User Manual

The model you have chosen is

LR-SKLUL1

REV:1.0
DATE ：2018/09/03

Motherboard User Manual

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Security guidance

1. Please read through this security guidance carefully.

2. Please keep this manual for future reference.

3.Please keep the main board dry.

4. Please put the main board on a stable plane before using

5. The opening slot of the machine case is used for ventilation to avoid overheating of parts in the machine case. Please do not cover or block such openings.

6. Please confirm the power supply voltage value and adjust the voltage to 110V/220V before connecting device to the power supply.

7. Please keep the power in the place without trampled and do not stack anything on the power cord.

8. Please disconnect the power after shutdown before plugging in or out any extension card or equipment module.

9. Please note all notes and warnings mentioned in the manual.

10. No liquid is allowed to pour into the slot of the box, otherwise serious damage or circuit burn will occur.

11. Please contact a professional to handle if any of the following situations occurs:

A. The power cord or plug is damaged;

B. Liquid infiltrates into the machine;

C. the machine is exposed to moist environment;

D. The machine is not working normally or the user cannot make it work normally through the instruction of this manual;

E. falling or being injured;

F. there are obvious signs of damage to the machine;

12. Please don't put the device in or stored in a temperature higher than 85 ℃, otherwise it may cause damage to equipment.

Items list

Thanks for purchasing Realan LR-SKLUL1 series Mainboard. Please check if the packing box is intact. If it is broke or short of some accessories, please contact the suppliers.

1. One LR-SKLUL1 Mainboard;

2. One SATA data cable;

3. SATA power cable;

4. One COM cable;

5.One Shield;

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Catalogue

Chapter 1 Introduction to Motherboard

Thank you for purchasing our ITX series motherboard!

The motherboard adopts single chip design, which is based on **Socket BGA 1356** chip design. It is equipped with Bay Skylake-U sixth generation Core/Pentium/Celeron processor, providing high performance and professional ITX platform solutions.

Chip + Processor: Motherboard Stick **Skylake-U Processor BGA1356** single chip.

Memory: Onboard 1*SODIMM memory slot, support **DDR3L** memory, maximum capacity can support 8GB.

Graphics display: the motherboard adopts Intel (R) HD Graphics display core and output interface :VGA+VGA_H1+HDMI+JHDMI+LVDS.

NIC: the motherboard adopts Realtek 8111F Gigabit LAN.

Sound card: the motherboard uses Realtek HD ALC662 audio decoder chip, supporting Line_OUT and MIC_IN.

IO interface/expansion slot: the motherboard supports 10*USB interface (6*USB2.0, 4*USB3.0), 4*USB2.0/2*USB3.0 need to be expanded, 5 display output interfaces (1*VGA,1*VGA_H1,1*HDMI,1*JHDMI,1*dual channel 24bit LVDS interface), 1* Gigabit LAN interface, onboard high fidelity sound card chip, 1* speaker/headphone output interface,1*MIC_IN interface,1*3W power amplifier interface Pin,1*M.2 Key M slot, support 2242/2280 NGFF SSD,1*M.2 Key E support 2230 WIFI/Bluetooth, onboard 6*COM interface, 2*SATA interface,1*LPT print interface,1*SPDIF pin,1*PS/2 pin 1*CIR pin.

Power supply mode: the motherboard adopts 12V DC power supply mode.

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1.1 Motherboard interface diagram

Motherboard front
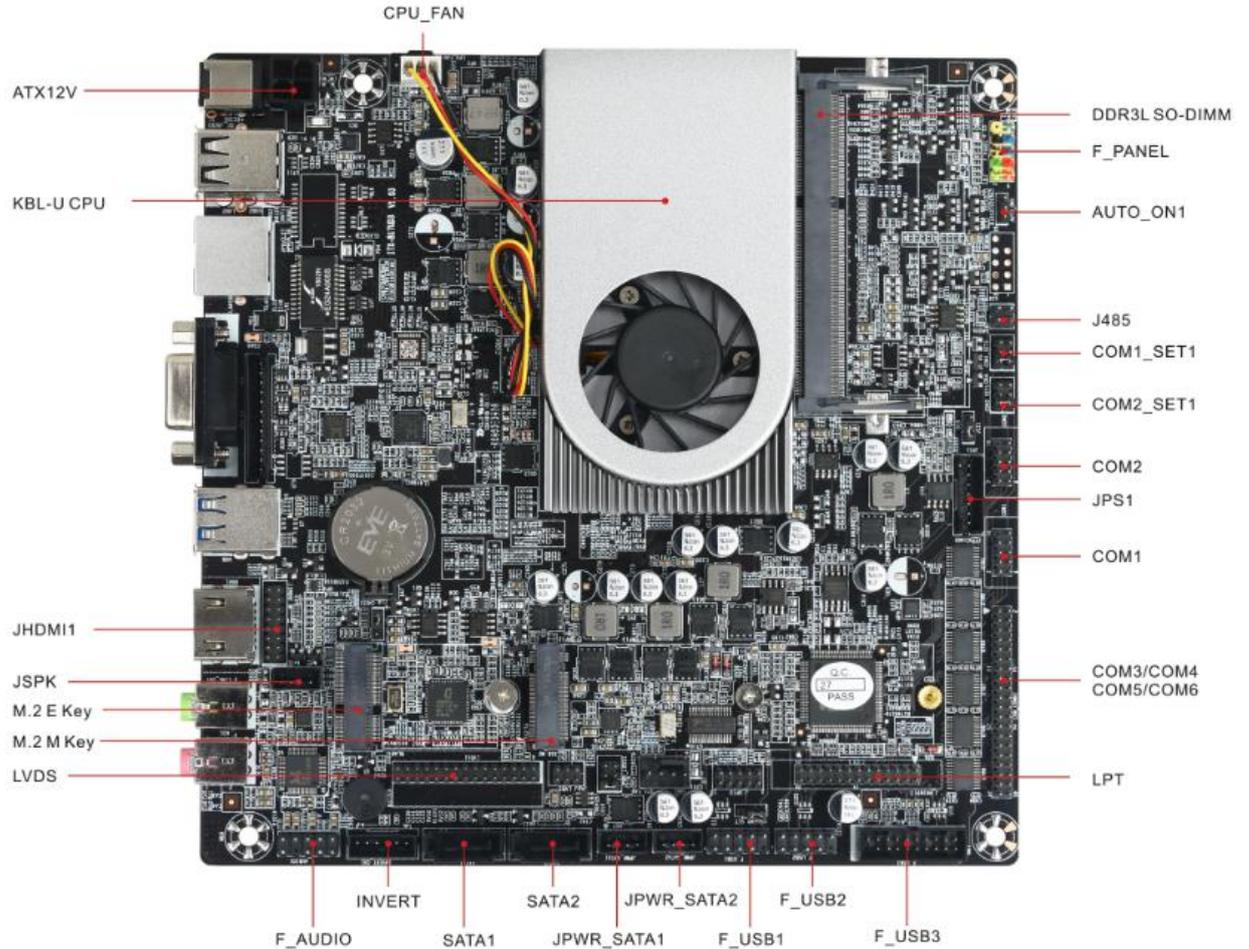
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1.2 Motherboard specifications

Processor	**SkyLake-U Processor BGA1356 Single Chip** **Intel SkyLake-U Core/Pentium/Celeron SoC**
RAM	**1*SO-DIMM, support single channel DDR3 1333/1600MHZ, maximum support 8G**
Display core	**Intel （R) HD Graphics Display core**
Network card	**Onboard Realtek 8111F Gigabit LAN, support PXE diskless boot**
Sound card	**Onboard Realtek HD ALC 662 5.1 audio chip**
Storage	**1*M.2 Key M Slot** **2*SATA3.0**
Expansion slot	**1*M.2 Key E**
USB	**4*USB3.0（2 of which are expanded by pins）** **6*USB2.0（4 of which are expanded by pins）**
Internal socket	**1*Mini PCIE/1*F_PANEL/1*SYS_FAN1** **1*CPU_FAN1/2*SATA/2*SATA_PWR** **6*COM/2*COM_9/1*LVDS/1*LVDS_PWR** **1*INVERT/1*F_AUDIO1/1*SPEAKER** **1*SPDIF/1*ATX12V/1*CLR_CMOS** **1*VGA_H1/1*JHDMI/1*AUTO_SET** **1*LPT/1*M.2/1*SIM/1*F_USB3.0**
Rear interface	**1*DC** **1*LAN** **1*VGA** **2*USB3.0** **2*USB2.0** **1*HDMI** **1*HP_OUT** **1*MIC_IN**
BIOS	**AMI EFI BIOS**
Power supply	**12V**
Operating system	**Support　Windows 10** **Support　Windows 8.1** **Support　Windows 7** **Support　Windows ES 7/8** **Support　LINUX**
PCB specifications	**170mm*170mm**
Working environment	**-15℃-60℃** **0%-96%　relative humidity, no condensation**

1.3 Motherboard rear I/O panel

The rear panel of the motherboard supports 1 DC_IN, 2*LAN, 1*VGA,2 USB3.0, 1*HDMI, 1*HP_OUT and 1*MIC_IN.

1.4 Motherboard Layout Diagram

Chapter II Board jumper and interface Setup instructions

2.1 motherboard jumper function settings

Before installing the hardware devices, please set the corresponding jumper according to your needs according to the following jumper function setting instructions.

Tip: How to identify the first stitch of jumper and pin.

All the first jumpers on the motherboard are close to the line or marked with a thick white line or a white triangle symbol , or look at the back bonding pad of motherboard, generally,

square pad is for the first stitch, please do not reverse, otherwise it may cause damage to your motherboard or other hardware devices.

Note: The black dots are the first pins in the schematic of jumpers and pins in this instruction.

2.1.1 Clear CMOS Jumper (CLR_CMOS1)

If there is a problem with the motherboard because of BIOS setup error, we can clear the BIOS settings to solve the problem, the method is that in the power off state, the CMOS jumper to 2-3 pins, jump out 5-6 seconds, please do not in the power-on state to clear the CMOS, otherwise it may damage your motherboard, its definition is as follows:

PIN	Setting status
1-2	Keep CMOS data (preset value)
2-3	Clear CMOS data

2.1.2 LVDS LCD Voltage Selection Jumper (JPWR_LVDS)

Before using the selected LVDS LCD screen, please understand the rated voltage of the required work. Please select the jumper according to the power supply voltage of the LVDS LCD. The jumper settings are as follows:
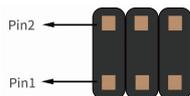
PIN	Setting status
1-2	3.3V available (default)
3-4	5V available
5-6	12V available

2.1.3 COM1/COM2 Status Selection Function Jumper (COM1_SET1/COM2_SET1)

COM1/COM2 on the motherboard supports RS232 serial port mode, Pin9 with 5V and 12V voltage three modes, you can set the COM1_SET1/COM2_SET1 pin jumper to select the working state of COM1/COM2, COM1_SET1/COM2_SET1 pin jumper setting as follows:
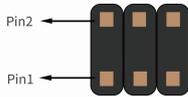
COM1_SET1/COM2_SET1	COM1/COM2 Status
1-2	RI(Default value）
3-4	5V available
5-6	12V available

2.2 Motherboard interface installation instructions

2.2.1 Fan power connector（SYS_FAN/CPU_FAN)

When connecting the fan to the fan power socket,the user must connect the red cable to the +12V power pin and the black wire to the ground.If you want to observe the fan's working status in the BIOS or hardware monitor,you must use a fan that supports the detected speed.For a fan with a speed sensor,the fan will generate 2 pulse waves per rotation.The system hardware monitor will report a fan rotation speed within the quotation,and the fan speed can be displayed in CMOS.
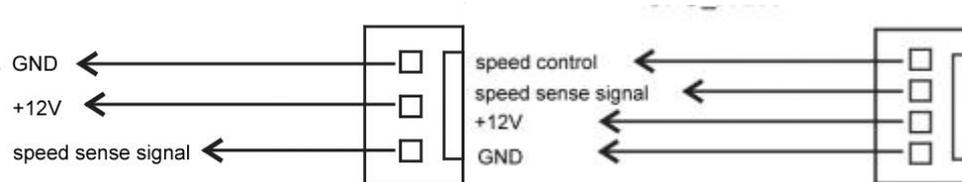
2.2.2 USB interface（F_USB1/F_USB2/F_USB3)

There are 4 USB2.0 ports and 4 USB3.0 ports on the motherboard, and the front panel USB interface (F_USB1/F_USB2/F_USB3) is a collection of 4 standard USB2.0 ports and 2 standard USB3.0 ports. You need to use the USB Cable cable to transfer the USB signal from the pin to the standard USB port (extension), which you can purchase from your motherboard dealer or electronic store.

Note: The first foot is marked on the motherboard with "Δ". Please be sure not to connect the wrong one. Otherwise, it may cause damage to your motherboard or equipment. The pins are defined as follows:

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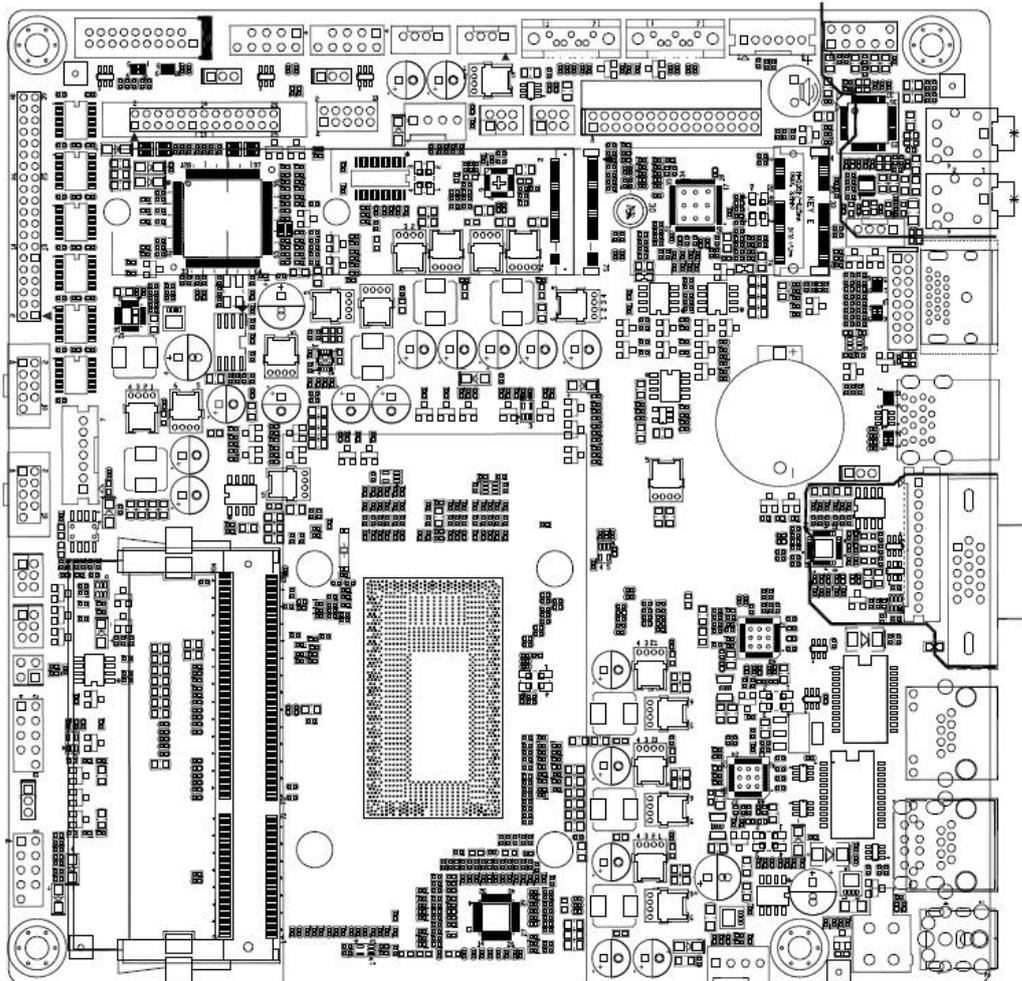**TEL:00**86-755-26996161-136   Fax**:** 0086-755-26996161-860

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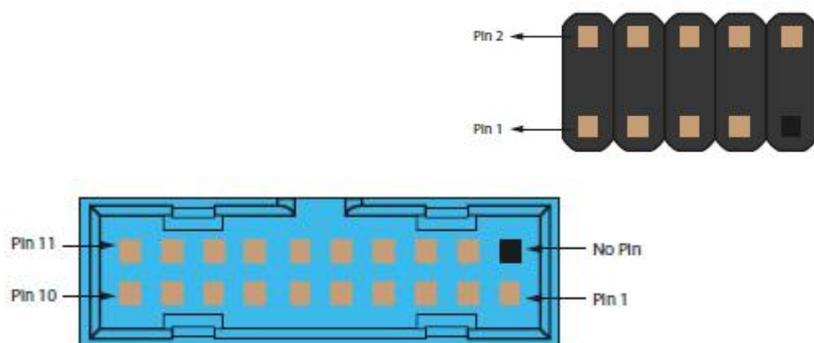
PIN	Pin definition	PIN	Pin definition
1	+5V	11	Data4-
2	SS3_RX-	12	Data4+
3	SS3_RX+	13	GND
4	GND	14	SS4_TX+
5	SS3_TX-	15	SS4_TX-
6	SS3_TX+	16	GND
7	GND	17	SS4_RX+
8	Data3+	18	SS4_RX-
9	Data3-	19	+5V
10	NC	20	NC

2.2.3 COM interface（COM1/COM2/COM_CONN1)

There are 6 COM interface pins on the motherboard, which are 2.0 pitch DB9 pins. You need to use COM port cable to convert to standard COM interface to connect with external devices. You can buy this COM port cable from motherboard distributor or electronic market.

Note: The COM pin definition suffix A stands for COM1, and its pin definition is as follows (taking COM1 as an example):
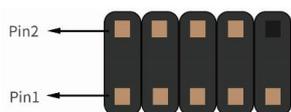
PIN	Pin definition	Definition Description
1	DCDA_R	Data carrying test
2	RXDA	Receive data
3	TXDA	Transfer data
4	DTRA	Data terminal is ready
5	GND	Ground
6	DSRA	Data setup is ready
7	RTSA	Request to send
8	CTSA	Clear to send
9	RIA	Ring indication
10	NC	NC

Wiring method of COM port pin:

To use the COM port pin, it must be realized by a patch cord. Connect the COM port pin to the COM cable as shown in the figure below (for example, 1 to 1, 2 to 2, and so on).

The COM3/COM4/COM5/COM6 ports on the motherboard are supported by the COM_CONN1 integrated pin, as defined below:

PIN	Pin definition	PIN	Pin definition
1	3DCD	21	5DCD
2	3SIN	22	5SIN
3	3SOUT	23	5SOUT
4	3DTR	24	5DTR
5	3GND	25	5GND
6	3DSR	26	5DSR
7	3RTS	27	5RTS
8	3CTS	28	5CTS
9	3RI	29	5RI
10	NC	30	NC
11	4DCD	31	6DCD
12	4SIN	32	6SIN
13	4SOUT	33	6SOUT
14	4DTR	34	6DTR
15	4GND	35	6GND
16	4DSR	36	6DSR
17	4RTS	37	6RTS
18	4CTS	38	6CTS
19	4RI	39	6RI
20	NC	40	NC

2.2.4 COM1/COM2 interface function status selection jumper (COM1_9/COM2_9)

The COM1/COM2 pins on the motherboard provide three status options: NORMAL, 5V and 12V. You can select the COM1_SET1/COM2_SET1 jumper to select the working level of COM1/COM2. (For details on the setting method, see 2.1.3), the COM1_9/COM2_9 pins are defined as follows:

PIN	Pin definition	PIN	Pin definition
1	RI	4	+12V
2	VCC5	5	RI
3	RI	6	NRI

2.2.5 Clear CLR_CMOS1 pin definition

The motherboard provides a set of CLR_CMOS1 jumpers. Clearing CMOS will permanently remove the previous BIOS system settings and set them to the original (factory settings) BIOS system settings. (For details, please refer to 2.1.1)

The CLR_CMOS1 pin pins are defined as follows:

PIN	Pin definition	Definition Description
1	VBAT	Connecting battery
2	RICRST	Connect RTC circuit
3	GND	Ground

2.2.6 Multi-channel display setting description

There are five kinds of display interfaces on the main board: VGA, VGA_H1, HDMI, JHDMI and LVDS. These interfaces can only achieve dual display. The specific combinations are as follows:

VGA/VGA_H1+HDMI/JHDMI	Synchronous/asynchronous dual display
HDMI/JHDMI+LVDS	Synchronous/asynchronous dual display
VGA/VGA_H1+LVDS	Synchronous/asynchronous dual display

Note: VGA and VGA_H1 are sync signals, HDMI and JHDMI are sync signals.

2.2.7 LVDS Pin Definition

The motherboard provides a set of 2*15pin LVDS pins that support dual 24-bit LVDS LCD screens.

LVDS pins are defined as follows：

PIN	Pin definition	PIN	Pin definition
1	VCC	16	ACLK+
2	VCC	17	AD03-
3	VCC	18	AD03+
4	GND	19	BD00-
5	GND	20	BD00+
6	GND	21	BD01-
7	AD00-	22	BD01+
8	AD00+	23	BD02-
9	AD01-	24	AD02+
10	AD01+	25	GND
11	AD02-	26	GND
12	AD02+	27	BCLK-
13	GND	28	BCLK+
14	GND	29	BD03-
15	ACLK-	30	AD03+

2.2.8 LVDS voltage control pin pin definition（LVDS_PWR）

The motherboard provides a set of JPWR_LVDS voltage control pins for the operating voltage selection of the LCD screen. (For details, see 2.1.2)

The LVDS_PWR pin pins are defined as follows：
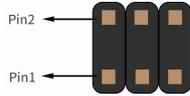
PIN	Pin definition	PIN	Pin definition
1	3.3V	2	LVDS VCC
3	5V	5	LVDS VCC
3	12V	6	LVDS VCC

2.2.9 INVERT pin definition (LVDS backlight control interface)

The motherboard provides a 6pin/8pin INVERT interface for adjusting the backlight panel brightness control of the LVDS1 device.

The pins of the 6pin INVERT pin are defined as follows：

PIN	Pin definition	Definition Description
1	+12V	power supply
2	+12V	power supply
3	L_BKLT_EN	LVDS backlight turned on
4	L_BKLT_CTL	LVDS backlight control
5	GND	Ground
6	GND	Ground

2.2.10 VGA pin pin definition（VGA_H1）

The motherboard provides a set of 1*12pin VGA_H1 pins, which can be converted to a standard VGA interface by using a VGA cable to connect to external devices.

VGA_H1 pin pins are defined as follows：

PIN	Pin definition	PIN	Pin definition
1	GND	7	VGA_GREEN signal
2	VGA_VSYNC signal	8	GND
3	VGA_HSYNV signal	9	VGA_BLUE signal
4	GND	10	GND
5	VGA_RED signal	11	DDC_DATA signal
6	GND	12	DDC_CLK signal

2.2.11 HDMI interface pin pin definition（JHDMI)

The motherboard provides a set of 2*8 JHDMI pins that need to be converted to a

standard HDMI interface using a JHDMI cable to connect to external devices.

JHDMI pin pins are defined as follows：

PIN	Pin definition	PIN	Pin definition
1	TXD2+	2	DDB_CLK
3	TXD2-	4	DDB_DATA
5	TXD1+	6	NV
7	TXD1-	8	HPD
9	TXD0+	10	DAC_5V
11	TXD0-	12	GND1
13	TXC0+	14	GND2
15	TXC0-	16	GND3

2.2.12 Amplifier Pin Definition (SPEAKER)

The motherboard provides a set of SPEAKER pins for connecting speakers to increase the size of the audio sound.

The SPEAKER pin pins are defined as follows:

PIN	Pin definition	Definition Description
1	R+	Right speaker positive
2	R-	Right speaker negative
3	L+	Left speaker positive
4	L-	Left speaker negative

2.2.13 Installation of ATX Power Supply (ATX1 12V)

The motherboard provides a set of 4pin DC_IN (12V) power connectors.
1) As shown in the figure below, you must use the new P4 power supply to connect the ATX power plug of the motherboard to the corresponding power connector on the motherboard. Otherwise, it will not be turned on and may cause damage to some devices.
2) The 5VSB current provided by the power supply you are using should not be less than 2A. Otherwise, the network/modem wake-up function may not be implemented.

The 4pin ATX_PWR power interface pins are defined as follows:

PIN	Pin definition	Definition Description
1	GND	grounded
2	GND	grounded
3	vcc	+12v
4	VCC	+12v

2.2.14 AUTO_ON1 pin definition (AUTO_SET)

The motherboard provides a set of AUTO_ON1 pins for automatic hardware power-up. (For details, see 2.1.4)

The AUTO_ON1 pin pins are defined as follows:

PIN	Pin definition	Definition Description
1	NC	empty link
2	PWRIN	Link F_PANEL 的 PWRIN
3	PERBIN_SIO	Connect hardware automatic power-on chip

2.2.15 SATA Power Interface Pin Definition (JSATA_PWR1/JSATA_PWR2)

The motherboard provides two SATA_PWR interfaces, and SATA_PWR is a power interface for powering SATA hard drives or optical drives.

The SATA power supply connector pins are defined as follows:

PIN	Pin definition	Definition Description
1	12V	Powering a 3.5-inch hard drive
2	GND	grounded
3	GND	grounded
4	5V	Powering a 2.5-inch hard drive

2.2.16 M.2 Key E slot introduction

The motherboard provides an M.2 Key E slot that can support the 2230 WIFI+BT wireless network.

2.2.17 Front audio input/output interface (F_AUDIO1)

The motherboard provides a front audio output interface F_AUDIO1, this set of sound card pins for you to connect to the front panel of the audio
Connector, so you can easily listen to music via the host to the panel and use the microphone for voice input.

The F_AUDIO1 pin pins are defined as follows:
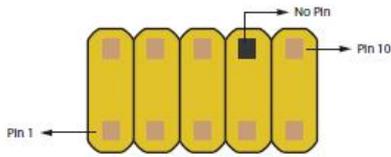
PIN	Pin definition	Definition Description
1	MIC_L	Microphone left channel input
2	GND	grounded
3	MIC_R	Microphone right channel input
4	NC	Empty link
5	LINE2_R	Front audio right channel output
6	AUD_RET_R	Front audio right channel detection signal return
7	AZSENSE	Low signal activation
8	NC	Empty link
9	LINE2_L	Front audio left channel output
10	AUD_RET_L	Front audio left channel detection signal return

2.2.18 System Signal / Control Panel Interface (F_PANEL1)

The motherboard provides a set of F_PANEL pins for connecting to the buttons and indicators on the front panel of the chassis. Please pay attention to the positive and negative poles when connecting. If the connection is wrong, some functions will not work properly.

The pins of the F_PANEL1 pin are as follows:

The pin assignment of F_PANEL is as follows:

PIN	Pin definition	Definition Description
1	HDD_POWER_LED+	Hard disk indicator positive
2	FP_LED+	POWER_LED primary color
3	HDD_LED	Hard disk indicator negative
4	FP_LED-	POWER_LED Alternating color
5	GND	grounded
6	PWRBTN#	Power switch
7	SYS_RST#	Reset switch
8	GND	grounded
9	3.3V	Voltage 3.3V
10	NC	Empty link

PWR_LED power indicator:

   The power indicator is a 2-pin connector that indicates the working status of the computer. When the computer is powered on, it indicates

The light is always on, otherwise it is not lit (note: there are positive and negative points).

HDD_LED hard disk indicator

   This set of two-pin header pin is connected to the hard disk indicator on the computer case. The LED can be used to display the working status of the hard disk. If the hard disk has read action, the indicator light will light up (Note: there are positive and negative points).

PWR_ON power switch

PWR_ON is a two-pin connector that controls the main switch of the ATX main power supply. Connect this set of pins to the switch on the computer case that controls the power

of the computer. When the two pins are shorted, the switch can be turned on and off.

RESET reset button

This set of two-pin headers is connected to the RESET switch on the computer case, allowing you to restart the system without turning off the computer, especially in the case of system stalls or crashes.

2.2.19 LPT interface (LPT)

The motherboard provides a set of LPT print interface pins with the following pin definitions:

PIN	Pin definition	PIN	Pin definition
1	LTP STB	14	GND
2	LPT AFD	15	LPT PD6
3	LPT PD0	16	GND
4	LPT ERR	17	LPT PD7
5	LPT PD1	18	GND
6	LPT INIT	19	LPT ACK
7	LPT PD2	20	GND
8	LPT SLIN	21	LPT BUSY
9	LPT PD3	22	GND
10	GND	23	LPT PE
11	LPT PD4	24	GND
12	GND	25	LPT SLCT
13	LPT PD5	26	NC

Chapter III Driver Installation

3.1 Intel ME driver installation

1) Enter the LR-SKLUL\WIN10\ME directory of the driver CD, and double-click "intel_me.exe" with the left mouse button;

2) Follow the prompts, click "Next", then click "Continue Anyway";

3) After the installation is complete, select "Yes" in the restart option and click "Finish" to restart the computer and then drive

The program is automatically loaded.

3.2 Chipset driver installation

1) Enter the driver CD LR-SKLUL\WIN10\Chipset directory, double-click "setup.exe" with the left mouse button;

2) Follow the prompts, click "Next", then click "Continue Anyway";

3) After the installation is complete, select "Yes" in the restart option and click "Finish" to restart the computer and the driver will load automatically.

3.3 Sound Card Driver Installation

1) Enter the driver CD LR-SKLUL\WIN10\AUDIO directory, double-click the "setup.exe" button with the left mouse button;

2) Follow the prompts, click "Next", then click "Continue Anyway";

3) After the installation is complete, select "Yes" in the restart option and click "Finish" to restart the computer and the driver will load automatically.

3.4 NIC driver installation

1) Enter the drive CD LR-SKLUL\WIN10\LAN directory, double-click "setup.exe" with the left mouse button;

2) Follow the prompts, click "Next", then click "Continue Anyway";

3) After the installation is complete, select "Yes" in the restart option and click "Finish" to restart the computer and the driver will load automatically.

3.5 graphics card driver installation

1) Enter the drive CD LR-SKLUL\WIN7\Graphics directory, double-click the "setup.exe" button with the left mouse button;

2) Follow the prompts, click "Next", then click "Continue Anyway";

3) After the installation is complete, select "Yes" in the restart option and click "Finish" to restart the computer and the driver will load automatically.

3.6 USB3.0 driver installation

1) Enter the driver CD LR-SKLUL\WIN7\USB3.0 directory, double-click the "setup.exe"

button with the left mouse button;

2) Follow the prompts, click "Next", then click "Continue Anyway";

3) After the installation is complete, select "Yes" in the restart option and click "Finish" to restart the computer and the driver will load automatically.

3.7 Settings for audio control output

The motherboard integrates the Realtek ALC662 audio chip, which supports 5.1 provincial output.

1. After installing the HD standard sound card driver, click the "Sound Effect" icon in the lower right corner of the system desktop to open the "HD Audio" configuration setting window as follows:

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2. Click to select the "Trumpet Configuration" window and select (4/5.1 channel) in a check box in the screen that appears, as follows:

3. Please note the above picture shows the 5.1 channel 2-hole audio interface of the motherboard. The function of each interface easy color is correct, ie:

◆ Yellow-green interface marked with front speakers

◆ Pink interface marked with microphone

Attachment 1: troubleshooting

If you have a failure when starting your system, refer to the following steps to troubleshoot it.

Begin

Turn off the power and remove all peripheral devices, cables and power lines connected to the motherboard

Confirm whether the main board is short-circuited → Yes → Please isolate the short circuit area

exclude

No

Check that all jumpers (such as CPU, frequency or voltage) are set correctly → no → Set the jumper to the correct setting

exclude

yes

Check whether the CPU cooling fan is fully attached to the CPU → no → The cooling fan is properly fixed to the CPU and connected to the power connector

exclude

yes

Whether the main memory is properly installed in the slot → no → Properly install the main memory in the slot

exclude

yes

Insert the display card, connect the ATX
power socket and turn on the power

yes

↓

Is the memory indicator light
on the main board or is the
CPU fan running normally?

→ no → It could be Power supply, CPU,main
memory, CPU/ memory socket
failure

exclude

yes

↓

Is there a picture

→ no → Display card, display card slot,
screen malfunction

exclude

yes

↓

Plug in the keyboard
after power off, and the mouse
will start up again

yes

↓

Check that the
keyboard is working properly

→ no → Keyboard, keyboard interface
may fail

exclude

yes

↓

Press Del to enter the BIOS setting,
select "Loading mized Defaults" and
save for opii and leave

yes

↓

Turn off the power, connect the IDE
device, and confirm whether it can be
started normally.

→ no → There may be something wrong with the
DE device/socket/wiring

exclude

yes

↓

Reinstall the operating system and install the
other devices back Try restarting it again

yes

The end

If the above instructions cannot solve your problem, please consult the dealer or manufacturer for technical support.

Attachment 2: common problems and solutions

1. How can I clear the Settings in CMOS?

Answer: if your motherboard has the Clear CMOS jumper wire, please refer to the user manual to set the specific stitch or short circuit to Clear CMOS, if not this jumper wire on the main board, you can pull up the CMOS battery, temporarily stop the CMOS power supply, after a few minutes to Clear the Settings in the CMOS.It is recommended that you follow the following steps:

1) turn off the power;

2) pull the power plug from the main board;

3) take out the CMOS battery on the main board and put it aside for about 10 minutes;

4) reload the CMOS battery into the battery base;

5) connect the power plug and start up;

6) after pressing the "DEL" button to enter the BIOS screen, select the "Load fail-safe

Defaults" project to set the most stable system;

7) remember to save the BIOS Settings and restart the computer before leaving the BIOS

screen.

2. Why do I think after BIOS upgrade, the system seems to become unstable?

Solution: please remember to select the "Load fail-safe Defaults" project in the BIOS option every time after upgrading the BIOS to make the most stable setting of the system and save it.

If you still feel a problem, try to understand the CMOS setup.

1. Why did I turn the horn on so loudly, but only heard so little?

Answer: please confirm whether the loudspeaker you use has the function of power supply or power amplifier. If not, please try the loudspeaker with built-in power supply or power amplifier.

4. On the main board with built-in display card function, I want to add a display card. How can I turn off the built-in display card function?

Answer: the main board has the function of automatic detection, so when you connect to the display card, the function of the built-in display card will be automatically closed, so no manual adjustment is required.

5. What does the "drip" sound mean when starting the machine?

Answer: the following are the continuous drip interpretation tables of Award BIOS and AMI BIOS respectively for reference only:
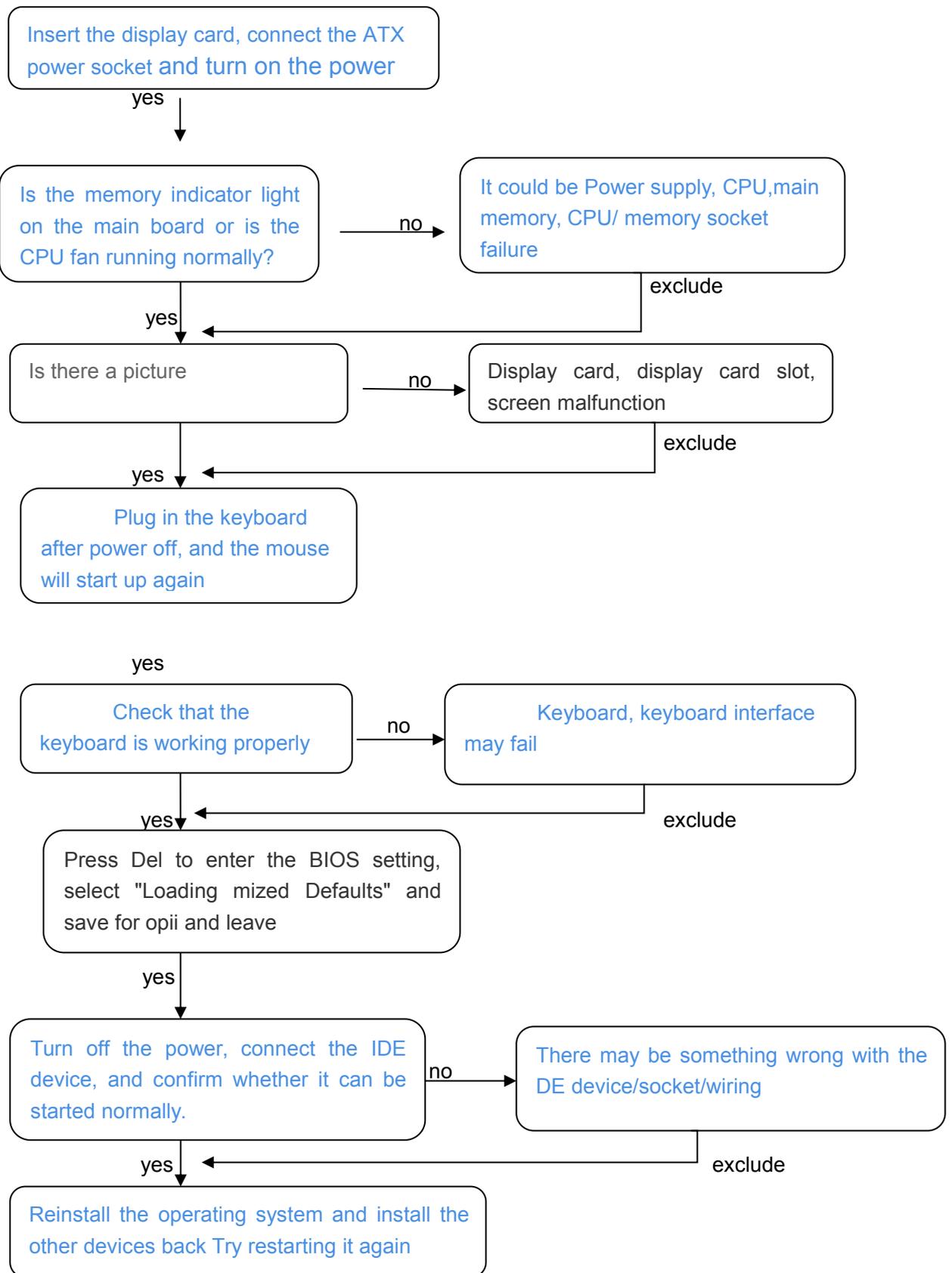
REALAN COMPUTER PRODUCTS LIMITED
Add: No. 103, 1st Floor, Building E, Songbai Road NO.1008, Sunshine Community, Xili Street, Nanshan District, Shenzhen 518055, China
TEL:0086-755-26996161-136   Fax**:** 0086-755-26996161-860

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AMI BIOS	AWARD BIOS
Drip 1: the system starts normally	1 short: the system starts normally
Short: memory refresh error	2 short: CMOS setup error
Short: memory ECC check error	1 long 1 short: memory or motherboard error
3 short: basic 64K memory check failed	1 long 2 short: screen or display card error
4 short: system time error	1 long 3 short: keyboard error
5 short: CPU error	1 long 9 short: BIOS memory error
6 short: Gate A20 error	continuous drip: the display card is not plugged in
7 short: cpu-end fault	continuous short burst: power supply problem
8 short: display card memory error	
9 short: ROM error	
10 short: CMOS read-write error	
11 short: cache error	

Attachment 3: how to upgrade BIOS

Upgrade motherboard BIOS needs two files, one is the new BIOS content file, file name suffix is usually. "bin" or "ROM", another is to upgrade the BIOS need to use the application, such as: AMI BIOS fparts and FPT, both are main suppliers.

1. Why upgrade the BIOS of the main board?

Usually new BIOS error in the original potential BUG fix, may be added more new functions, support the new processor, memory function, such as the latest if all your machine work is normal, but you are not the pursuit of the latest technology, etc., you can do not need to update the BIOS.

2. Where can I get the BIOS file?

BIOS files and applications can be provided from the motherboard vendor or accessed over the Internet.

3. What are the attention points of updating BIOS?

1) make sure there is no virus in your computer disk, and the original file is free of virus;

2) confirm that the BIOS file type required for the upgrade is fully in line with the requirements of the main board;

3) backup the original BIOS file;

How to upgrade?

1) enter the system into pure DOS mode and find the application for upgrading;

2) run the application and backup the original BIOS file;

3) refresh the BIOS, whose command is fpt-f < new BIOS filename >.

Attachment 4：Proper noun meaning

ACPI   Advanced Configuration and Power Interface
APM   Advanced Power Management
AGP   Accelerated Graphics Port
AMR   Audio Modem Rister
ACR   Advanced Communications Riser
BBS   BIOS Boot Specification
BIOS   Basic Input Output System
CMOS   Complementary Metal Oxide Semiconductor
CPU   Central Processing Unit
CRIMM   Continuity RIMM
CNR   Communication and Networking Riser
DMA   Direct Memory Access
DMI   Desktop Management Interface
DIMM   Dual Inline Memory Module
DRM   Dual Retention Mechanism

DRAM   Dynamic Random Access Memory
DDR   Double Date Rate
ECP   Extended Capabilities Port
ESCD   Extended System Configuration Date
ECC   Error Checking and Correcting
EMC   Electromagnetic Compatibility
EPP   Enhanced Parallel Port
ESD   Electrostatic Discharge
FDD   Floppy Disk Device
FSB   Front Side Bus
HDD   Hard Disk Device
IDE   Integrated Dual Channel Enhanced
IRQ   Interrupt Request
I/O   Input/Output
IO   ACPI Input Output Advanced Programmable Input Controller
ISA   Industry Standard Architecture
LBA   Logical Block Addressing
LED   Light Emitting Diode
MHz   Megahertz
MIDI   Musical Instrument Digital Interface
MTH   Memory Protocol Translator
NIC   Network Interface Card
OS   Operating System

PAC　　　PCI A.G.G.Controller
POST　　　Power-On Self Test
PCI　　　Peripheral Component Interconnect
RIMM　　　Rambus in-line Memory Module
SCI　　　Special Circumstance Instuctions
SECC　　　Single Edge Contact Cartridge
SRAM　　　Static Random Access Memory
SMP　　　Symmetric Multi-Processing
SMI　　　System Management Interrupt
USB　　　Universal Serial Bus
VID　　　Voltage ID

REALAN COMPUTER PRODUCTS LIMITED
Add: No. 103, 1st Floor, Building E, Songbai Road NO.1008, Sunshine Community, Xili Street, Nanshan District, Shenzhen 518055, China
TEL:0086-755-26996161-136　　　Fax**:** 0086-755-26996161-860

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