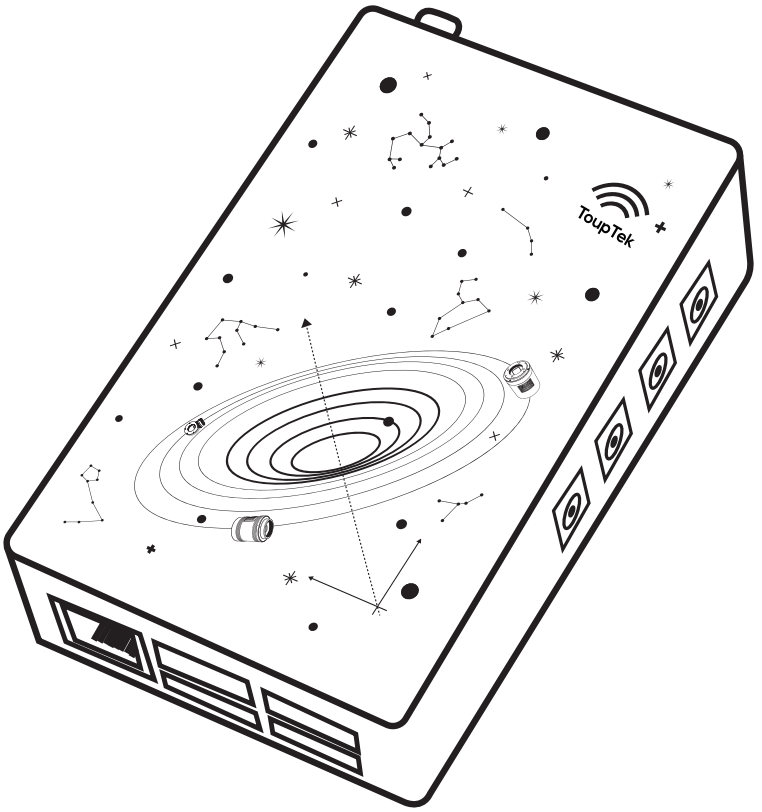
ToupTek Astro

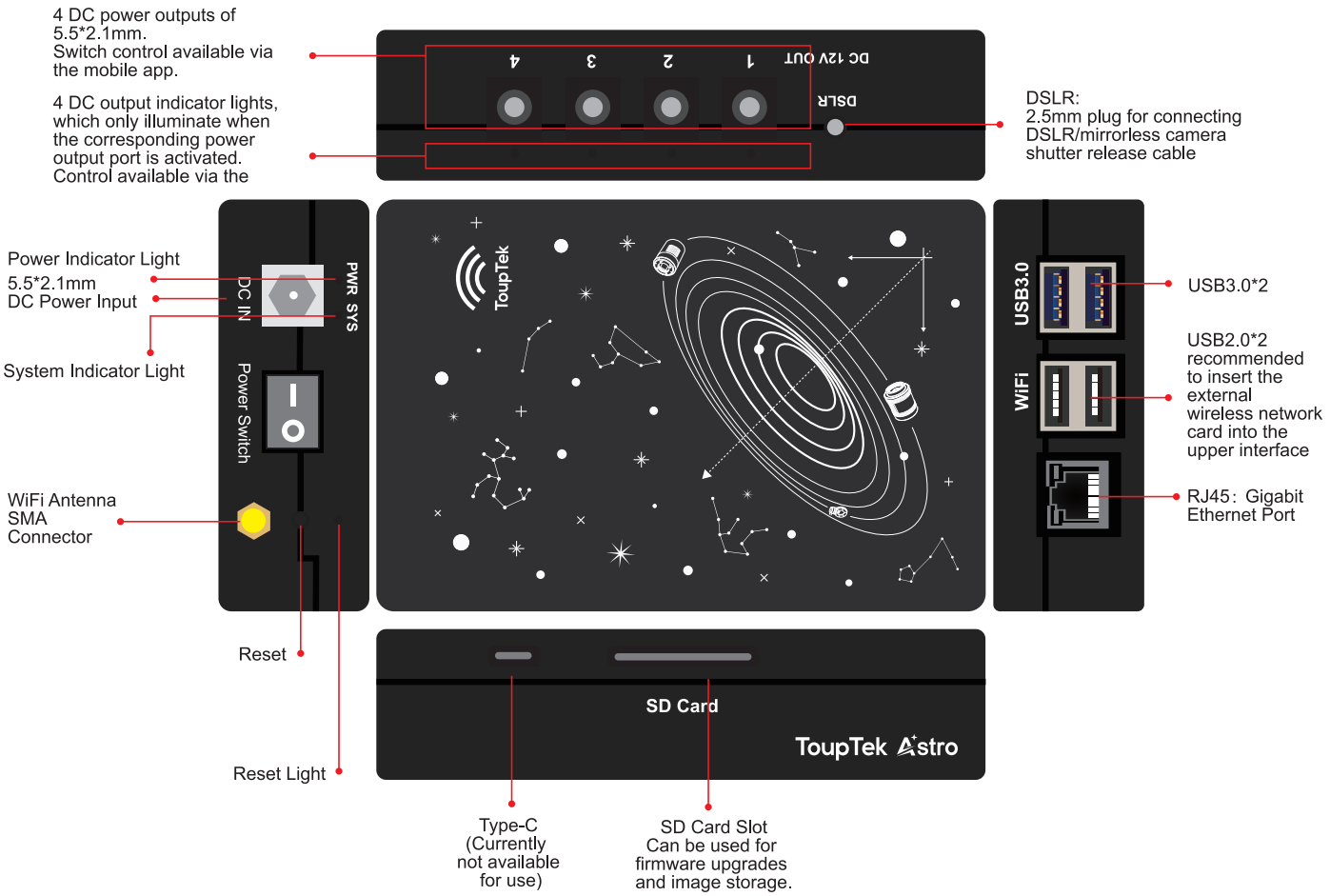
StellaVita

Quick Start Guide



Features Introduction

StellaVita is an intelligent controller designed specifically for astrophotography, catering to both entry-level and professional operation needs. It can effectively manage various types and brands of astronomical photography equipment. With its compact design and powerful performance, StellaVita aims to provide users with a simplified astrophotography experience, making imaging easier.
StellaVita utilizes a high-performance ARM architecture processor as its core hardware and independently develops related hardware circuits and software platforms.



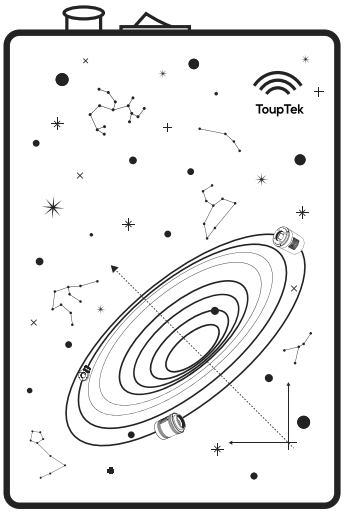
StellaVita Device Compatibility, App System and Hardware Requirements

• SDK-Compatible Manufacturers/Devices:
ToupTek Astro (All devices), ZWO (Cameras), QHYCCD (Some models of cameras), PlayerOne (All devices).

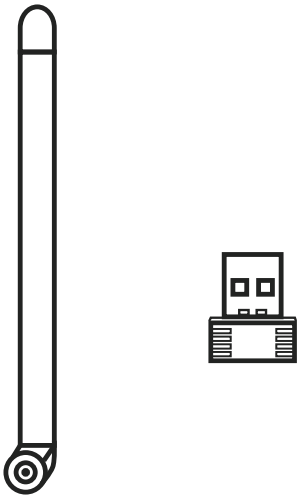
• INDI Platform-Compatible Manufacturers/Devices:
ZWO (Filter wheels, electric focusers, equatorial mounts), QHYCCD (Some models of Filter wheels & electric focusers), ATIK (Cameras), Equatorial mounts based on Onstep settings (Meow, EasyMount, WarpAstron, CLEARSKY, JUWEI, BlackHole, etc.), Gemini (Electric focusers), Astroasis (Electric focusers, filter wheels), Sky-Watcher (Equatorial mounts), iOptron (Most of devices), Celestron (Equatorial mounts).

• DSLR camera shooting is not supported (under development).

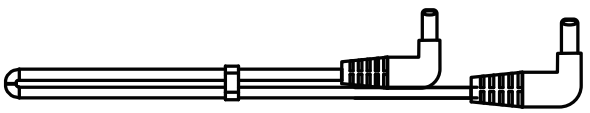
Packaging Accessories



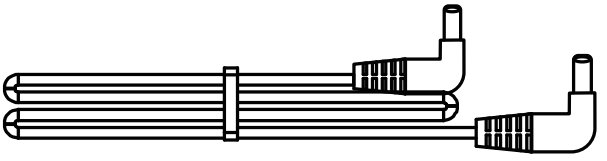
StellaVita Main Body



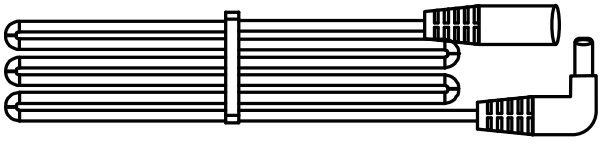
Dual-band Antenna
& Wireless Network Card



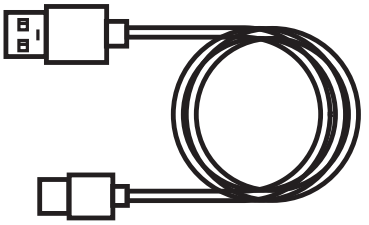
DC Male to Male
Power Cable x2 (0.5m)



DC Male to Male
Power Cable x2 (1.0m)



DC Male to Female Extension
Power Cable (1.5m)



USB 3.0 Square Port
Data Cable (1.5m)

Connection Instructions

1.Hardware Connection

StellaVita connects to all devices via a USB cable.

Equatorial Mounts: Refer to your mount manufacturer's guidelines for wired PC connections, then connect the mount to StellaVita accordingly.

• For older mounts, you may need to connect the mount to the StellaVita following the order below:
Mount ➡ RS232 cable of the mount ➡ R232-USB cable ➡ StellaVita.
You can also use a dedicated equatorial mount-to-USB serial adapter cable to connect it to StellaVita.
• For newer mounts with a built-in USB-to-serial chip, a standard USB cable is sufficient.
• No need to worry about driver compatibility. StellaVita supports common serial chip drivers, including CH340, FTDI, and PL2303.

Camera and Other Devices: Simply connect your camera and other devices to StellaVita using the appropriate USB cables. StellaVita supports USB hub expansion. Some cooled cameras have USB ports on the back that can serve as data interfaces when connected to StellaVita. However, using multiple or multi-tiered USB hubs may reduce connection stability and transfer speeds.

Power Supply: We recommend using a 12V DC power source with at least 2A output. StellaVita has a low standby power consumption of 3-4W. If using StellaVita as a power management hub for other devices, ensure your power input is sufficient for all connected equipment and stays within StellaVita's rated power.

Warning: Insufficient power may cause repeated device disconnections or malfunctions.

2.Software Connection

You can obtain the StellaVita mobile app by contacting ToupTek Astro customer support or technical support. In the future, it will also be available on ToupTek Astro's official website, Apple App Store and Google Play.

Power On: Plug in StellaVita and turn on the power switch. Wait a moment until you hear three sets of beeps:
• The first "beep-beep" indicates the hotspot has started.
• The second "beep-beep" confirms StellaVita is fully operational.
• A final short beep means you can now connect your phone to StellaVita's Wi-Fi.

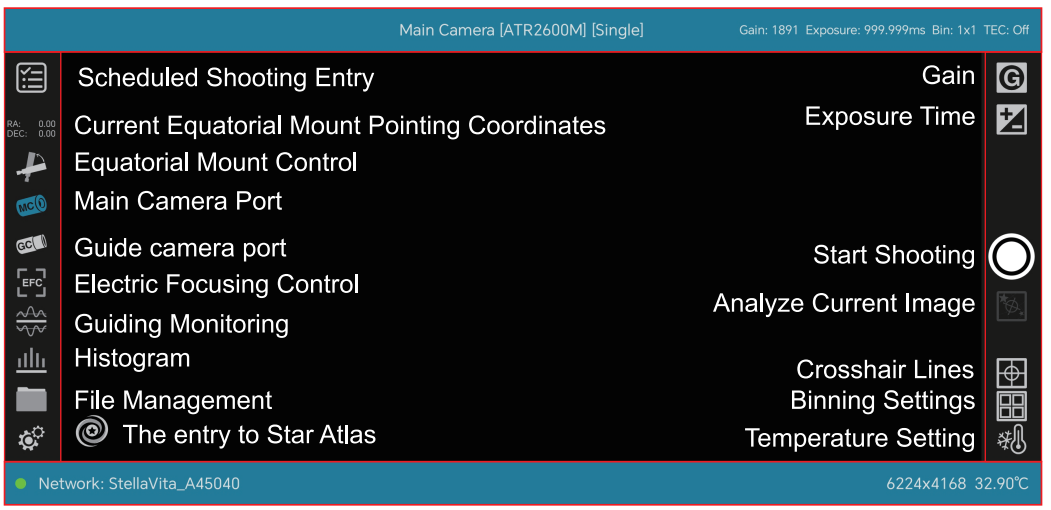
Wi-Fi Connection: Connect your phone to the Wi-Fi named "StellaVita_XXXX" using the default password "12345678".
Launch the App: Open the StellaVita app and start exploring astrophotography!

Note: If your StellaVita is from an earlier batch, the software may still display "AstroStation" instead of "StellaVita." This is only a display issue. All hardware remains identical across different batches.

Interface Introduction

Top Title Bar: This section will display the current camera type and shooting mode within the central display area, along with the relevant shooting parameters set by the user.

Left Toolbar: This section will provide tools that are frequently used during shooting.



Right Control Panel: This section will automatically provide relevant control options based on the current functionality being used.

Device & Other Settings

Bottom Status Bar: On the left side, it will display the current network connection status and the connection status with AstroStation. On the right side, it will display status information for certain functions used by the user, such as resolution and chip temperature.

File Storage

1.Firmware Upgrade

StellaVita supports two image storage options: internal eMMC storage and external SD card storage, each with its export method.

External SD Card (recommended)

• Works like a DSLR camera - quick and convenient.
• Supports hot-swapping.
• To use an SD card, go to Settings > Misc in the app and select SD Card Storage.
• After capturing images, remove the SD card and transfer files to your computer via a card reader.

2.Internal Storage & Wi-Fi Transfer

• After capturing images, connect a computer or other device to StellaVita's Wi-Fi.
• Open the File Explorer and enter \\10.0.10.1 in the address bar.
• If prompted, enter the Username: "as" and Password: "astrostation" to wirelessly access and export images.

Software Updates

1.App Updates

Android: Contact customer support or technical support for the StellaVita app. It is possible to download it from the official website or app stores in the future. For updates, uninstalling and reinstalling the new version may change the image storage path. It is recommended to install the new version over the existing one to avoid this issue.
iOS: Currently in testing. Stay tuned.

2.Firmware Updates

2.1 OTA Updates

OTA (Over-the-Air) updates can upgrade StellaVita's Core, Indi, and supported astronomy brands' SDKs.

Check Firmware Version

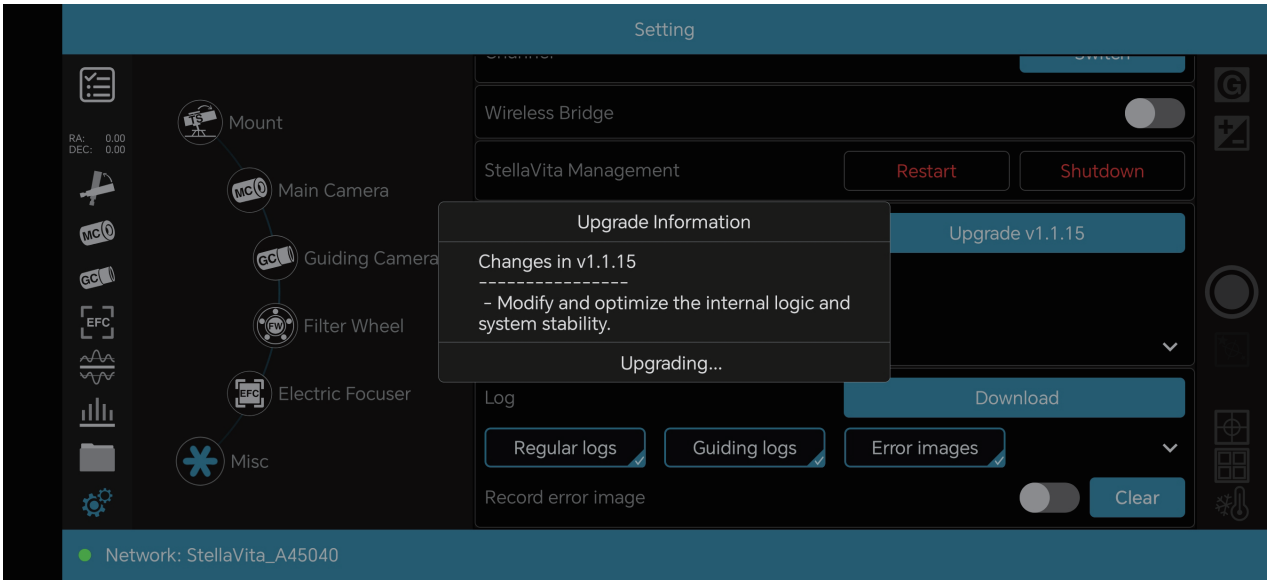
• Connect your phone/tablet to StellaVita's Wi-Fi and open the app.
• The app will automatically retrieve StellaVita's firmware version.

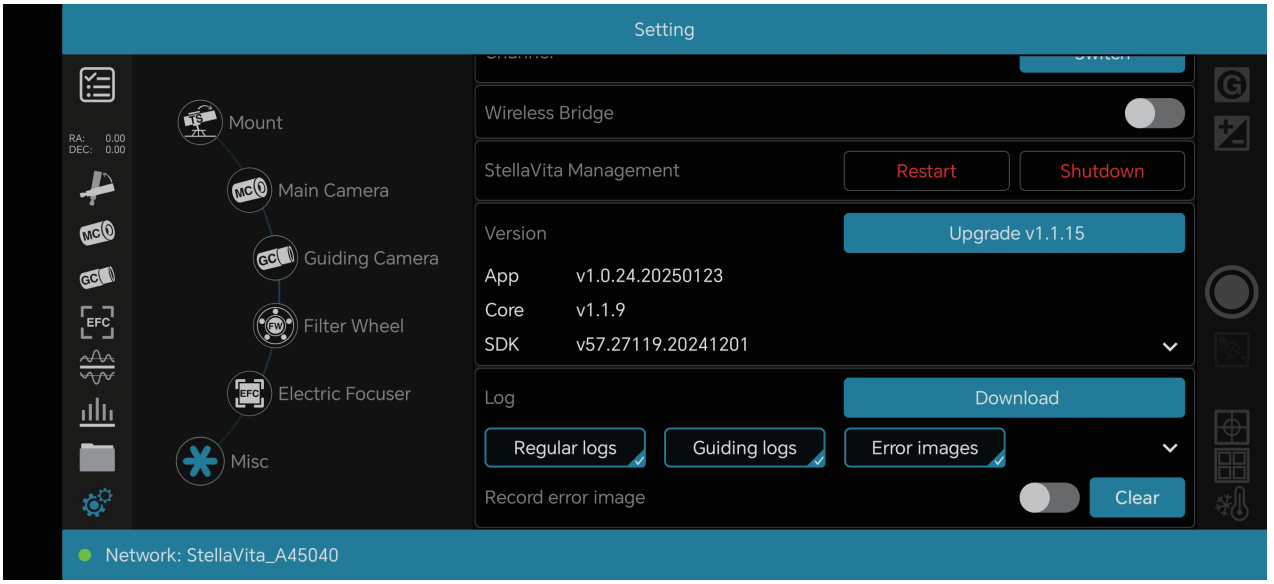
Download Update Package

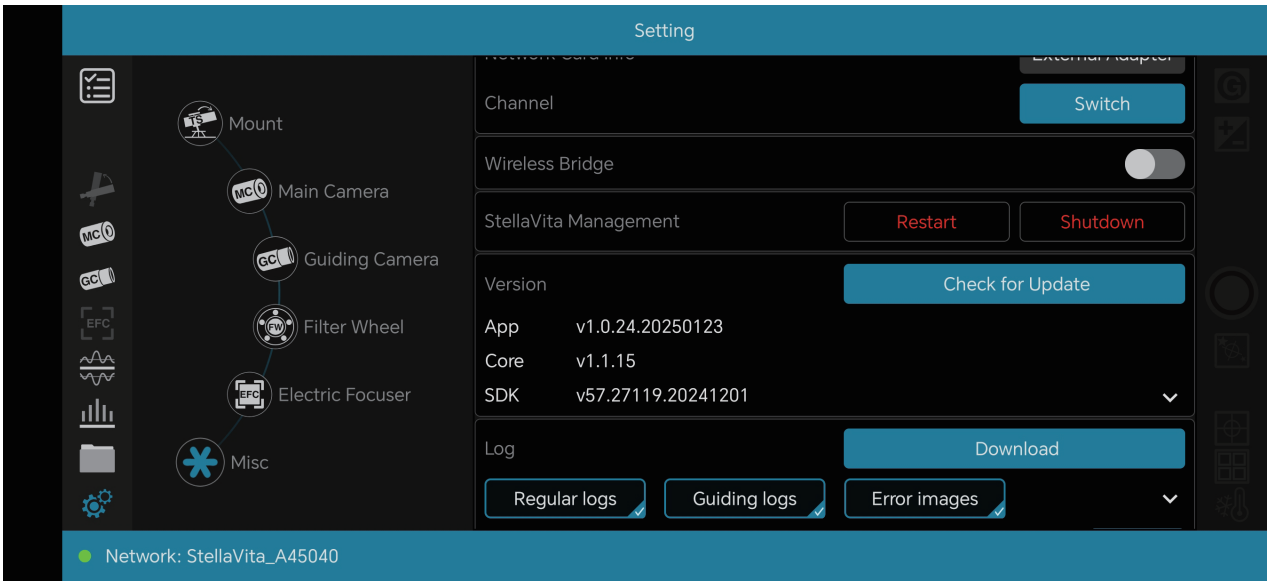
• Connect to an internet network and open the StellaVita app again. The app will automatically check for the available update package. Or open the app and check Settings > Misc > Version. Tap "Check for Update" in the upper-right corner.
• If an update is available, download the package.

Install the Update

• After downloading the update package, reconnect to StellaVita's Wi-Fi and open the app. The app will automatically detect if an installable update package is available. Or go to Settings > Misc > Version, and tap "Install Update" to complete the firmware upgrade.


Setting
Mount
Main Camera
Guiding Camera
Filter Wheel
Electric Focuser
Misc
Wireless Bridge
StellaVita Management
Restart
Shutdown
Upgrade Information
Changes in v1.1.15
- Modify and optimize the internal logic and system stability.
Upgrading...
Upgrade v1.1.15
Log
Download
Regular logs
Guiding logs
Error images
Record error image
Clear
Network: StellaVita_A45040


Setting
Mount
Main Camera
Guiding Camera
Filter Wheel
Electric Focuser
Misc
Wireless Bridge
StellaVita Management
Restart
Shutdown
Version
Upgrade v1.1.15
App v1.0.24.20250123
Core v1.1.9
SDK v57.27119.20241201
Log
Download
Regular logs
Guiding logs
Error images
Record error image
Clear
Network: StellaVita_A45040


Setting
Mount
Main Camera
Guiding Camera
Filter Wheel
Electric Focuser
Misc
Channel
Switch
Wireless Bridge
StellaVita Management
Restart
Shutdown
Version
Check for Update
App v1.0.24.20250123
Core v1.1.15
SDK v57.27119.20241201
Log
Download
Regular logs
Guiding logs
Error images
Network: StellaVita_A45040

2.2 SD Card Updates

You can also update StellaVita's Core and supported camera SDKs via SD card firmware upgrades.

Prepare an SD Card

• Use an SD card with enough free space.

• Download the firmware (.aspkg file) from the official ToupTek community or contact consumer support and technical support. Or contact the manufacturer of the camera to download the SDK.

• Format the SD card to FAT32 or exFAT and place the firmware file or SDK in the root directory of the SD card.

Update Process

• Insert the SD card into StellaVita until you hear a "click" (hot-swappable).

• Power on StellaVita and connect to its Wi-Fi via a phone or tablet.

• Open the app. If the firmware is detected, you'll be prompted to update.

• If no prompt appears, go to Settings > Misc > Version and tap "Check for Update" to manually start upgrading StellaVita's Core and supported camera SDKs.

Note: There are multiple firmware versions due to ongoing optimizations of the app and Core of StellaVita. Older versions may not support OTA updates directly. If OTA fails, update via SD card first, then try OTA. If you encounter any issues, please contact customer support or technical support for assistance.

For more information, please visit ToupTek Astro's official website at

https://www.touptek-astro.com/.

Should you encounter any other issues during use, feel free to contact

ToupTek Astro email: ***tpa-support@touptek.com*** or through the purchase channel.