3  | LVDS Pin                     |
| 4  | LVDSP Jumper                 |
| 5  | INVERT Pin                   |
| 6  | DDR4 Slot                    |
| 7  | CPU_FAN Pin                  |
| 8  | COM Pin                      |
| 9  | FUSB2 Pin                    |
| 10 | SPEAK Pin                    |
| 11 | CFPA Pin                     |
| 12 | MINI PCIE Slot(WIFI)         |
| 13 | LPC Pin                      |
| 14 | MINI PCIE Slot(MSATA)        |
| 15 | HDMI Pin                     |
| 16 | 4Pin Power outlet            |
| 17 | FUSB5 Pin                    |
| 18 | FUSB4 Pin                    |
| 19 | SATA Data interface          |
| 20 | JSATA Power supply interface |
| 21 | SATA Data interface          |

|    |                      |    |                                    |
|----|----------------------|----|------------------------------------|
| 22 | DC 12V-19V interface | 25 | LAN interface                      |
| 23 | HDMI interface       | 26 | USB3.0 interface                   |
| 24 | USB3.0 interface     | 27 | AUDIO interface (1*LINE OUT、1*MIC) |

# ZA-KB3NVG Mainboard Definition

## (1) Front panel Pin

| Location        | Pin | Definition          | Pin | Definition   |
|-----------------|-----|---------------------|-----|--------------|
| FP1<br>(2.54mm) | 1   | 3.3V                | 2   | Power LED    |
|                 | 3   | Hard Disk Drive LED | 4   | GND          |
|                 | 5   | Reset Switch        | 6   | Power Switch |
|                 | 7   | GND                 | 8   | GND          |
|                 | 9   | NC                  |     |              |

## (2) SYS\_FAN Pin

| Location | Pin | Definition |
|----------|-----|------------|
| SYS_FAN  | 1   | GND        |
|          | 2   | +12V       |
|          | 3   | FAN_TAC22  |
|          | 4   | FAN_CTL22  |

## (3) LVDS Pin

| Location      | Pin | Definition    | Pin | Definition    |
|---------------|-----|---------------|-----|---------------|
| LVDS<br>(2mm) | 1   | VDDLVD        | 2   | VDDLVD        |
|               | 3   | VDDLVD        | 4   | GND           |
|               | 5   | GND           | 6   | LVDS_DP       |
|               | 7   | LVDS_DATA_0N  | 8   | LVDS_DATA_0P  |
|               | 9   | LVDS_DATA_1N  | 10  | LVDS_DATA_1P  |
|               | 11  | LVDS_DATA_2N  | 12  | LVDS_DATA_2P  |
|               | 13  | GND           | 14  | GND           |
|               | 15  | LVDS_CLKN     | 16  | LVDS_CLKP     |
|               | 17  | LVDS_DATA_3N  | 18  | LVDS_DATA_3P  |
|               | 19  | LVDS1_DATA_0N | 20  | LVDS1_DATA_0P |
|               | 21  | LVDS1_DATA_1N | 22  | LVDS1_DATA_1P |
|               | 23  | LVDS1_DATA_2N | 24  | LVDS1_DATA_2P |
|               | 25  | GND           | 26  | GND           |
|               | 27  | LVDS1_CLKN    | 28  | LVDS1_CLKP    |
|               | 29  | LVDS1_DATA_3N | 30  | LVDS1_DATA_3P |

## (4) LVDS1 Jumper

| Location       | Pin | Definition | Pin | Definition  |
|----------------|-----|------------|-----|-------------|
| LVDS1<br>(2mm) | 1   | 3.3V_RUN   | 2   | LVDS1_POWER |
|                | 3   | 5V_RUN     | 4   | LVDS1_POWER |
|                | 5   | 12V_RUN    | 6   | LVDS1_POWER |

## (5) INVERT Pin

| Location | Pin | Definition |
|----------|-----|------------|
| INVERT   | 1   | GND        |
|          | 2   | GND        |
|          | 3   | BL_ADJ     |
|          | 4   | BKLT-EN    |
|          | 5   | +12V       |
|          | 6   | +12V       |

## (7) CPU\_FAN Pin

| Location | Pin | Definition |
|----------|-----|------------|
| CPU_FAN1 | 1   | GND        |
|          | 2   | +12V       |
|          | 3   | FAN_TAC    |
|          | 4   | FAN_CTL    |

## (8) COM Pin

| Location         | Pin | Definition | Pin | Definition |
|------------------|-----|------------|-----|------------|
| COM1<br>(2.54mm) | 1   | NDCDA      | 2   | NSINA      |
|                  | 3   | NSOUTA     | 4   | NDTRA      |
|                  | 5   | GND        | 6   | NDSRA      |
|                  | 7   | NRTSA      | 8   | NCTSA      |
|                  | 9   | NRIA       |     |            |

## (9/17/18) FUSB Pin

| Location          | Pin | Definition | Pin | Definition |
|-------------------|-----|------------|-----|------------|
| FUSB2<br>(2.54mm) | 1   | VCC        | 2   | VCC        |
|                   | 3   | Data 0-    | 4   | Data 1-    |
|                   | 5   | Data 0+    | 6   | Data 1+    |
|                   | 7   | GND        | 8   | GND        |
|                   |     |            | 10  | NC         |



| Location | Pin | Definition |
|----------|-----|------------|
| FUSB5    | 1   | VCC        |
|          | 2   | DATA0-     |
|          | 3   | DATA0+     |
|          | 4   | GND        |

| Location          | Pin | Definition | Pin | Definition |
|-------------------|-----|------------|-----|------------|
| FUSB4<br>(2.54mm) | 1   | 5V_RUN     | 2   | 5V_RUN     |
|                   | 3   | FDM3       | 4   | FDM4       |
|                   | 5   | FDP3       | 6   | FDP4       |
|                   | 7   | GND        | 8   | GND        |
|                   | 9   | NC         | 10  | GND        |

## (10) SPEAK Pin

| Location | Pin | Definition |
|----------|-----|------------|
| SPK1     | 1   | SPKOUT_L-  |
|          | 2   | SPKOUT_L+  |
|          | 3   | SPKOUT_R-  |
|          | 4   | SPKOUT_R+  |

## (11) FPA Pin

| Location         | Pin | Definition  | Pin | Definition |
|------------------|-----|-------------|-----|------------|
| FPA1<br>(2.54mm) | 1   | MIC2_L      | 2   | AUD_AGND   |
|                  | 3   | MIC2_R      | 4   | NC         |
|                  | 5   | SUR_BACK_0R | 6   | MIC2-JD    |
|                  | 7   | AUD_AGND    | 8   | NC         |
|                  | 9   | SUR_BACK_0L | 10  | LINE2-JD   |

## (15) HDMI Pin

| Location       | Pin | Definition | Pin | Definition     |
|----------------|-----|------------|-----|----------------|
| HDMI2<br>(2mm) | 1   | DDI1_TXP0  | 2   | HDMIC_SCL      |
|                | 3   | DDI1_TXN0  | 4   | HDMIC_SDA      |
|                | 5   | DDI1_TXP1  | 6   | NC             |
|                | 7   | DDI1_TXN1  | 8   | HDMIC_HPD_SINK |
|                | 9   | DDI1_TXP2  | 10  | DDC_5V         |
|                | 11  | DDI1_TXN2  | 12  | GND            |
|                | 13  | DDI1_TXP3  | 14  | GND            |
|                | 15  | DDI1_TXN3  | 16  | GND            |