



What's the BPI-M2?

Banana Pi M2 is the open source hardware platform, Banana PI M2 is an quad core version of Banana Pi ,Banana Pi M2 is the quad core more better than the Banana Pi M1, it support WIFI onboard.

Banana Pi M2 series run Android, Debian linux, Ubuntu linux, Raspberry Pi image and others image.

Elastos coordinate multi CUP to from the family cloud entirment which based on the "software/hardware service"

Banana Pi M2 hardware: 1Ghz ARM7 quad-core processor, 1GB DDR3 SDRAM,

Banana Pi M2 with Gigabit ethernet port, It can run with Android 4.4 smoothly. The size of Banana Pi M2 same as Banana Pi M1, it can easily run with the game it support 1080P high definition video output, the GPIO compatible with Raspberry Pi B+ and can run the ROM Image.

Note: Banana Pi M2 not support sata port, so you need use USB for hardisk

Specification

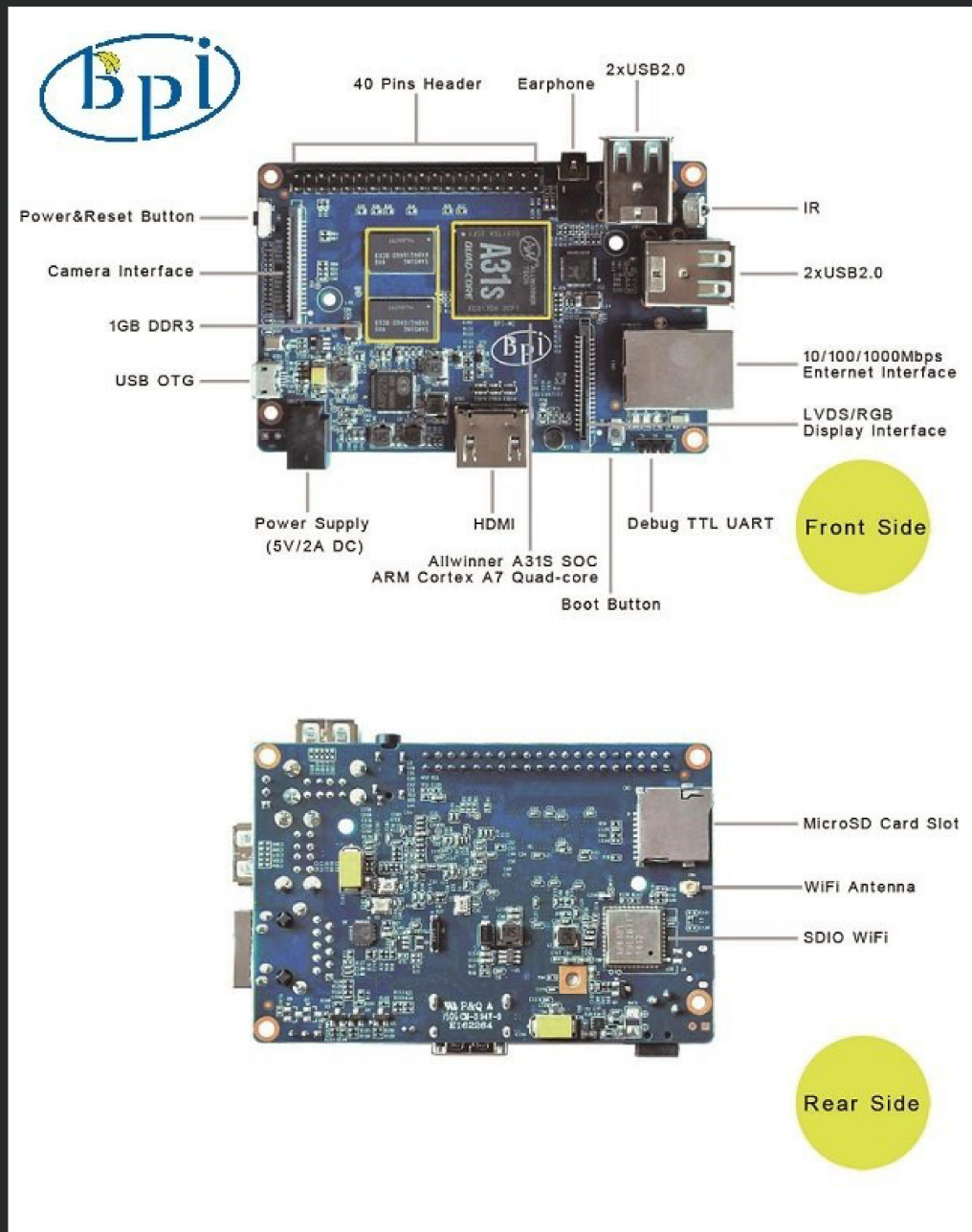
Hardware specification

CPU	A31S ARM Cortex-A7 quad-core, 256 KB L1 cache 1 MB L2 cache
GPU	· PowerVR SGX544MP2 · Comply with OpenGL ES 2.0, OpenCL 1.x, DX9_3
Memory (SDRAM)	1GB DDR3 (shared with GPU)
Onboard Storage	TF card (Max. 64GB) / MMC card slot
Onboard Network	10/100/1000 Ethernet RJ45, WiFi module (AP6181) onboard
Video Input	A CSI input connector allows for the connection of a designed camera module
Video Outputs	HDMI, LVDS/RGB
Audio Output	3.5 mm Jack and HDMI
Power Source	5 volt via MicroUSB (DC In Only) and/or MicroUSB (OTG)
USB 2.0 Ports	4 USB PORT
Buttons	Reset & Power button
GPIO (2X20) pin	GPIO, UART, I2C bus, SPI bus with two chip selects, ADC, PWM, +3.3v, +5v, ground.
LED	Power Key & RJ45
Remote	IR (Optional)
OS	Android and Linux etc. OS

Interface definition

Product size 92 mm × 60mm
Weight 48g
working temperature range -15~75I

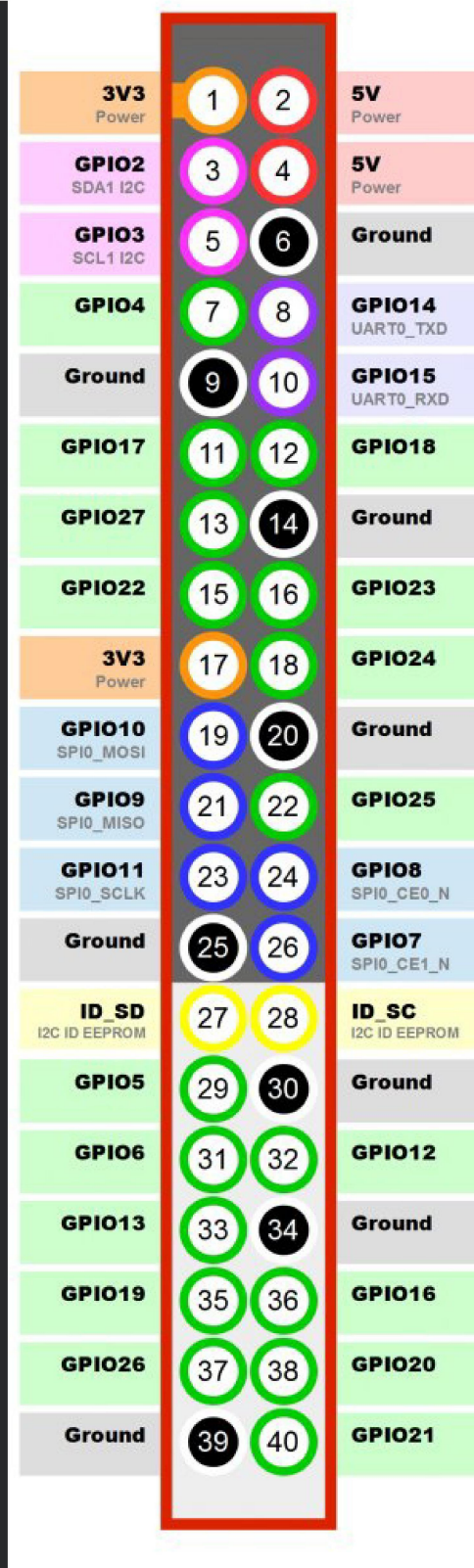
Interface



GPIO specification

Banana Pi 40-pin GPIO

Banana Pi has a 40-pin GPIO header that matches that of the Model B+ Raspberry Pi. Following is the Banana Pi GPIO Pinout:



GPIO Pin Name	Pin Definition	IO on A31s
CON7-P01	VCC-3V3	
CON7-P02	VCC-DC	
CON7-P03	TWI2-SDA	PB19
CON7-P04	VCC-DC	
CON7-P05	TWI2-SCK	PB18
CON7-P06	GND	
CON7-P07	PWM1-P	PH9

CON7-P08	UART5_TX	PE4
CON7-P09	GND	
CON7-P10	UART5_RX	PE5
CON7-P11	UART2_RX	PG7
CON7-P12	PWM1-N	PH10
CON7-P13	UART2_TX	PG6
CON7-P14	GND	
CON7-P15	UART2_CTS	PG9
CON7-P16	PWM2-P	PH11
CON7-P17	VCC-3V3	
CON7-P18	PWM2-N	PH12
CON7-P19	SPI1_MOSI	PG15
CON7-P20	GND	
CON7-P21	SPI1_MISO	PG16
CON7-P22	UART2_RTS	PG8
CON7-P23	SPI1_CLK	PG14
CON7-P24	SPI1_CS0	PG13
CON7-P25	GND	
CON7-P26	SPI1_CS1	PG12
CON3-P27	TM3-SDA	PB6
CON7-P28	TM3-SCK	PB5
CON7-P29	I2S_MCLK	PB0
CON7-P30	GND	
CON7-P31	I2S_BCLK	PB1
CON7-P32	I2S_DI	PB7
CON7-P33	I2S_LRCK	PB2
CON7-P34	GND	
CON7-P35	I2S_DO0	PB3
CON7-P36	UART5_RTS	PE6
CON7-P37	I2S-D01	PB4
CON7-P38	UART5_CTS	PE7
CON7-P39	GND	
CON7-P40	1WRE PM	PM2

CSI Camera Connector specification:

CSI Camera Connector

The CSI Camera Connector is a 40-pin FPC connector which can connect external camera module with proper signal pin mappings. The pin definitions of the CSI interface are shown as below. This is marked on the Banana Pi board as "CN6".

Pin on Board	Pin Definition	IO on A31s
CON6-P01	LINEINL	
CON6-P02	LINEINR	
CON6-P03	VCC-CSI	
CON6-P04	AVDD_CSI	
CON6-P05	GND	
CON6-P06	VDD_CSI	
CON6-P07	MIC2P	
CON6-P08	VCC-CSI	
CON6-P09	MIC2N	
CON6-P10	AFVCC-CSI	
CON6-P11	GND	
CON6-P12	CSI-I00	PM0
CON6-P13	LRADC0	
CON6-P14	TWI1-SDA	PH15
CON6-P15	MIC-MBIAS	
CON6-P16	TWI0-SCK	PH14
CON6-P17	CSI-D4	PE8
CON6-P18	CSI0-STBY-EN	PH27
CON6-P19	CSI-D5	PE9
CON6-P20	CSI-PCLK	PE0
CON6-P21	CSI-D6	PE10
CON6-P22	CSI0-PWR-EN	PG18
CON6-P23	CSI-D7	PE11
CON6-P24	CSI-MCLK	PE1
CON6-P25	CSI-D8	PE12
CON6-P26	CSI0-RESET#	PH26
CON6-P27	CSI-D9	PE13
CON6-P28	CSI-VSYNC	PE3
CON6-P29	CSI-D10	PE14
CON6-P30	CSI-HSYNC	PE2
CON6-P31	CSI-D11	PE15
CON6-P32	CSI1-STBY-EN	PH25
CON6-P33	AP-RESET#	
CON6-P34	CSI1-RESET#	PH24
CON6-P35	CSI-I01	PM1
CON6-P36	HPR	
CON6-P37	HPL	
CON6-P38	IPSOUT	
CON6-P39	GND	
CON6-P40	IPSOUT	

LVDS specification

LVDS (LCD display interface)

The LVDS Connector is a 40-pin FPC connector which can connect external LCD panel (LVDS) and touch screen (I2C) module as well. The pin definitions of this connector are shown as below. This is marked on the Banana Pi board as "CN9".

Pin on Board	Pin Definition	IO on A31s
CON9-P01	IPSOUT	
CON9-P02	TWI1-SDA	PH15
CON9-P03	IPSOUT	
CON9-P04	TWI1-SCK	PH16
CON9-P05	GND	
CON9-P06	TP-INT	PG0
CON9-P07	LCD-PWR-EN	PG4
CON9-P08	TP-RST	PG1
CON9-P09	LCD0-D00	PD0
CON9-P10	LCD0-PWM	PH13
CON9-P11	LCD0-D01	PD1
CON9-P12	LCD0-BL-EN	PG3
CON9-P13	LCD0-D02	PD2
CON9-P14	LCD0-DE	PD25
CON9-P15	LCD0-D3	PD3
CON9-P16	LCD0-VSYNC	PD27
CON9-P17	LCD0-D4	PD4
CON9-P18	LCD0-HSYNC	PD26
CON9-P19	LCD0-D5	PD5
CON9-P20	LCD0-CS	PG2
CON9-P21	LCD0-D06	PD6
CON9-P22	LCD0-CLK	PD24
CON9-P23	LCD0-D07	PD7
CON9-P24	GND	
CON9-P25	LCD0-D08	PD8
CON9-P26	LCD0-D23	PD23
CON9-P27	LCD0-D09	PD9
CON9-P28	LCD0-D22	PD22
CON9-P29	LCD0-D10	PD10
CON9-P30	LCD0-D21	PD21
CON9-P31	LCD0-D11	PD11
CON9-P32	LCD0-D20	PD20
CON9-P33	LCD0-D12	PD12
CON9-P34	LCD0-D19	PD19
CON9-P35	LCD0-D13	PD13
CON9-P36	LCD0-D18	PD18
CON9-P37	LCD0-D14	PD14
CON9-P38	LCD0-D17	PD17
CON9-P39	LCD0-D15	PD15
CON9-P40	LCD0-D16	PD16

UART specification:

The header CON8 is the UART interface. For developers of Banana Pi, this is an easy way to get the UART console output to check the system status and log message.

CON8 Pin Name	Default Function	GPIO
CON8 PO3	UART0-TXD	PH20
CON8 PO2	UART0-RXD	PH21
CON8 PO1	GND	