

# Developer boards

## Overview of features & connections

Model	SoC	CPU type (AMR)	CPU cores	CPU cycle	CPU architecture	GPU type	GPU cycle (MHz)	RAM (MB)	RAM type	Memory card up to max. 64 GB	eMMC (GB)	Pins	GPIO	USB 2.0	USB 3.0	Audio	HDMI	SATA	Mini-PCIe	LAN up to 100 MBit	LAN up to 1 GBit	WLAN	BT	IR	Mic	CSI	DSI	UART	I²C	SPI	CAN	PWM	ADC	Supports		
<b>NEW</b> Raspberry Pi 3 B +	BCM2837B0	Cortex-A53	4	1,400 MHz	64-bit	Mali-400MP2	400	1024	DDR2	Micro SD		40	26	4		•	•				•	b/g/n/ac	4.2			•	•	•	•	•				Windows 10 IoT, Raspbian, Pidora, Archlinux, OpenElec, Raspbmc, Kall Linux, Razdroit, RetroPi		
Raspberry Pi 3	BCM2837	Cortex-A53	4	1,200 MHz	64-bit	Mali-400MP2	400	1024	DDR2	Micro SD		40	26	4		•	•			•		b/g/n	4.1			•	•	•	•	•				Windows 10 IoT, Raspbian, Pidora, Archlinux, OpenElec, Raspbmc, Kall Linux, Razdroit, RetroPi		
Raspberry Pi 2 B	BCM2836	Cortex-A7	4	900 MHz	32-bit	Mali-400MP2	250	1024	DDR2	Micro SD		40	26	4		•	•			•						•	•	•	•	•				Windows 10 IoT, Raspbian, Pidora, Archlinux, OpenElec, Raspbmc, Kall Linux, Razdroit, RetroPi		
Raspberry Pi B+	BCM2835	ARM 11	1	700 MHz	32-bit	Mali-400MP2	250	512	DDR2	Micro SD		40	26	4		•	•			•						•	•	•	•	•				Raspbian, Pidora, Archlinux, OpenElec, Raspbmc, Kall Linux, Razdroit, RetroPi		
Raspberry Pi A+	BCM2835	ARM 11	1	700 MHz	32-bit	Mali-400MP2	250	512	DDR2	Micro SD		40	26	1		•	•									•	•	•	•	•				Raspbian, Pidora, Archlinux, OpenElec, Raspbmc, Kall Linux, Razdroit, RetroPi		
Raspberry Pi CM 3	BCM2837	Cortex-A53	4	1,200 MHz	64-bit	Mali-400MP2	250	1024	DDR2	Micro SD	4	60	48	1		•	•									2	2	2	2					Raspbian, Pidora, Archlinux, OpenElec, Raspbmc, Kall Linux, Razdroit, RetroPi		
Raspberry Pi CM 3 Lite	BCM2837	Cortex-A53	4	1,200 MHz	64-bit	Mali-400MP2	250	1024	DDR2	Micro SD		60	48	1		•	•									2	2	2	2					Raspbian, Pidora, Archlinux, OpenElec, Raspbmc, Kall Linux, Razdroit, RetroPi		
Asus Tinker	Rockchip RK3288	Cortex-A17	4	1,800 MHz	32-bit	ARM Mali-T764		2048	DDR3	Micro SD		40	26	4		•	•				•					•	•	•	•	•				Debian TinkerOS		
<b>NEW</b> Banana Pi Zero	Allwinner H2+	Cortex-A7	4	1,200 MHz	32-bit	Mali-400MP2		512	DDR3	Micro SD		40	26	2		•	•					b/g/n	4.0			•		•	•	•		•	•		Android, Debian, Ubuntu, Bananian, Raspbian, etc.	
Banana Pi M2 Berry	Allwinner V40	Cortex-A7	4	1,200 MHz	32-bit	Mali-400MP2		2048	DDR3	Micro SD	8	40	26	4		•	•	•			•	b/g/n	4.0		•	•	•	•	•	•	•	•	•			Android, Debian, Ubuntu, Bananian, Raspbian, etc.
Banana Pi	Allwinner A20	Cortex-A7	2	1,000 MHz	32-bit	Mali-400MP2		1024	DDR3	SD		26	17	2		•	•	•			•			•	•	•	•	•	•	•	•	•			Android, Debian, Ubuntu, Bananian, Raspbian, etc.	
Banana Pi Pro	Allwinner A20	Cortex-A7	2	1,000 MHz	32-bit	Mali-400MP2		1024	DDR3	Micro SD		40	26	2		•	•	•			•	b/g/n		•	•	•	•	•	•	•	•	•	•			Android, Debian, Ubuntu, Bananian, Raspbian, etc.
Banana Pi M2	Allwinner A31s	Cortex-A7	4	1,000 MHz	32-bit	PowerVR SGX544MP2		1024	DDR3	Micro SD		40	26	4		•	•				•	b/g/n		•	•	•	•	•	•	•	•	•	•			Android, Debian, Ubuntu, Bananian, Raspbian, etc.
Banana Pi M2+	Allwinner H3	Cortex-A7	4	1,000 MHz	32-bit	PowerVR Mali400MP2	600	1024	DDR3	Micro SD		40	26	2		•	•				•	b/g/n	4.0	•		•	•	•	•	•	•	•	•			Android, Debian, Ubuntu, Bananian, Raspbian, etc.
Banana Pi M2+ EDU	Allwinner H3	Cortex-A7	4	1,000 MHz	32-bit	PowerVR Mali400MP2	600	512	DDR3	Micro SD		40	26	2		•	•				•			•	•	•	•	•	•	•	•	•			Android, Debian, Ubuntu, Bananian, Raspbian, etc.	
Banana Pi M2U	Allwinner R40	Cortex-A7	4	1,500 MHz	32-bit	PowerVR Mali400MP2	500	2048	DDR3	Micro SD	8	40	26	3		•	•				•	b/g/n	4.0	•	•	•	•	•	•	•	•	•	•			Android, Debian, Ubuntu, Bananian, Raspbian, etc.
Banana Pi M3	Allwinner A83T	Cortex-A7	8	2,000 MHz	32-bit	PowerVR SGX544MP1		2048	DDR3	Micro SD	8	40	26	2		•	•	•			•	b/g/n	4.0	•	•	•	•	•	•	•	•	•	•			Android, Debian, Ubuntu, Bananian, Raspbian, etc.
Banana Pi M64	Allwinner A64	Cortex-A53	4	1,200 MHz	64-bit	Mali-400MP2	500	2048	DDR3	Micro SD	8	40	26	3		•	•				•	b/g/n	4.0	•	•	•	•	•	•	•	•	•	•			Android, Debian, Ubuntu, Bananian, Raspbian, etc.
Banana Pi R1	Allwinner A20	Cortex-A7	2	1,000 MHz	32-bit	Mali-400MP2		1024	DDR3	Micro SD		26	17	2		•	•	•						1+4	b/g/n	•	•	•	•	•	•	•	•			Android, Debian, Ubuntu, Bananian, Raspbian, etc.
<b>NEW</b> Banana Pi R2	MediaTek MT7623N	Cortex-A7	2	1,000 MHz	32-bit	Mali-450MP4		1024	DDR3	Micro SD	8	40	26		2	•	•	•	•			1+4	a/b/g/n	4.1	•	•	•	•	•	•	•	•			Android, Debian, Ubuntu, Bananian, Raspbian, etc.	
Beaglebone Black	AM3358/9	Cortex-A8	2	1,000 MHz	32-bit	PowerVR SGX530	200	512	DDR3	Micro SD	4	92	65	1		•	•			•								•	•	•	2	•	•		Ångström, Windows embedded, Android, Debian, openSUSE, FreeBSD, OpenBSD, QNX	

**SoC** System-on-a-Chip (combines several components on one chip, e.g. CPU, GPU, LAN, memory, sound, etc.)  
**CPU** Central Processing Unit (processor)  
**GPU** Graphics Processing Unit (graphic card)  
**RAM** Random Access Memory (main memory)

**eMMC** Permanently integrated memory card  
**Pins** Pin connectors  
**GPIO** General Purpose Input Output (programmable I/Os)  
**USB** Universal Serial Bus  
**Audio** Sound playback

**HDMI** High Definition Multimedia Interface (video/audio output)  
**SATA** Serial ATA interface for hard drives  
**LAN** Local Area Network (network connection)  
**WLAN** Wireless Local Area Network (WiFi)  
**BT** Bluetooth

**IR** Impulse Response (infrared)  
**Mic** Microphone connection  
**CSI** Camera Serial Interface (camera connection)  
**DSI** Display Serial Interface (display connection)  
**UART** Universal Asynchronous Receiver Transmitter (serial port)

**I²C** Inter-Integrated Circuit (serial data bus)  
**SPI** Serial Peripheral Interface (synchronous serial data bus)  
**CAN** Controller Area Network (standardised serial high-speed bus system)  
**PWM** Pulse-width modulation (output signal between 2 logic levels)  
**ADC** Analog Digital Converter (converts analogue signals to digital)