

RK3288 Main board

CLK163

Specification

Shenzhen Innotronics Technology Co., Ltd

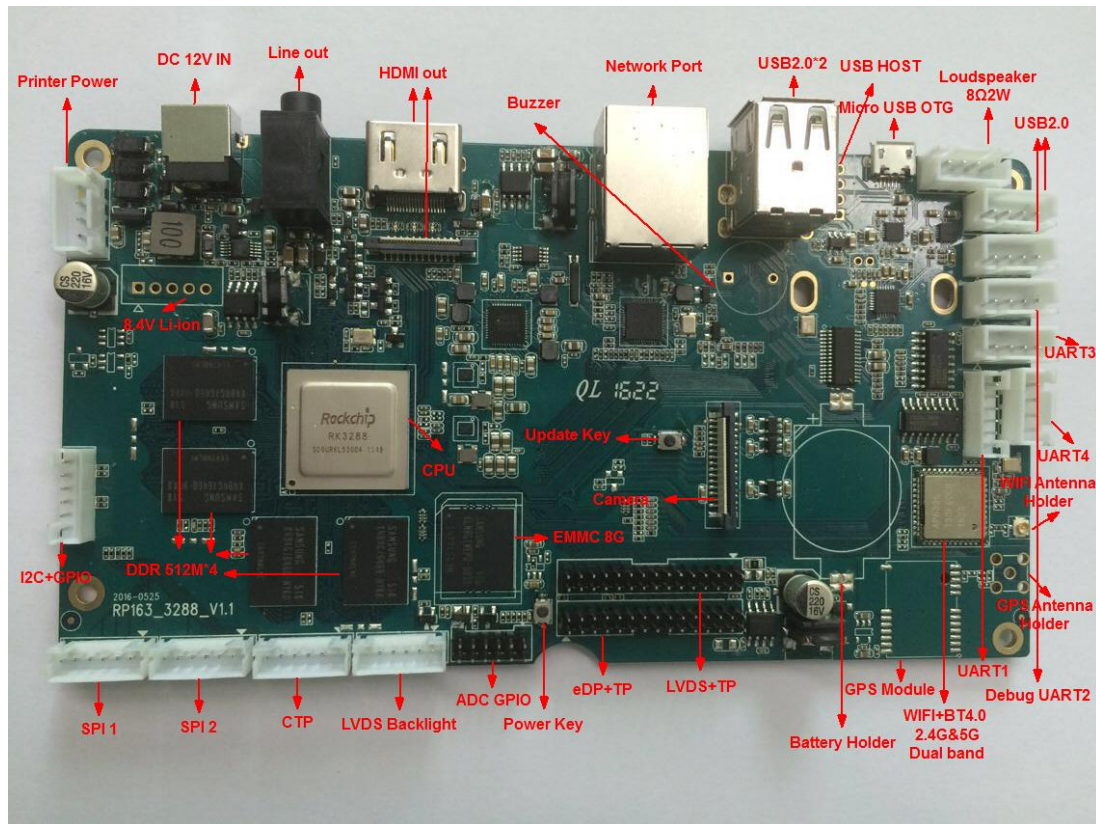
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Content

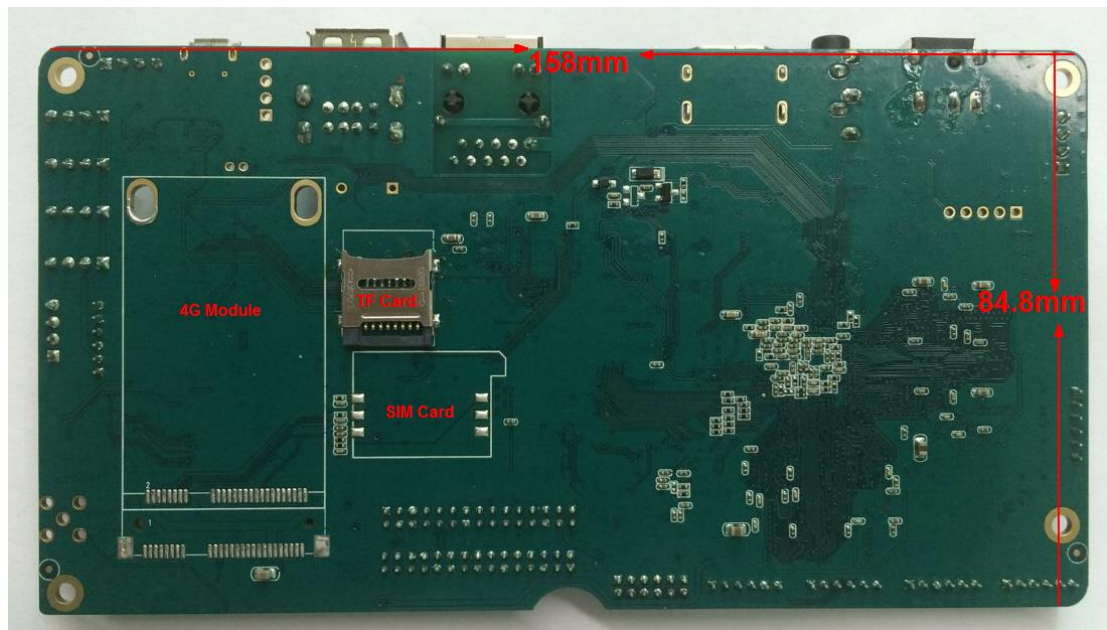
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1.Product picture

1) Port description(only for reference,please make the object as the standard):



2) PCB Size: (158 * 84.8)cm



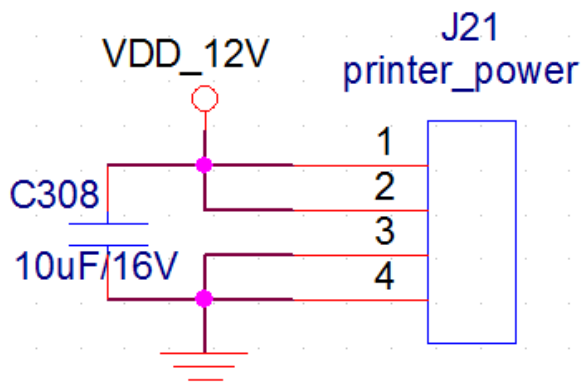
2. Product Specification

Specification	
CPU	RK3288, 28nm Cortex-A17 Quad Core 1.8GHz
RAM	DDR3 2G/4G (optional)
Storage	EMMC 8G/16G (extendable)
Decode resolution	Up to 3840*2160
OS	Android 5.1
GPU	ARM Mali-T764 GPU,support TE,ASTC,ARBC tech
Display mode	Support regular, circle, inter-cut play mode
Network	RJ45, Wifi, BT4.0, 4G ALL network passed (optional)
GPS/BD	GPS L1&BD2
Photo display	JPG/BMP/GIF/TIFF/PNG
Video	Support RMVB,FLV,MPEG1/2/4,AVI,WMV,MOV,MP4,TS,etc
USB port	USB*5
Serial port	RS232*4
Ethernet	1, 10M/100M/1000M adaptive ethernet
LVDS output	1, support 50/60Hz single/double 8 LCD panel
HDMI output	1, up to 1080P output
Touch screen	Support infrared, capacitor (USB/i ² c)
Video output	Support MP3/AAC/WAV/WMA/Dolby True HD/DTS-HD/LPCM /H264/VP8/MVC/Double track 8Ω/2W、4Ω/3W output
RTC clock	Support
OS upgrade	TF card
Power	Input: 12V
Size	158mm*84.8mm*1.6mm
Other	Support camera, infrared remote, USB keyboard& mouse, horizontal & vertical display, USB data input, multi language

3、 Port parameter:

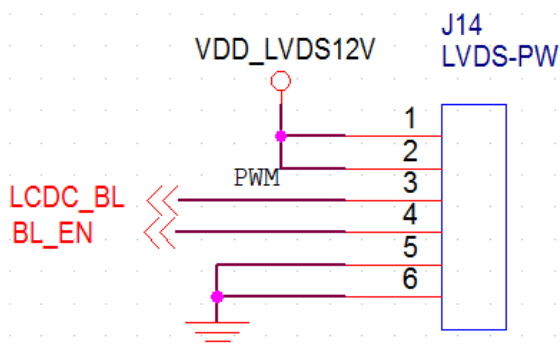
1) Printer Power input:

NO.	Name	attribute	description
1	12VIN	input	12V input
2	12VIN	input	12V input
3	GND	GND	GND
4	GND	GND	GND



2) LVDS Back light port:

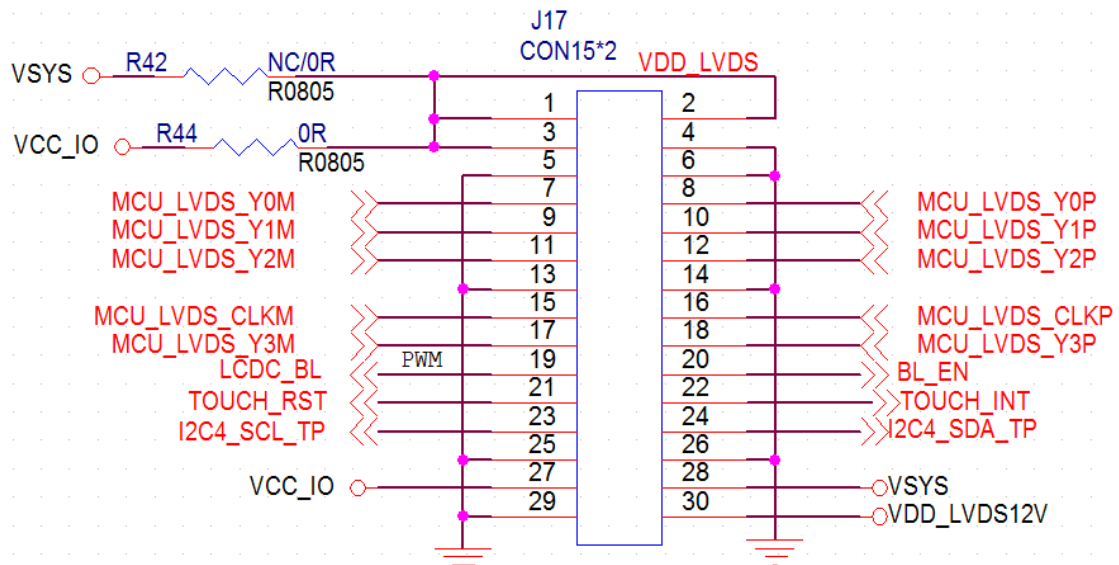
NO.	Name	Attribute	Description
1	12V	power	12V output
2	12V	power	12V output
3	LCDC_BL	output	Back light brightness PWM
4	BL_EN	output	Back light on/off
5	GND	GND	GND
6	GND	GND	GND



3.1) LVDS + TP Single 8:

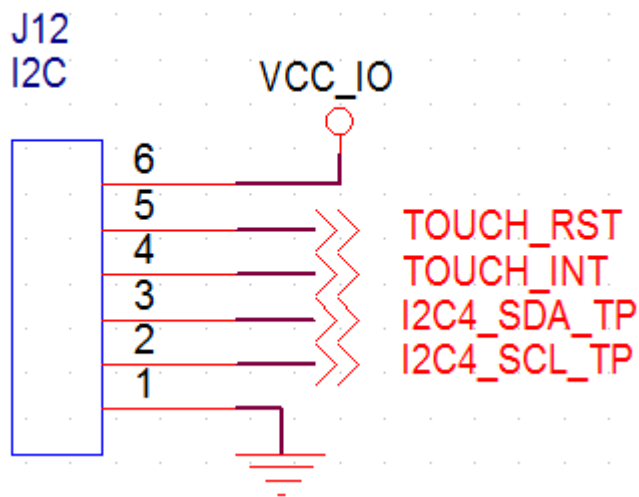
NO.	name	Attribute	description
1	VCC	power	PANEL power input (+3.3V/+5V)
2			
3			
4	GND	GND	GND
5			
6			
7	Y0M-	output	Negative Transmission Data of Pixel 0(Odd)
8	Y0P+	output	Positive Transmission Data of Pixel 0(Odd)
9	Y1M-	output	Negative Transmission Data of Pixel 1(Odd)
10	Y1P+	output	Positive Transmission Data of Pixel 1(Odd)
11	Y2m-	output	Negative Transmission Data of Pixel 2(Odd)
12	Y2P+	output	Positive Transmission Data of Pixel 2(Odd)
13	GND	GND	GND
14	GND	GND	GND
15	CLKM0-	output	Negative Transmission Clock (Odd)
16	CLKP0+	output	Positive Transmission Clock (Odd)
17	Y3M-	output	Negative Transmission Data of Pixel 3(Odd)
18	Y3P+	output	Positive Transmission Data of Pixel 3(Odd)
19	LCDC-BL	output	LCD Backlight PWM
20	BL_EN	output	Backlight enable
21	Touch_RST	output	Touch screen reset
22	TOUCH_int	output	Touch screen int
23	I2C4_SCL	output	I2C clock
24	I2C_SDA	output	I2C data
25	GND	GND	GND
26	GND	GND	GND
27	VCC_IO	output	IO POWER 3.3V
28	VSYS	output	5.0V
29	GND	output	GND
30	12V	output	12V

LVDS_TP 单8bit



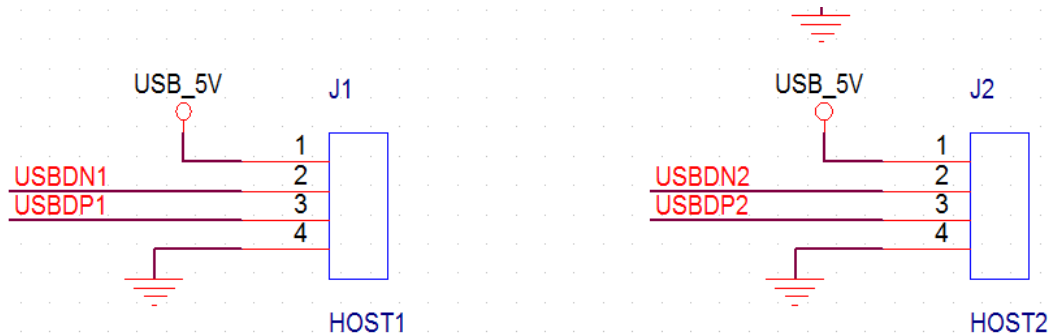
4) TP i²c port:

NO.	name	attribute	description
1	GND	GND	GND
2	TP_CLK	Signal wire	Signal wire
3	TP_SDA	Signal wire	Signal wire
4	TP_INT	Signal wire	Signal wire
5	TP_RESET	Signal wire	Signal wire
6	3.3V	Power	Power



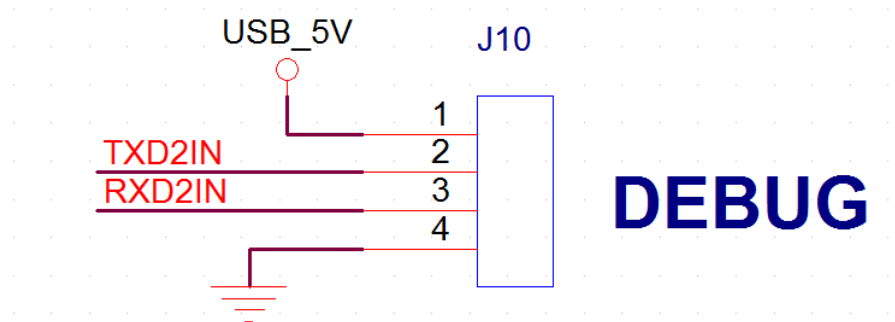
5) USB port:

NO.	Name	attribute	description
1	5V	power	5V output
2	D-	In/output	Digital Minus(D-)
3	D+	In/output	Digital Positive(D+)
4	GND	GND	GND



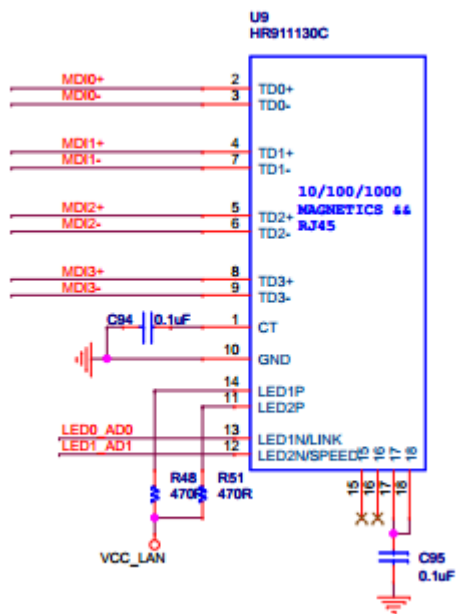
6) Serial port UART:

NO.	Name	Attribute	description
1	5V	power	5V output
2	TX	Input/output	Transmit
3	RX	Input/output	Receive
4	GND	GND	GND



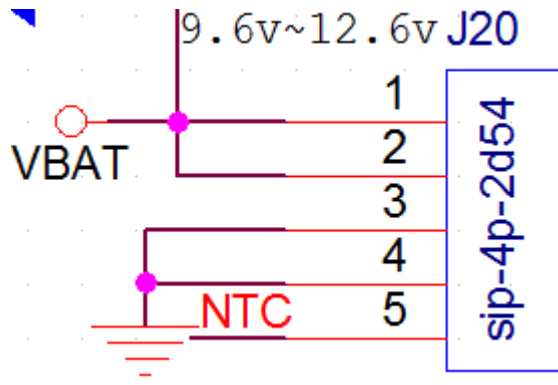
7) Ethernet port:

NO.	Name	Attribute	Description
2	TDR0+	output	Receive
3	TDT0-	output	Transmit
4	TDR1-	output	Receive
7	TDT1+	output	Transmit
5	TDR2-	output	Receive
6	TDT2+	output	Transmit
8	TDR3-	output	Receive
9	TDT3+	output	Transmit



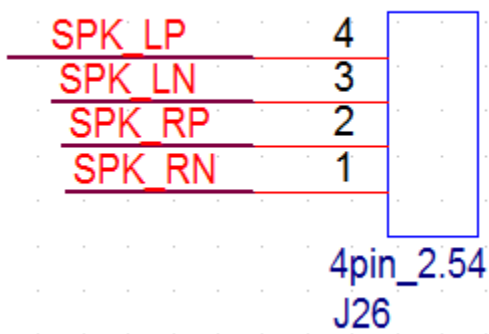
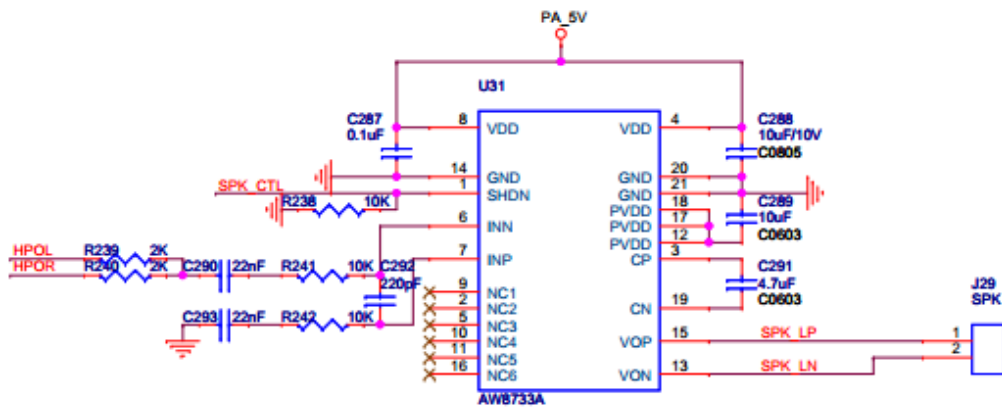
8) Battery Charging port:

NO.	Name	Attribute	Description
1	VCC	Power	Power
2	VCC	Power	Power
3	GND	GND	GND
4	GND	GND	GND
5	GND	GND	GND



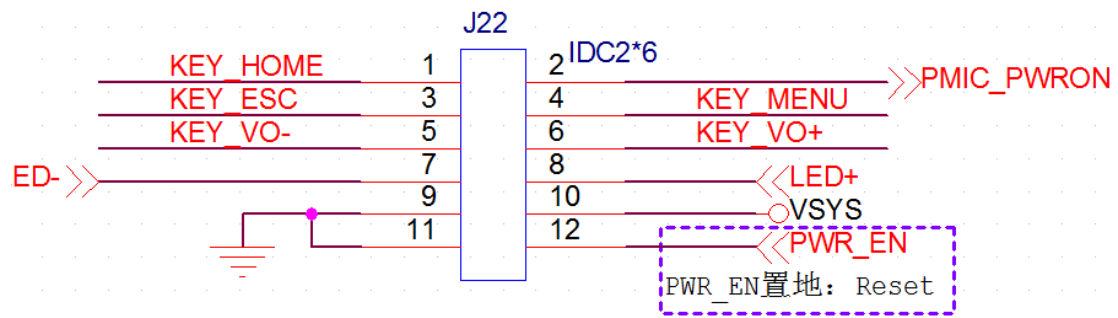
9) Audio SPK:

NO.	Name	Attribute	Description
1	SPK_RN	output	Right sound track output
2	SPK_RP	output	Right sound track output
3	SPK_LN	output	Left sound track output
4	SPK_LP	output	Left sound track output



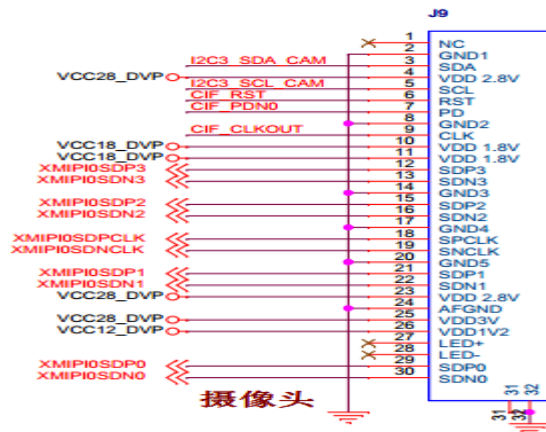
10) key & lights port:

NO.	Name	Attribute	Description
1	Key_home	DKEY	Home key
2	PWRON	GPIO	PMIC
3	Key_ESC	DKEY	ESC key
4	Key_MENU	DKEY	Menu key
5	Key_VOL-	DKEY	Vol key
6	Key_VOL+	DKEY	Vol key
7	LED-	Power	Light power
8	LED+	Power	Light power
9	GND	GND	GND
10	VSYS	VSYS	5.0V
11	GND	GND	GND
12	Reset	Reset	PWR_EN 置地



12) Mipi camera ports:

1	NC	NC	NC
2	NC	NC	NC
3	I2C3_SDA	Output	I2c date
4	VCC28_DVP	Output	VDD 2.8V
5	I2C_SCL	Output	I2c clock
6	CIF_RST	Output	Reset line
7	CF_PDN0	Output	Camera Power down
8	GND	GND	GND
9	CIF_CLK	Output	Camera clock input
10	VCC18	Output	VDD 1.8V
11			
12	MIPI0DP3	Output	Positive Transmission Data of Pixel 3(Odd)
13	MIPI0DN3	Output	Negative Transmission Data of Pixel 3(Odd)
14	GND	GND	GND
15	MIPI0DP2	Output	Positive Transmission Data of Pixel 2(Odd)
16	MIPI0DN2	Output	Negative Transmission Data of Pixel 2(Odd)
17	GND	GND	GND
18	MIP0DPCLK	Output	Mipi camera DP clock
19	MIPI0DNCLK	Output	Mipi camera DN clock
20	GND	GND	GND
21	MIPI0DP1	Output	Positive Transmission Data of Pixel 1(Odd)
22	MIPI0DN1	Output	Negative Transmission Data of Pixel 1(Odd)
23	VCC28	Output	Output vdd 2.8V
24	GND	GND	GND
25	VCC28	Output	Output vdd 2.8v
26	VCC12	Output	Output vdd 1.2V
27	5V	Output	Reserve
28			
29	MIPI0DP0	Output	Positive Transmission Data of Pixel 0(Odd)
30	MIPI0DN0		Data of Pixel 0(Odd)



13) Other typical ports:

Ethernet port	RJ45	Support 10M/100M adaptive wired internet
HDMI	Typical	Support HDMI output, up to 1080P
TF card	TF card	Extendable data storage up to 32G
USB2.0 port	USB2.0	Support USB keyboard & mouse, camera, data input, touch screen, etc
Micro-USB port	USB2.0	Connect with X86 host system data
Audio output	Audio	Support 3.5mm port audio output

4. Operation Notes:

A, Relative Temperature $\leq 80\%$;

B, Storage temperature: -10°C — 60°C ;

C, Operating temperature: 0°C — 40°C ;

D, Make sure of the electrostatic prevention during the transportation and complete machine assembling

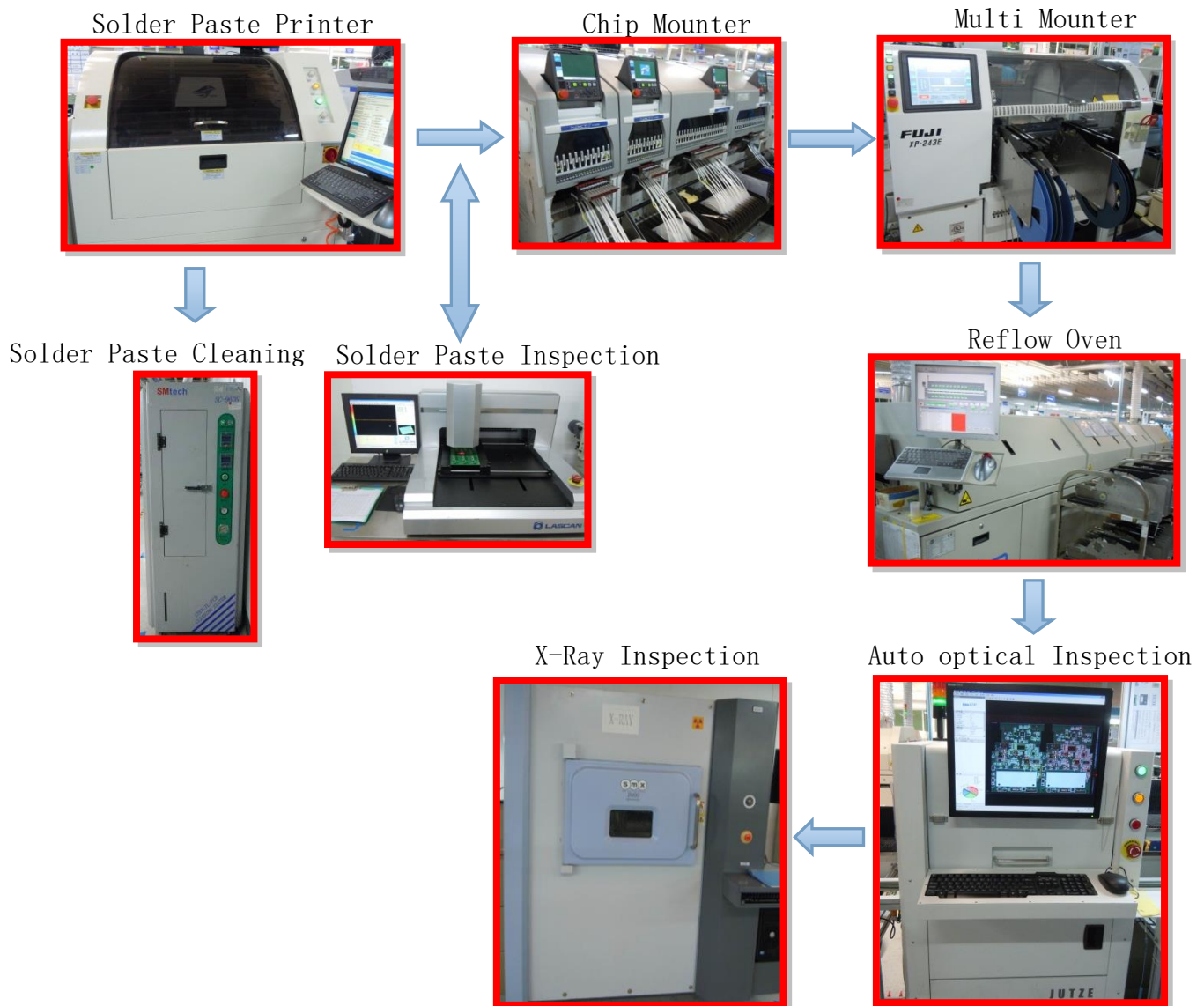
F, No hard pressing, twisting or dropping

G, No power before connecting the panel correctly.

H, Don't put together with the ones which are electric conduction during working.

I, Don't repair or dismantle if not professional ones.

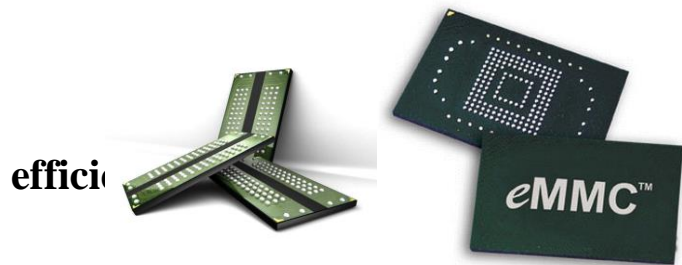
5. Production environment:



6.product description:

A.RK3288 Quad core 1.8GHz,low power consuming,high efficiency

Use the quad core Cortex-A17 CPU + Mali-T764 GPU structure,
28nm HKMG technics and high master efficiency to make the operation perfectly.



B. New storage solution, more stable and higher

With DDR3 RAM, improved by 50% compared with DDR3;
EMMC technics solution,read speed up to 120MB/S!

C. Support 3840*2160 resolution and double screen displaying.

Support super high resolution, without any limitation of the screen size.
More application field, more outstanding advantage



D. Android5.1 system,faster,more stable

Continue the original Android5.1 UI with humanization process
Offer hardware/software, PIO solution customized solution service

E. Industrial level material, advanced production tech

The critical material is from importing or Chinese branded to make sure of the quality. Testing by high & low temperature to make sure it can be running under the terrible condition!



F. Multifunctional interface, easy connection!

Kinds of I/O ports, compatible with many kinds of display & touch

!

G. One-stop service support.

RPDZKJ owns excellent suppliers for the main board material, we can make out prototype quickly to shorten the lead time for your products.



H. Our partners

Rockchip electronics——
Professional information terminal SOC solution supplier!

Our partners——
Some main digital signage software companies, such as
56iq, Star-net, etc. ;
Some big solution companies of smart digital signage, such as

People's daily digital broadcast company, Touchmedia, Sinopec, JS lottery, etc.