

ID Info 7000

Hardware Description

iDTRONIC GmbH
Donnersbergweg 1
67059 Ludwigshafen
Germany/Deutschland

Phone: +49 621 6690094-0
Fax: +49 621 6690094-9
E-Mail: info@idtronic.de
Web: idtronic.de

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1 Introduction

产品简介 | Introduction



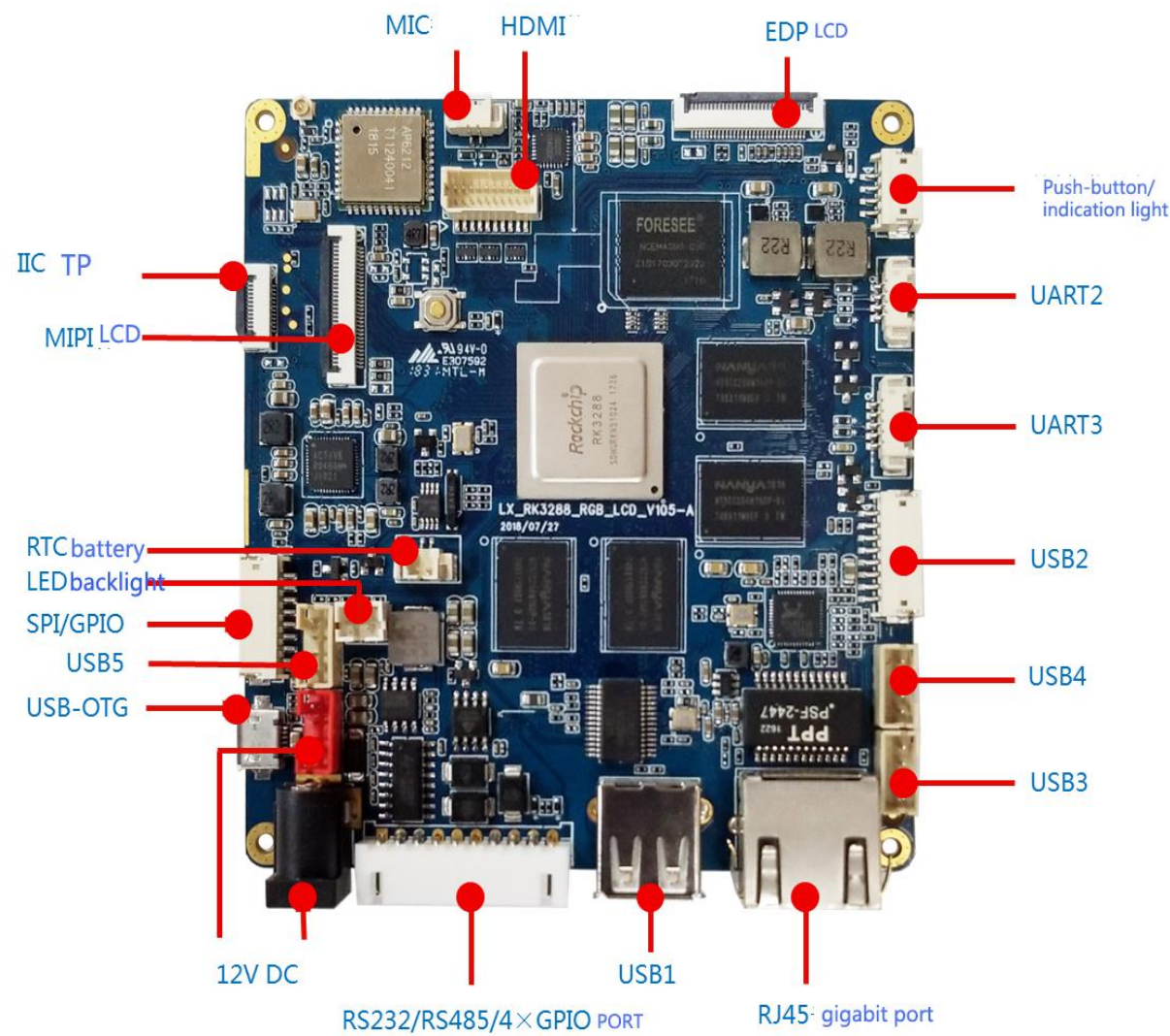
1.1 How to power on and operate the product ?

When you get this product , pls follow the below steps :

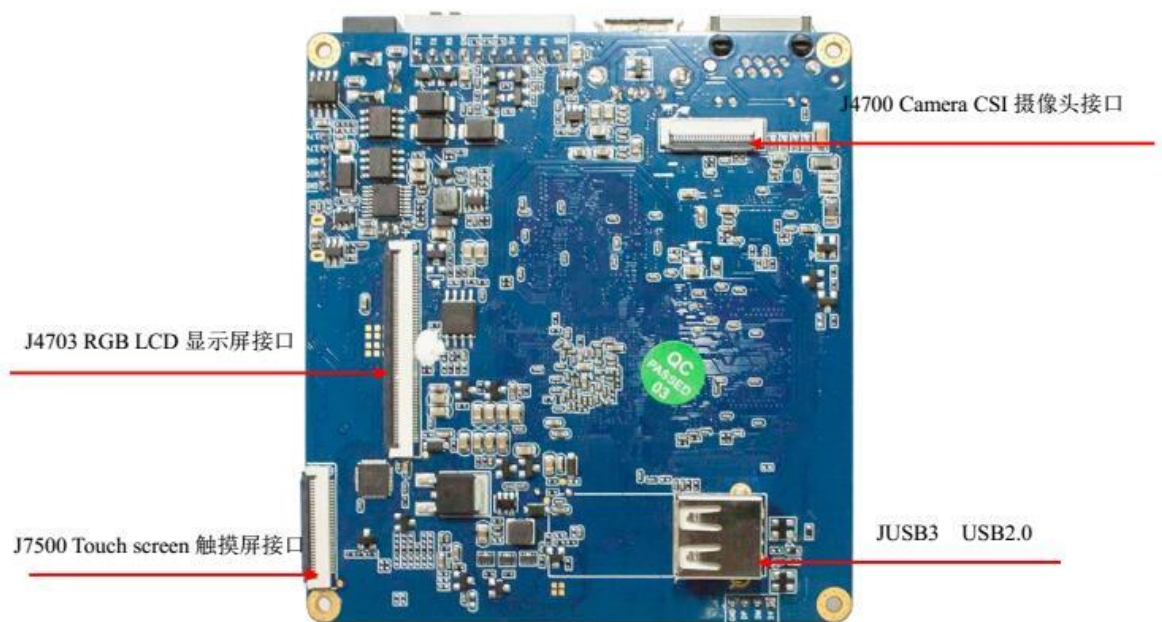
1. Open the box , take out the product and power adaptor
2. Power on - Connect the DC power adaptor to AC power supply , the maximum input voltage is 220V . after hearing an sound of “DI” ,the product starts working.
3. Internet - Connect an internet cable to LAN port at wiring area of backside of product , or you can connect WiFi (selecting at settings)
4. Language-selecting language at settings
5. The operation is as same as an Android Tablet!

2 Hardware

2.1 3、PCBA port indication



PCBA front side



PCBA backside

4. Pinout description of ports

J8115: (PH2.0MM_5PIN) BAT 电池插座, 未标注管脚为空

NO.	SYMBOL	DESCRIPTION	
1	GND	GROUND	
2	NTC	TESTING SIGNALS	
3	GND	GROUND	
4	BAT+	BAT+	
5	BAT+	BAT+	

J8114: (PH2.5MM_10PIN) RS232X2/RS485/GPIO CONNECTOR, 未标注管脚为空

NO.	SYMBOL	DESCRIPTION	
1	VCC_5V	5V POWER SUPPLY	
2	RS232_TXD4	RS232_TXD4 TRANSMIT	
3	RS232_RXD4	RS232_RXD4 RECEIVE	
4	GND	GROUND	
5	RS485-A	RS485-A SIGNALS	
6	RS485-B	RS485-B SIGNALS	
7	VCC_5V	5V POWER SUPPLY	
8	GPIO-0	GPIO	
9	GPIO-1	GPIO	
10			

BATTER1: (CON1.25-2PL) VBAT CONNECTOR

NO.	SYMBOL	DESCRIPTION	
1	VBAT	VCC3.3V	
2	GND	GROUND	
5	GND	GROUND	
6	GND	GROUND	

J8111: (CON8P_1.5MM) USB2.0-HUB

NO.	SYMBOL	DESCRIPTION	
1	GND	GROUND	
2	COMP-INT	INT SIGNALS	
3	VCC_LED	VCC_SYS	
4	VCC_LED	VCC_SYS	
5	USB-PWR24	USB POWER SUPPLY	VCC5V
6	DM2	USB_DM2 SIGNALS	
7	DP2	USB_DP2 SIGNALS	
8	GND	GROUND	

J8112: (CON5P_1.5MM) UART3

NO.	SYMBOL	DESCRIPTION	
1	NC	---	
2	GND	GROUND	
3	UART3_RXD	UART3_RXD RECEIVE	
4	UART3_TXD	UART3_TXD TRANSMIT	
5	5V_UART	5V_UART POWER SUPPLY	

J2: (CON4P_1.5MM) UART2 调试口

NO.	SYMBOL	DESCRIPTION	
1	GND	GROUND	
2	UART2_TXD	UART2_TXD TRANSMIT	
3	UART2_RXD	UART2_RXD RECEIVE	
4	5V_UART	5V_UART POWER SUPPLY	

J8108: (CON4P_1.5MM) System reset power supply CONNECTOR.

NO.	SYMBOL	DESCRIPTION	
1	POWER_LED	USB_5V POWER SUPPLY	
2	GND	GROUND	
3	RESET_KEY	RESET_KEY	
4	POWER_KEY	POWER_KEY	

J8110: (CON4P_1.5MM) SPEAKER CONNECTOR

NO.	SYMBOL	DESCRIPTION	
1	SP+	SP+ SIGNALS	
2	SP-	SP- SIGNALS	

JUSB4: (PH2.0MM_4PIN) USB_HOST

NO.	SYMBOL	DESCRIPTION	
1	USB_PWR24	USB_5VP	
2	USB_DM4	USB_DM4 SIGNALS	
3	USB_DP4	USB_DP4 SIGNALS	
4	GND	GROUND	

J8109: (2PIN/1.25MM) MIC INPUT CONNECTOR

NO.	SYMBOL	DESCRIPTION	
1	MIC_IN1P	MIC_IN1P SIGNALS	
2	MIC_IN1N	MIC_IN1N SIGNALS	

J10: (2X10-20PIN/1.0MM) HDMI PANER CONNECTOR 未标注管脚为空

NO.	SYMBOL	NO.	SYMBOL	NC
1	HDMI_TX2P	13	PORT_CEC	
2	GND	14	NC	
3	HDMI_TX2N	15	DDC_SCL	
4	HDMI_TX1P	16	DDC_SDA	
5	GND	17	GND	
6	HDMI_TX1P	18	VCC50_BOOST	
7	HDMI_TX0P	19	PORT_HPD	
8	GND	20	GND	
9	HDMI_TX0N			
10	HDMI_TXCP			
11	GND			
12	HDMI_TXCP			

J4703: (FPC-1.5H-60PIN/0.5MM) LCD RGB CONNECTOR

NO.	SYMBOL	NO.	SYMBOL	NC
1	GND	21	LCDC0_DO_B1	
2	AVDD	22	LCDC0_DO_B2	
3	VCC_LCD	23	LCDC0_DO_B3	
4	LCDC0_D16_R0	24	LCDC0_DO_B4	
5	LCDC0_D16_R1	25	LCDC0_DO_B5	
6	LCDC0_D16_R2	26	LCDC0_DO_B6	
7	LCDC0_D16_R3	27	LCDC0_DO_B7	
8	LCDC0_D16_R4	28	LCDC0_DCLK1	
9	LCDC0_D16_R5	29	LCDC0_DEN	
10	LCDC0_D16_R6	30	LCDC0_HSYNC	
11	LCDC0_D16_R7	31	LCDC0_VSYNC	
12	LCDC0_D8_G0	32	MODESELECT	
13	LCDC0_D8_G1	33	LCD_RST	
14	LCDC0_D8_G2	34	STBYB	
15	LCDC0_D8_G3	35	SHLR	
16	LCDC0_D8_G4	36	VCC_LCD	
17	LCDC0_D8_G5	37	UPDN	
18	LCDC0_D8_G6	38	GND	
19	LCDC0_D8_G7	39	GND	
20	LCDC0_DO_B0	40	DITH	

J4700: (FPC-24PIN/0.5MM) CAMERA CSI CONNECTOR

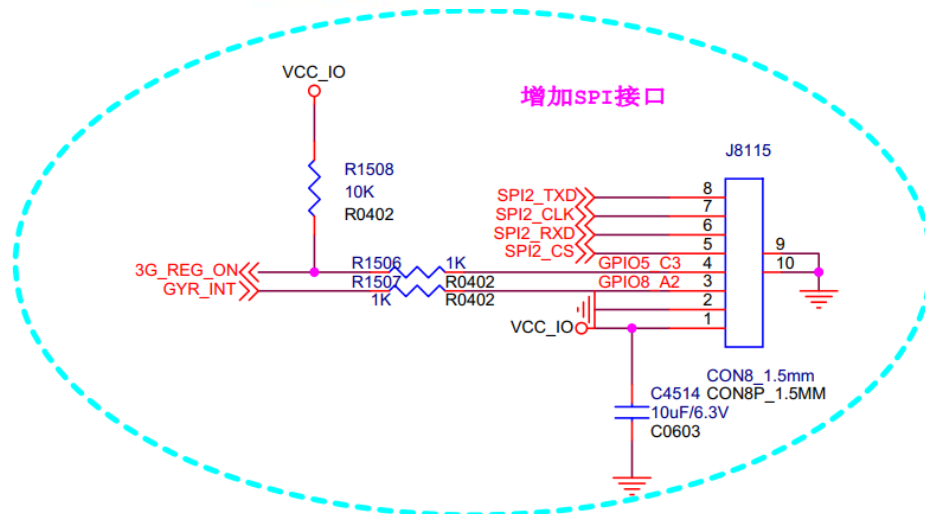
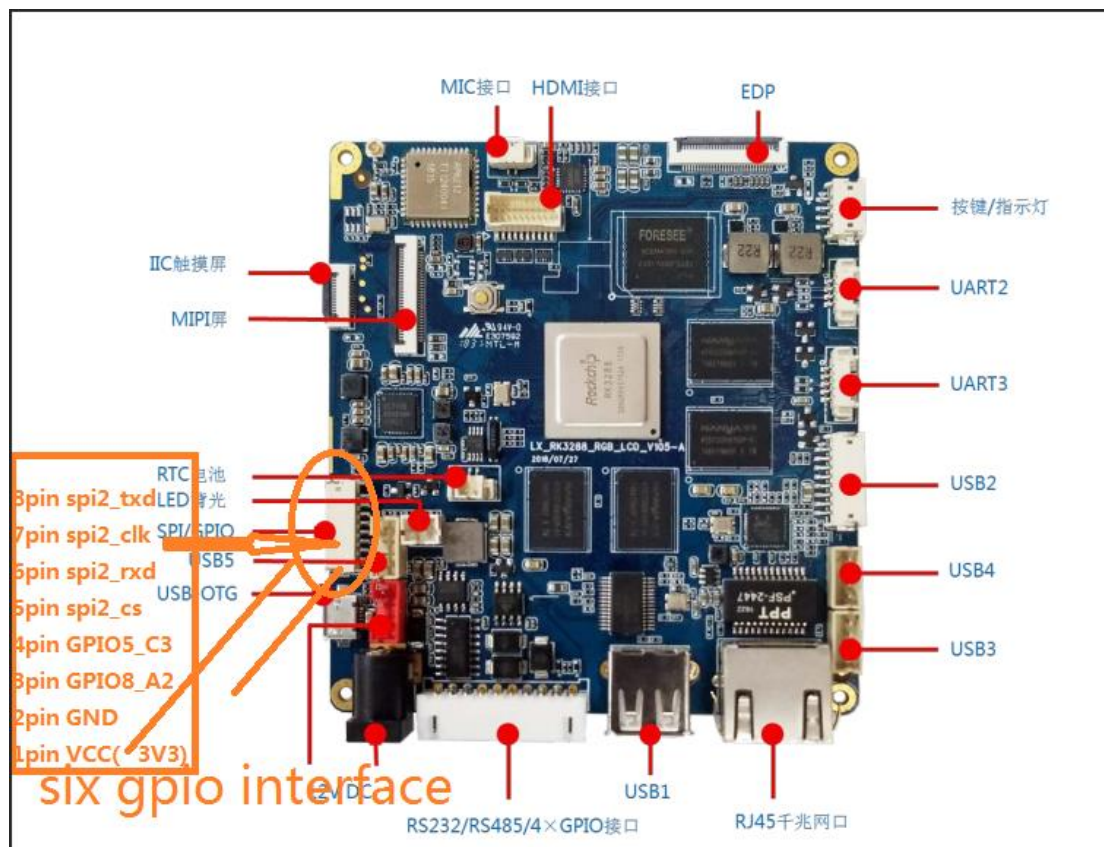
NO.	SYMBOL	NO.	SYMBOL	NC
1	CIF_PDN1	13	CIF_CLKOUT	
2	GND	14	CIF_D6	
3	I2C3_SDA_CAM	15	GND	
4	AVDD28_DVP	16	CIF_D6	
5	I2C3_SCL_CAM	17	CIF_CLKIN	
6	CIF_RST	18	CIF_D4	
7	CIF_VSYNC	19	CIF_D0	
8	CIF_PDNO	20	CIF_D3	
9	CIF_HREF	21	CIF_D1	
10	AVDD28_DVP	22	CIF_D2	
11	AVDD28_DVP	23	NC	
12	CIF_D7	24	NC	

J7500: (FPC-30PIN/0.5MM) Touch_screen CONNECTOR

NO.	SYMBOL	NO.	SYMBOL	NC
1	GND	16	DRV1	
2	DRV15	17	DRV0	
3	DRV14	18	GND	
4	DRV13	19	GND	
5	DRV12	20	SENS0	
6	DRV11	21	SENS1	
7	DRV10	22	SENS2	
8	DRV9	23	SENS3	
9	DRV8	24	SENS4	
10	DRV7	25	SENS5	
11	DRV6	26	SENS6	
12	DRV5	27	SENS7	
13	DRV4	28	SENS8	
14	DRV3	29	SENS9	
15	DRV2	30	GND	

Connector J1

PIN	Name	Description
1	Ant-	
2	Ant+	

3 GPIO description

pin1 vcc 3v3
pin2 gnd

three gpio input default high level

pin3: GPIO8_A2
read the gpio function:
cat /sys/class/gpio/gpio250/value
pin4:GPIO5_C3
read the gpio function:
cat /sys/class/gpio/gpio171/value
pin5: SPI2_CS
read the gpio function:
cat /sys/class/gpio/gpio255/value

three gpio output default high level

pin6: SPI2_RXD default high level
echo 0 > /sys/class/gpio/gpio256/value set low level
echo 1 > /sys/class/gpio/gpio256/value set high level

pin7: SPI2_CLK default high level
echo 0 > /sys/class/gpio/gpio254/value set low level
echo 1 > /sys/class/gpio/gpio254/value set high level
pin8: SPI2_TXD default high level
echo 0 > /sys/class/gpio/gpio257/value set low level
echo 1 > /sys/class/gpio/gpio257/value set high level

control LED light:

echo 0 > /sys/class/gpio/gpio189/value light on
echo 1 > /sys/class/gpio/gpio189/value light off

4 Technical Data

4.1 Specification

Model	ID-Info 7000
CPU	Rockchip RK3288(Quad-core Cortex-A17 up to 1.8GHz, Mali-T764 GPU)
RAM	DDR3 2GB
ROM	EMMC 8GB
LAN	LAN 10/100/1000M rj45
LCD	LCD 7" , 1024*600 ,touch screen
POWER	DC inupt 12V 2A
Camera	2.0 MP
Spk	4R2W
OS	OS android 5.1
HDMI	HDMI 2.0
Wifi	wifi/bt 802.11 b/g/n 2.4G/5G
Bluetooth	ble 4.0
Housing	aluminium alloy
RFID Module	reader support MF\S50\S70 \14443A protocol
Size	188mm(L)*113mm(W)*30mm(H)
Ports	RJ45*1, USB2.0*1,DC*1, GPIO *1

4.2 Features

Main function	<p>Rockchip CPU- RK3288 (Quad-core Cortex-A17 up to 1.8GHz, Mali-T764 GPU) ,use extremely low leakage current, high performance 28nm HKMG artcrafts , ARM Cortex-A17 Quad-core, the core frequency can be 1.8GHz, 1MB Secondary cache;support 4K H.264 and 10bits H.265 video decode , 1080P multi formats of decoding video, Support HDMI and LVDS (two-channel BIT) out double display, support 3840x2160 resolution; compatible with MIPI interface LCD ; graphic system: ARM Mali-T764 GPU, Support TE, ASTC, AFBC</p>
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	<p>technology,support OpenGL ES1.1/2.0/3.0, Open 1.1, OpenCL, DirectX11。 Embedded 2D accelerated hardware ; hardware secure system , support HDCP 2.2; support HDMI2.0 and Gigabit Ethernet</p>
Features	<p>Superstrong quad-core ARM Cortex-A17 CPU- RK3288 ,Quad-core processor ,Main frequency up to 1.8GH, 1MB of L2 Cache</p>
	<p>4K H.264 & 10bits H.265 video decode, 1080P multi formats of video decoding ;support H.264, VP8 & MVC;</p>
	<p>Image enhancement processing function ; Hardware improvement of image display under low power consumption</p>
	<p>Memory : 2G Byte of 64-bit wide DDR3 @ 528MHz</p>
	<p>Wide range power management : support 9-15V (suggested12VDC) External power supply</p>
	<p>Support HDMI,Dual/single channel, LVDS multi video decoding format ; support HDMI+RGB dual display</p>
	<p>Support external RTC;</p>
	<p>Support HP OUT,MIC IN and amplify output:2WX1</p>
	<p>Support USB2.0- 5 ports (1 port of USB for OTG, other 4 ports is used for HOST),one port of extended MINI-PCIE</p>
	<p>standard interface of USB communication 3G/LTE(4G) module, one port extended USB network card</p>
	<p>Support SDIO interface WIFI & Ble V4.0①</p>
	<p>support 10/100/1000M(RJ45)ethernet</p>
	<p>Support 1 port of RS232 and 1 port of RS485</p>
	<p>Support protected GPIO output for 5V</p>
	<p>Support Camera CSI port</p>
	<p>reserved 1 port HDMI and 1 port RGB Display interface pin</p>
	<p>Reserved backup battery ,including temperature detection ,built-in recharge circuit</p>
	<p>Reserved GSL1680 Touch screen interface</p>

Remark

- ① Can be upgrade to WIFI 5G: IEEE802.11ac;

4.3 hardware feature

CPU	CPU	RK3288 Quad core	ARMCortexA17 quad-core , main frequency 1.8GHz
	Video decoding (GPU)	ARM Mali-T764 GPU	support OpenGL ES1.1/2.0/3.0, OpenVG1.1 , OpenCL, DirectX11; Embedded 2D accelerated hardware; support 4K H.264 和 10bits H.265 Video decoding , 1080P multi format video decoding
	RAM	2/4GByte of 64-bit wide DDR3 @ 528MHz	
	ROM	EMMC/NAND FLASH 8GB	
	OS	Android 5.1.1、 LINUX	
	2x USB2.0 HOST	High-speed, 480Mbps(USB A type of connector) (JUSB1,JUSB3)	
	1 x USB2.0 OTG	High-speed, 480Mbps(microUSB type of connector) (USB-OTG)	
	2 x USB2.0extended	USB2.0 PH connector (J8111) (JUSB4)	
	1↑1000M port	INTERNET 1000MHZ Adaptive network port equipment (10M/100M/1000M) (RJ1)	
	1X RS232 port	2 line RS232 (J8114)	
	1X RS485 port	(J8114)	
	2 X GPIO port	GPIO support output 5V power level (J8114)	
Audio /video output & input	MIC IN	MICINPUT	PH2.0MM-5P plug (J8109)
	Power amplifier output	amplifier output (impedance 8Ω)	Left and right channels 1X2W output(J8110)
	HDMI port	HDMI(2X10-20PIN/1.0MM) Output (J10)	HD video digital signal
	RGB port	Support RGB interface display(J4703)	
	CAMEAR CSI port	CAMEAR CSI line camera port (J4700)	
Power & Port	Power management	Work mode , system standby (low power consumption)mode	
	Controlling and keyboard port	On/off control , remote control , LED light (J8108) (J8112)	
	12V power port	DC12V/2A (POWER-JACK DC socket) (CON2)	
	GPIO port	CON10_2.54MM pin GPIOX2 extended (J8114)	

Others	Keyboard define	RESET_KEY,POWER_KEY(J8108)
	OSD language	Chinese, English and others, for optional
	Back up battery port	External RTC Power supply socket 2PIN/1.25MM(BATTER1)
	recharge battery port	Recharging current adjustable >5A (PH2.0MM_5PIN) (J8115)
	Power indication	POWER_LED Power indication port (J8108)
	Encryption chip	Board mounted anti-piracy encryption chip

SDK Information

Supported OS by Silabs USB VCP Driver	Windows 7/8/8.1/10 (v6.7.3) Windows XP/Server 2003/Vista/7/8/8.1 (v6.7) Windows 2K (v6.3a) WinCE (5.0, 6.0) Macintosh OSX (v4) Linux (3.x.x., 2.6.x) Android 4.2
Supported OS	Windows XP, Vista, 7, 8, 8.1, 10
Supported Languages	ASCII command protocol, VS2005 C++
Demo Software	Windows