



IMX6 Cubox-i

[cubox-i](#), [imx6](#), [hardware](#)

Description

Solid-Run's CuBox-i is the second generation family of mini computers, based on the SolidRun MicroSOM using scalable Freescale i.MX6 family of system-on-chip (SoC) ranging from a single to quad [Cortex-A9](#) processor cores, 2D/3D hardware graphics processing unit, video decoding and encoding acceleration hardware, HDMI 1080p 3D broad range of peripherals.

Physical Dimensions

- Approximately: 55mm x 55mm x 42mm (2.17 x 2.17 x 1.65 inches)
- Weight: Depends on the model being used

Hardware specification

- Detailed Hardware specification about the Cubox-i Carrierboard can be found here: [IMX6 Cubox-i Hardware](#)
- Detailed IMX6 MicroSom specification can be found here: [IMX6 MicroSom](#)
- Additional Cubox-i Documents: [Cubox-i Documents](#)

Comparison Table

Notes: The features of the MicroSoms are limited to the features of the Carrierboard.

For example: MicroSom supports eMMC, but Cubox-i not.

Description/Model	Cubox-i1 ¹	Cubox-i2	Cubox-i2ex	Cubox-i2ultra ²	CuboxTV	Cubox-i4pro	Cubox-4x4
Cubox-i Carrierboard	Base	Base	Professional	Professional	Base	Professional	Professional

Description/Model	Cubox-i1 ¹	Cubox-i2	Cubox-i2ex	Cubox-i2ultra ²	CuboxTV	Cubox-i4pro	Cubox-4x4
MicroSOM	Solo	Dual Light	Dual	Dual	Quad	Quad	Quad
Core Count	1 @ 1GHz	2 @ 1GHz	2 @ 1GHz	2 @ 1GHz	4 @ 1GHz	4 @ 1GHz	4 @ 1GHz
Memory Size	512MByte DDR3	1GByte DDR3	1GByte DDR3	1GByte DDR3	1-4GByte DDR3	2GByte DDR3	4GByte DDR3
Memory Config	32bit @ 800Mbps	64bit @ 800Mbps	64bit @ 1066Mbps	64bit @ 1066Mbps	64bit @ 1066Mbps	64bit @ 1066Mbps	64bit @ 1066Mbps
3D GPU	Vivante GC880	Vivante GC880	Vivante GC2000	Vivante GC2000	Vivante GC2000	Vivante GC2000	Vivante GC2000
3D Graphics Support	OpenGL ES 1.1/2.0	OpenGL ES 1.1/2.0	OpenGL ES 1.1/2.0, OpenCL 1.1E	OpenGL ES 1.1/2.0, OpenCL 1.1E	OpenGL ES 1.1/2.0, OpenCL 1.1E	OpenGL ES 1.1/2.0, OpenCL 1.1E	OpenGL ES 1.1/2.0, OpenCL 1.1E
HW Video Dec/Enc	Multiformat	Multiformat	Multiformat	Multiformat	Multiformat	Multiformat	Multiformat
HDMI 1080p	1.4, 3D and CEC support	1.4, 3D and CEC support	1.4, 3D and CEC support	1.4, 3D and CEC support	1.4, 3D and CEC support	1.4, 3D and CEC support	1.4, 3D and CEC support
Ethernet	10/100/1000 Mbps ³	10/100/1000 Mbps ³	10/100/1000 Mbps ³	10/100/1000 Mbps ³	10/100/1000 Mbps ³	10/100/1000 Mbps ³	10/100/1000 Mbps ³
WiFi 11b/g/n/BlueTooth 2.1	Optional	Optional	Optional	✓	✗	✓	✓
Micro SD Interface	✓	✓	✓	✓	✓	✓	✓
eSata II 3Gbps⁴	✗	✗	✓	✓	✓	✓	✓
RTC With Backup Battery	✗	✗	✓	✓	✗	✓	✓
Optical S/PDIF Audio Out	✓	✓	✓	✓	✓	✓	✓
Micro USB to RS-232	✗	✗	✓	✓	✗	✓	✓
USB Host	2x USB 2.0	2x USB 2.0	2x USB 2.0	2x USB 2.0	2x USB 2.0	2x USB 2.0	2x USB 2.0
InfraRed for Remote Control	38KHz Receiver	38KHz Receiver	38KHz Receiver & Transmitter	38KHz Receiver & Transmitter	38KHz Receiver	38KHz Receiver & Transmitter	38KHz Receiver & Transmitter

Notes:

¹ The CuBox-i1 is no longer available for purchase

² The CuBox-i2ultra has been replaced by the CuBox-i2eX. The only difference is that WiFi/BlueTooth is now optional

³ 1000Mbps link is limited to 470Mbps actual bandwidth due to internal chip bus limitation

⁴ With command based switching port multiplier support

CuBox-i Customization

Mix & Match Feature for business customers: Choose the model that's right for you. You can choose your SolidRun uSOM and match it to each Cubox-i carrierboard you wish:

- Choose the [Cubox-i Carrierboard](#)
- Choose the [MicroSom](#)
- Choose optional Wifi/Bt

More Information can be found at our [Mix and Match](#) section of our [Solid-Run.com Website](#) or [contact us](#) directly.

CuBox-i Ports



Back

- 1. Optical S/PDIF audio out
- 2. Power connector
- 3. Ethernet port
- 4. HDMI port
- 5. Micro SD card slot1
- 6. Upper USB port (USB OTG)
- 7. Lower USB port
- 8. eSATA port
- 9. [Micro USB to RS232 port](#)

Notes:

- Install the micro-SD card so that the contacts face UP (towards the HDMI port). To ensure contact, the card must be fully inserted, with no portion extending beyond the edge of the CuBox.
- The SPDIF/COAX port is limited to 15mbits - it will do 192kbps 2 channel PCM but won't support any of the "HD" audio formats as there isn't enough bandwidth - please use the HDMI port instead.

Front

The LED and infrared receiver/transmitter are all behind the plastic window on the lower right.



- 1. Status LED
- 2. Infrared receiver

3. Infrared transmitter

Remote Controls

InfraRed Remotes

It's a GPIO based 38KHz receiver that supports lots of 38KHz based remote controls. Also [LIRC](#) is supported.

HDMI-CEC

All imx6 devices supports hdmi-cec. For further information please have a look at: [IMX6 HDMI-CEC](#)

Power Consumption

Power Supply

CuBox-i offers a single powersupply (input: 110V - 220V) with two connector options: US or Europe. The power supply has the connectors directly on the brick. For those living in Australia, or other countries that do not utilize the US or Europe power connectors, you can use a connector adapter to adapt the US or Europe connector to your local connector type. In this case, select the connector option that is easiest to adapt.

3rd Party Power Supplies

Outputs 5V and is able to source 2A (3A for CuBox-i4pro models). Jack has a 2.1mm internal diameter and 5.5mm external diameter, center positive. Preferably has more than 10.5mm in length. Limited current source power supply (meaning it has adequate current limiting circuit for safety purposes). Be extra careful not to use 9V or 12V adapters or any other adapters outputting more than 5V. It will damage the CuBox-i and possibly USB devices connected to it.

The CuBox-i4pro uses 1.5A in max peak (wifi/gig/processor/gpu/vpu/memory). Because the CuBox-i also supplies two 500mA USB ports, the power supply should be at least 2.5A (1.5A for CuBox + 1A for USB devices since it's a powered USB host ports). CuBox-i will ship 5V 3A PSU.

Minimum Power Consumption

On idle times; CuBox-i4 goes to < 1W while refreshing the HDMI out. Disabling HDMI out makes DDR clock completely gated which should be even lower.

Turn Cubox-i off

There is no on/off button as the CuBox-i is an always on computer. Lots of engineering effort has been invested to make this mini computer extremely low power in deep idle states. The CuBox-i has better power schemes than the CuBox, given the newer Freescale technology and the way our implementation uses it.

Additional Documents

Documents like the Schematics of the Carrierboards and the ROHS/CE Certificates are listed here:
[Cubox-i Documents](#)

External Links and References

- [IMX6 Cubox-i Documents](#)
- [IMX6 MicroSom](#)
- [IMX6 Cubox-i Carrierboards](#)
- [SolidRun Cubox-i Website](#)

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