



StarFive
赛昉科技

VisionFive 2 Lite Product Brief

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Legal Statements

Important legal notice before reading this documentation.

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Contact Us

Address: Room 506, Building 2, No. 61 Shengxia Rd., China (Shanghai) Pilot Free Trade Zone, Shanghai, 201203, China

Website: <http://www.starfivetech.com>

Email: sales@starfivetech.com(sales) , support@starfivetech.com(support)

Preface

About this guide and technical support information.

About this document

This document mainly provides the users with the features and technical specifications for StarFive VisionFive 2 Lite Single Board Computer (SBC).

Revision History

Table 0-1 Revision History

Version	Released	Revision
1.0	2025/09/30	The first official release.

Notes and notices

The following notes and notices might appear in this guide:

-  **Tip:**
Suggests how to apply the information in a topic or step.
-  **Note:**
Explains a special case or expands on an important point.
-  **Important:**
Points out critical information concerning a topic or step.
-  **CAUTION:**
Indicates that an action or step can cause loss of data, security problems, or performance issues.
-  **Warning:**
Indicates that an action or step can result in physical harm or cause damage to hardware.

Figure 1-1 VisionFive 2 Lite – Top View

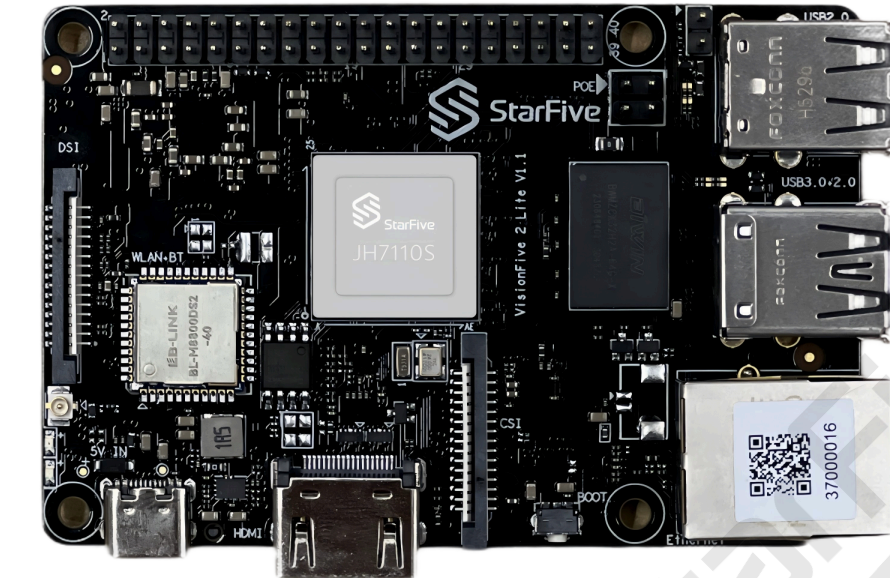
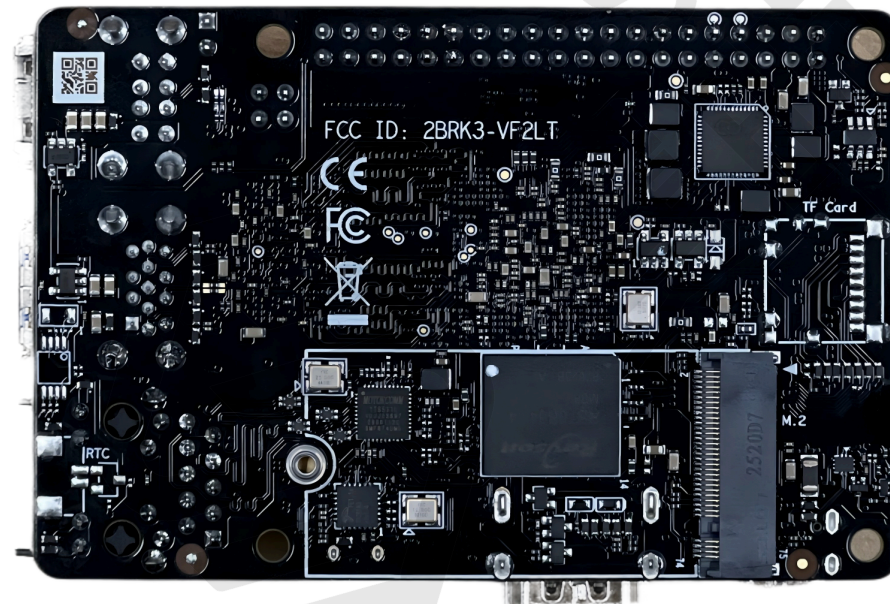


Figure 1-2 VisionFive 2 Lite – Bottom View



VisionFive 2 Lite is a budget-friendly and feature-rich RISC-V single board computer tailored for education, AIoT, smart home, and IIoT applications. Powered by StarFive's JH-7110S quad-core processor, it features robust image and video processing capabilities along with versatile expansion interfaces including PCIe, HDMI, USB 3.0, and Gigabit Ethernet. With full support for mainstream Linux distributions and open-source toolchains, it enables fast development and smooth integration. Whether for learning, prototyping, or embedded deployment, VisionFive 2 Lite delivers an exceptional balance of performance and affordability.

2. Specifications

VisionFive 2 Lite has the following specifications.

Table 2-1 VisionFive 2 Lite Specification

Type	Item	Description
Processor	StarFive JH-7110S	StarFive JH-7110S with RISC-V quad-core CPU with 2 MB L2 cache and a monitor core, supporting RV64GC ISA, working up to 1.25 GHz
	Imagination GPU	IMGBXE-4-32 MC1 with work frequency up to 400MHz
Memory	2GB/4GB/8GB	LPDDR4SDRAM, up to 2,800 Mbps
Storage	Onboard TF card slot or eMMC	Either the eMMC or the TF card can be chosen.
	QSPI Flash	The firmware to store U-Boot and BootLoader
Multimedia	Video Output	1× 2-lane MIPI DSI display port, supporting up to 1080p@30fps 1× HDMI 2.0, supporting up to 4K@30fps or 2K@60fps
	Camera	1× 2-lane MIPI CSI camera port, supporting up to 1080p@30fps
	Encoder/Decoder	Video decoder supports up to 4K@60fps and multi-stream for H264/H265 Video encoder supports up to 1080p@30fps and multi-stream for H265 JPEG encoder/decoder
Connectivity	Ethernet	1× RJ45 Gigabit Ethernet ports
	USB Host	3× USB 2.0 and 1× USB 3.0/USB 2.0 ports (multiplexed with a PCIe 2.0 1× lane)
	USB Device	1× USB device port (by reusing the USB-C port)
	M.2 Connector	M.2 M-Key, size: 2242
	Wireless	Onboard WiFi 6 & BT 5.4
Power	USB-C port	USB Type C 5V / 3A
	GPIO Power In	5V DC via GPIO header
	PoE (Power over Ethernet)	Power function is enabled and requires separate PoE HAT
GPIO	40-Pin GPIO Header	1× 40-pin GPIO header, supporting various interface options: • 3.3 V (on 2 pins) • 5 V (on 2 pins) • Ground (on 8 pins) • GPIO • CAN bus • DMIC • I2C

Table 2-1 VisionFive 2 Lite Specification (continued)

Type	Item	Description
		• I2S • PWM • SPI • UART
Button	Boot button	Used for recovering the BootLoader
Dimensions	85 × 56 mm	-
Compliance	RoHS, FCC, CE	-
Environment	Recommended operating temperature	0-50 °C
Other	Debug function	UART TX and UART RX are available through the 40-pin GPIO header
	Fast boot mode	Used for flashing the OS image to the eMMC Short the J20 header by Jumper and power on, then the board will automatically enter the fastboot mode, the user can flash the OS image to the eMMC via USB-C

3. Physical Specifications

Figure 3-1 VisionFive 2 Lite Mechanical Drawing - Top View

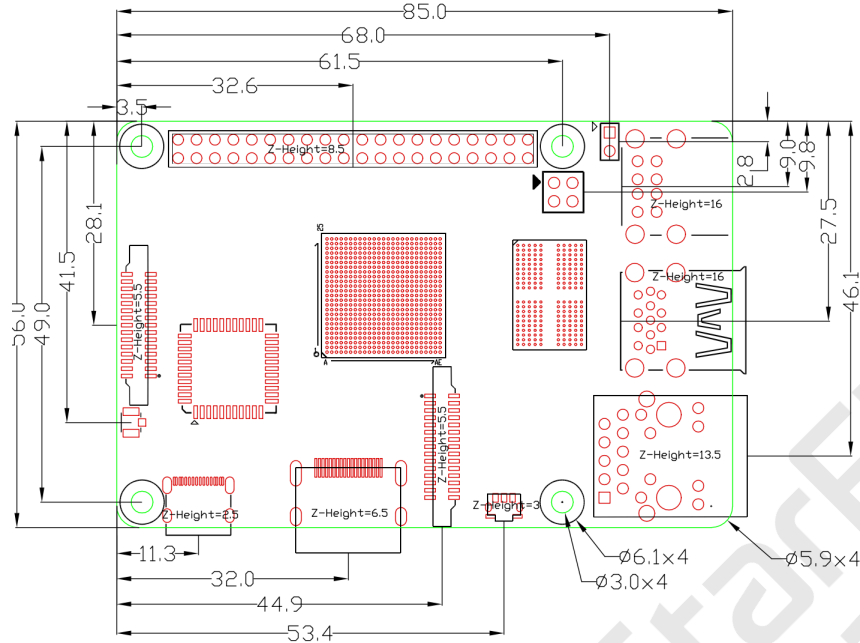
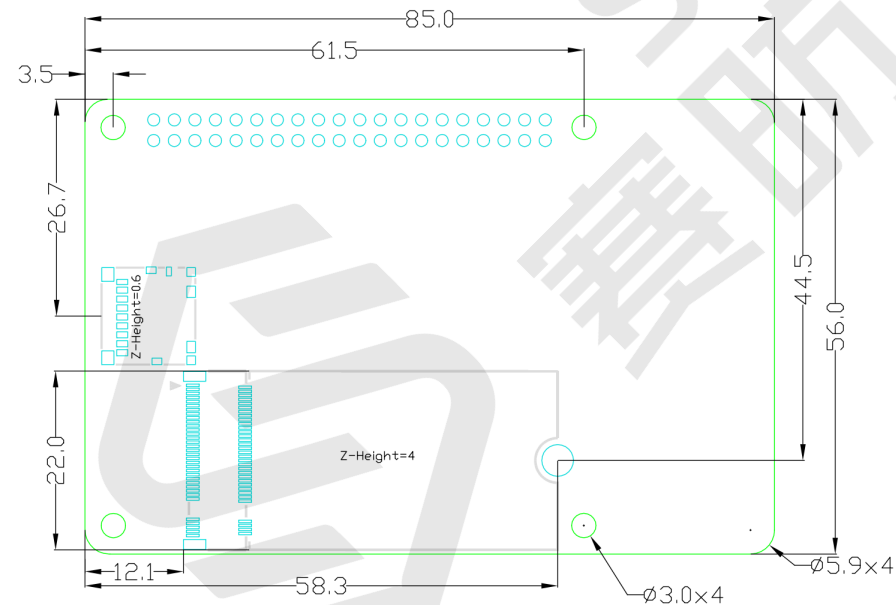


Figure 3-2 VisionFive 2 Lite Mechanical Drawing - Bottom View

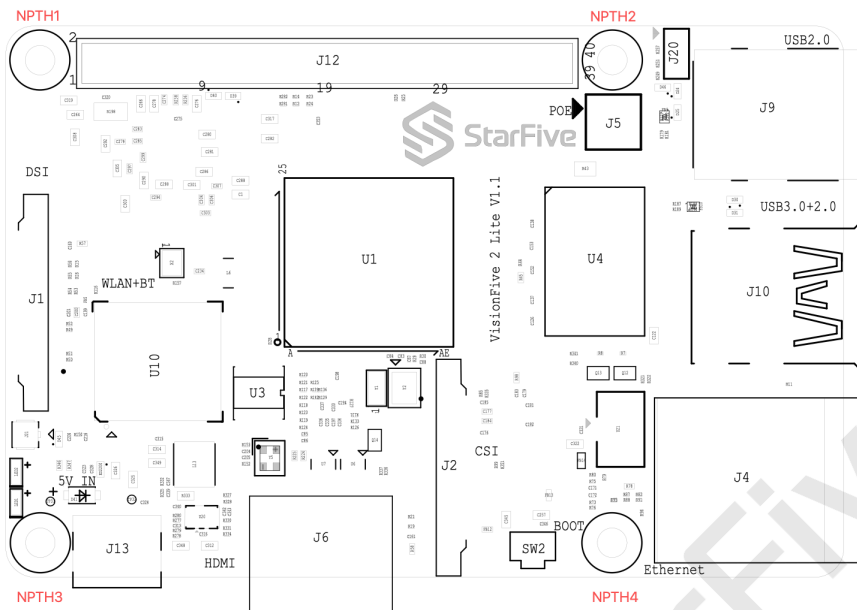


Warning:

During the use of VisionFive 2 Lite, avoid contact with hard objects that may cause damage. Thus, StarFive recommends that you use spacers for the following NPTHs (Non Plating Through Hole):



Figure 3-3 NPTHs on VisionFive 2 Lite



For spacers, StarFive strongly recommends that you use the copper columns or studs with the following specifications:

- Single head hexagonal copper columns (Size: M2.5*10+6mm)

Figure 3-4 Single head hexagonal copper columns



- Double way hexagon copper studs (Size: M2.5*4)

Figure 3-5 Double way hexagon copper studs

