

SIYI

ETHERNET TO HDMI CONVERTER

USER MANUAL



SIYI Technology (Shenzhen) Co., Ltd.

SIYI.biz/en

Thank you for purchasing SIYI's product.

SIYI AI tracking module supports collaborative control with SIYI optical pods and gimbal cameras to achieve real-time tracking and capture of targets and can highlight the tracking target in the picture through real-time focus and zoom.

It supports the anti-lost function. During the tracking process, if the target is blocked or briefly leaves the monitoring screen, AI tracking module can automatically recognize and continue tracking when it re-enters the monitoring screen.

To ensure you a good experience of the product, please read this manual carefully. If you encounter any issue using the product, please consult the manual or check the online pages of this product on SIYI official website (<https://siyi.biz/en>). You can also write an email to SIYI official A/S center (support@siyi.biz).

Contact Us: **SIYI Official Website** (<https://SIYI.biz/en>)

SIYI User Group - Facebook	
Facebook	
LinkedIn	
YouTube	

User Manual Update Log

Version	Date	Updates
1.0	2023.11	Original version.

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READ TIPS

Icons

Please pay more attention to content indicated with the following marks:



DANGER Dangerous manipulation probably leads to human injuries.



WARNING Warnings on manipulation possibly leads to human injuries.



CAUTION Cautions on what manipulation may lead to property loss.



Prohibited



Mandatory



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Safety

SIYI ethernet to HDMI converter is designed for professional application in specific scenes, users who approach to the equipment should have the basic knowledge of how to operate it. Irregular or irresponsible manipulations to the device may cause damage, property loss, or human injuries, and SIYI Technology is not obliged to any of the damage, loss, or injury. It is prohibited to use SIYI products for military purpose. Users under 14 years' old should follow an experienced trainer's guide. Disassembling or modification to the system is prohibited without permission from its manufacturer, SIYI Technology.

Storage / Carrying / Recycling

When your SIYI product is left unused, or you are bringing it outdoors, or the product life has expired, please do read the below precautions.



DANGER

Always place your SIYI products at places where babies or kids do not reach.

SIYI products should be placed in places which are too hot (above 60°C) or too cold (under -20°C).



CAUTION

SIYI products should not be placed in places under direct sunshine or too dusty or too wet.

Carrying or transporting SIYI products should avoid vibration or shatter by which components may break.

1 INTRODUCTION

1.1 Product Features

Mavlink OSD Information Overlay

Mavlink telemetry information from SIYI links can be overlay to HDMI video output as On-Screen-Display (OSD) through the Ethernet to HDMI output converter. FPV OSD coming with full HD images is very enjoyable.

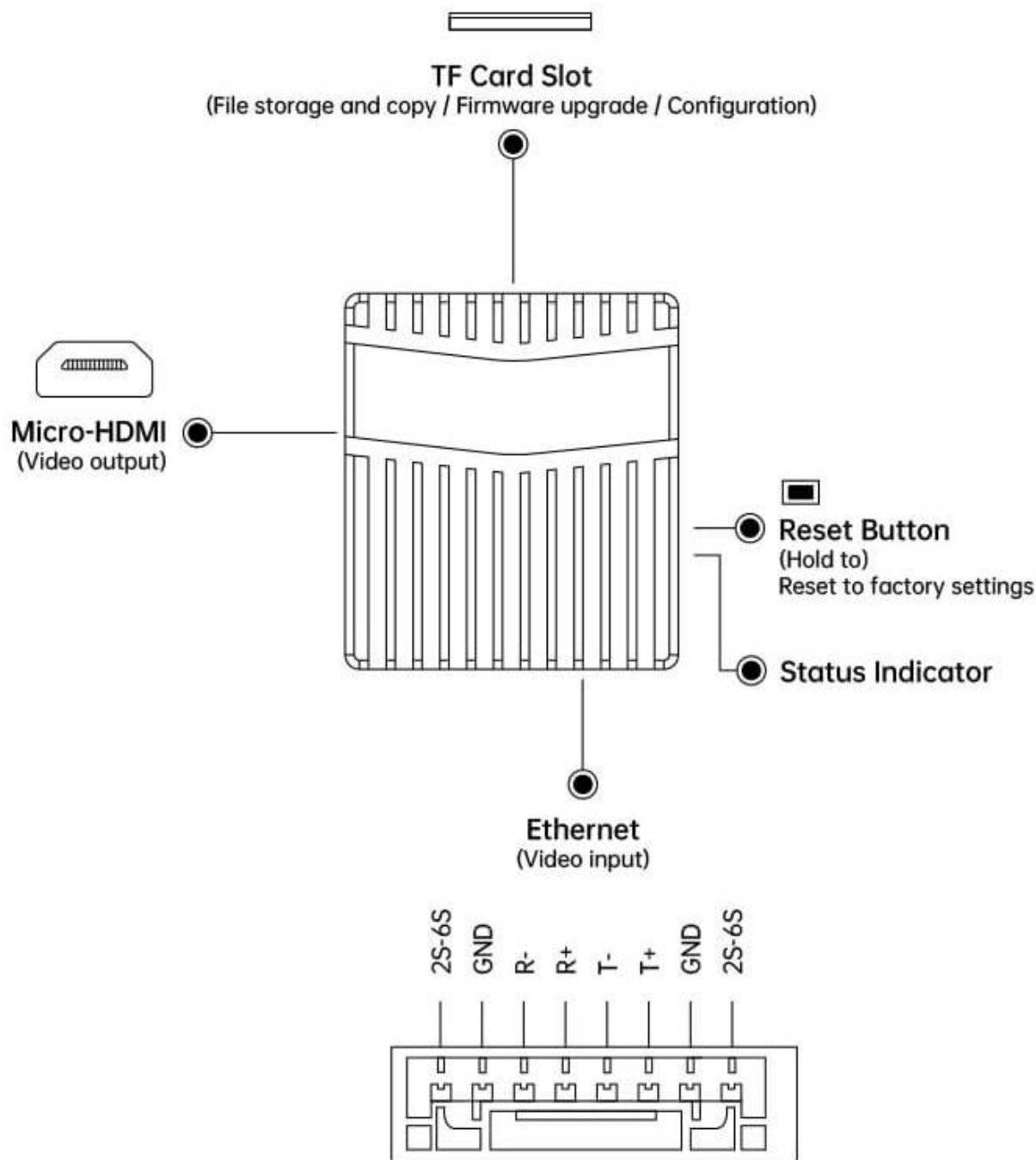
Real-Time Recording in MP4 Format

The converter can record video streams to TF / SD card in MP4 format. Very easy to replay flight videos and make backup.

Abundant Configuration

Through TF / SD card the converter can also be configured for customizing IP addresses, modifying video stream RTSP addresses, enable / disable OSD, etc. Tiny module, powerful feature!

1.2 Interface & Pinouts



1.3 Technical Specification

Video Input Port	Ethernet
Video Output Port	Micro-HDMI
Working Voltage	8.4 ~ 25.2 V
Power Consumption	Average: 1.5 W Summit: 5 W
Video Recording Resolution	1080p (1920*1080) @ 30 fps 720p (1280*720) @ 30 fps
Video Recording Bitrate	12 Mbps
Supported File System	FAT32 ExFAT
Video Recording Format	MP4
Supported TF / SD Card Type	Micro-SD Class10, max 128 GB
Product Dimensions	42 x 37 x 13 mm
Product Weight	25 g
Working Temperature	-10 ~ 50°C



Please format the SD card to FAT32 before firmware upgrade.

1.4 Packing List

1 x SIYI Ethernet to HDMI Converter

1 x HM30 Ground Unit to Ethernet-HDMI Converter 2 in 1 Connection & Power Cable
(Connect HM30 ground unit's LAN port to the converter's Ethernet port and powers the converter separately)

1 x Micro-HDMI to Standard HDMI Cable
(Connect the converter to HDMI monitor)

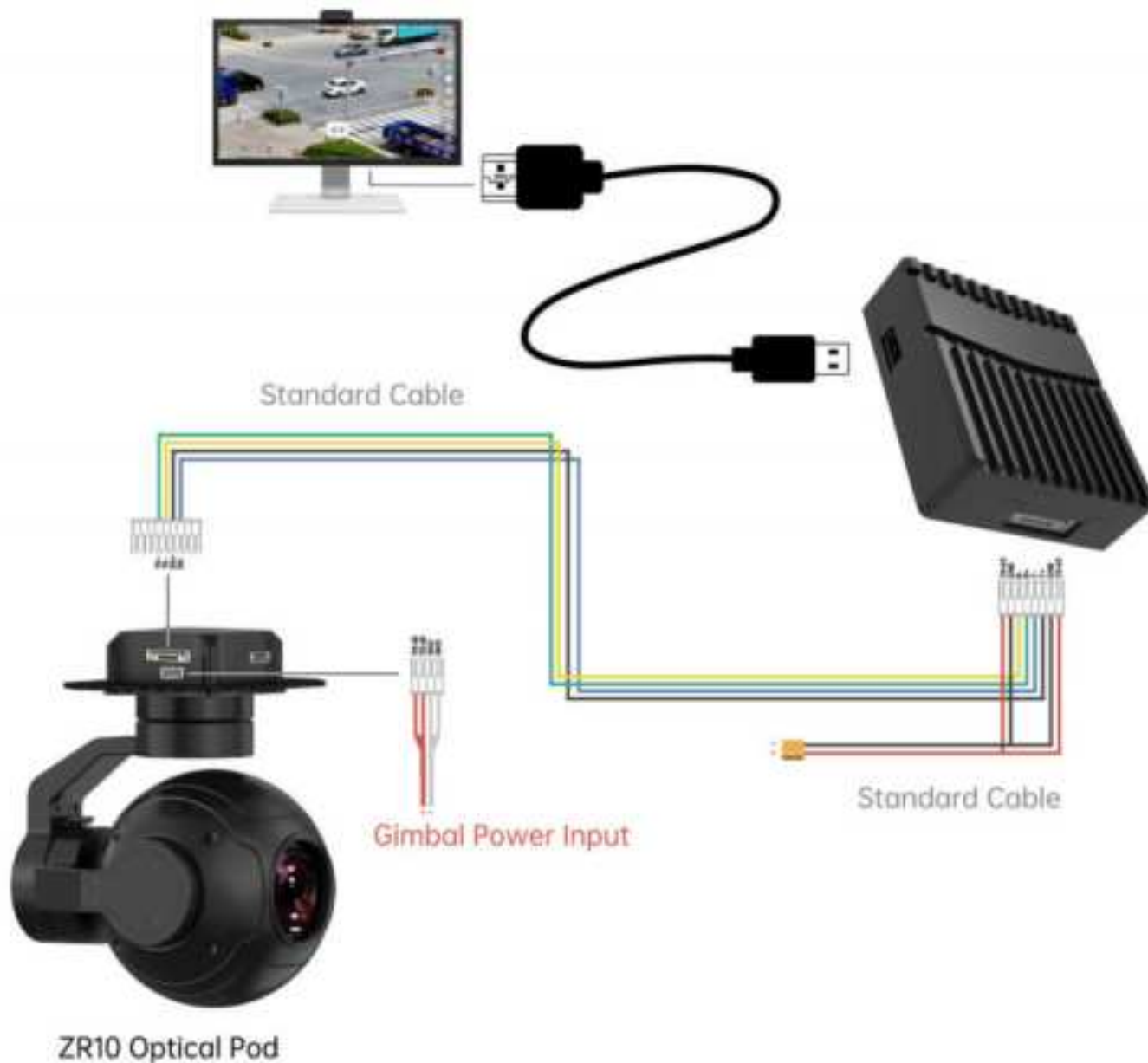
1 x SIYI Optical Pod to Ethernet-HDMI Converter 2 in 1 Connection & Power Cable
(Connect SIYI optical pod's Ethernet port to the converter's Ethernet port and powers the converter separately)

1.5 Indicator Definition

-  Red-Green-Yellow Slow Blinks: Converter is starting.
-  Slow Green Blinks: Converter receives video stream.
-  Slow Yellow Blinks: Converter is not receiving video stream.

2 TYPICAL CONNECTION DIAGRAM

2.1 SIYI Optical Pod Outputs HDMI Video through Ethernet to HDMI Converter



2.2 HM30 Ground Unit Outputs HDMI Video through Ethernet to HDMI Converter



3 HOW TO CONFIGURE THE MODULE

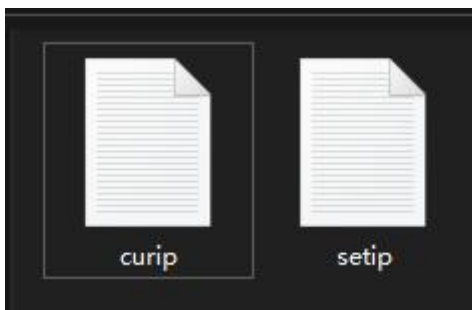
SIYI Ethernet to HDMI converter can be configured through SD card, so does firmware upgrade.

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It is suggested to format the SD card to FAT32 before firmware upgrade.

It is suggested to insert the SD card to the converter and run it for a while, then you will see the files related to module configuration.

The two “.txt” files in the root category of the SD card are for checking and changing module configuration.



“curip.txt” for checking the current IP addresses.

“setip.txt” for customers to change IP addresses.

3.1 IP Addresses

3.1.1 Check IP Addresses

Open the “curip.txt” file, you will see the current IP addresses and gateway of the AI tracking module.

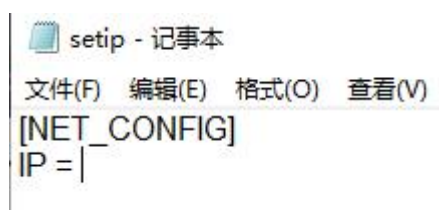
```
[NET_CONFIG]
IP = 192.168.144.50
GATEWAY = 192.168.144.12
```

“192.168.144.50” is the factory default module IP addresses.

“192.168.144.12” is the factory default module gateway.

3.1.2 Change IP Addresses

Open the “setip.txt” file, input the IP addresses you need after “IP = ”.



```
setip - 记事本
文件(F) 编辑(E) 格式(O) 查看(V)
[NET_CONFIG]
IP = |
```



```
*setip - 记事本
文件(F) 编辑(E) 格式(O) 查看(V)
[NET_CONFIG]
IP = 192.168.144.26
```

Then insert the SD card to the module and power it. After three to five minutes, the new IP addresses will be flashed into module. Then we restart the module to finish changing IP addresses.

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When you are using the converter with SIYI gimbals and SIYI links, please do configure its IP addresses within “192.168.144.X” and avoid conflicting with their existing IP addresses. Please refer to the “Common IP Addresses” chapter in this manual for detail.

3.2 Configuration

3.2.1 Check Converter Configuration

Open the “curip.txt” file, you will see the current configuration of the converter.

```
[Protocol]
ProtocolType = 1
RtspAddress = rtsp://192.168.144.25:8554/main.264
SiyiAddress = 192.168.144.25
SiyiPort = 37256
OsdShow = 1
```

- ProtocolType = 1 indicates the current streaming type (0 = SIYI protocol, 1 = RTSP stream)
- RtspAddress = rtsp://192.168.144.25:8554/main.264 indicates the current stream source's RTSP addresses
- SiyiAddress = 192.168.144.25 indicates the current stream source's SIYI protocol IP addresses
- SiyiPort = 37256 indicates the current stream source's SIYI client port number
- OsdShow = 1 indicates current OSD displaying status (0 = OFF, 1 = ON)

3.2.2 Make Converter Configuration

Open the “setip.txt” file, input your required parameters after relevant configurations.

```
[Protocol]
ProtocolType =
RtspAddress =
SiyiAddress =
SiyiPort =
OsdShow =
```

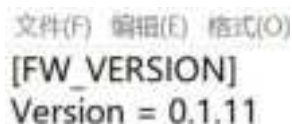
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Configuring the converter does not require restarting it. When the converter is working, parameters will be automatically flashed in after inserting Micro-SD card.

3.3 Firmware Upgrade

3.3.1 Check Firmware Version

Open the “curip.txt” file, you will see the current firmware version of the AI tracking module.



文件(F) 编辑(E) 格式(O)
[FW_VERSION]
Version = 0.1.11

3.3.2 Firmware Upgrade Steps

Before upgrading, it is necessary to prepare the tools, software, and firmware below.

- SD / TF card

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Customers should prepare the above tools.

- SIYI Ethernet to HDMI Converter Firmware



Above tools can be downloaded from the “Downloads” page on SIYI official website (<https://siyi.biz/en>).

Steps

1. Save the module firmware’s “.bin” file to the SD / TF card’s root directory and do not change the file name.

名称	修改日期	类型
 SIYI_LanToHDMI_UpgradeSD.bin	2023/10/11 11:16	BIN 文件

2. Insert the SD card with saved firmware to the converter and power it.
3. Wait for three to five minutes, camera firmware will be flashed automatically and disappear from the SD card.
4. Restart the module to make the configuration work.

3.4 Common IP Addresses

SIYI Air Unit IP Address: 192.168.144.11

SIYI Ground Unit IP Address: 192.168.144.12

SIYI Handheld Ground Station Android System IP Address: 192.168.144.20

SIYI Ethernet to HDMI Output Converter IP Add: 192.168.144.50

SIYI AI Camera IP Address: 192.168.144.60

SIYI Optical Pod / Gimbal Camera's Default IP Addresses: 192.168.144.25

(NEW) SIYI Optical Pod / Gimbal Camera's Default RTSP Addresses:

- SIYI AI Camera: rtsp://192.168.144.25:8554/video0
- Main Stream: rtsp://192.168.144.25:8554/video1
- Sub Stream: rtsp://192.168.144.25:8554/video2

(NEW) SIYI FPV App's Private Video Stream Protocol's Addresses:

- SIYI Camera 1 Main Stream: 192.168.144.25: 37256
- SIYI Camera 1 Sub Stream: 192.168.144.25: 37255
- SIYI Camera 2 Main Stream: 192.168.144.26: 37256
- SIYI Camera 2 Sub Stream: 192.168.144.26: 37255

SIYI IP67 Camera A's IP Address: 192.168.144.25

SIYI IP67 Camera B's IP Address: 192.168.144.26

SIYI Air Unit HDMI Input Converter's IP Address: 192.168.144.25

SIYI IP67 Camera A's RTSP Address: rtsp://192.168.144.25:8554/main.264

SIYI IP67 Camera B's RTSP Address: rtsp://192.168.144.26:8554/main.264

SIYI Air Unit HDMI Input Converter's RTSP Address:

Common Video Player: SIYI FPV, QGroundControl, EasyPlayer

Network Diagnosis Tool: Ping Tools

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SIYI cameras released after ZT30 (including ZT30 and ZT6) start to use the new addresses.

SIYI cameras released before ZT30 (including ZR30, A2 mini, A8 mini, ZR10, and R1M) are stilling using the old addresses.

3.5 Main Firmware Update Log

Date	2023-10-11
Version	0.1.11
Updates	New: OSD information changed to English only.

Date	2023-07-18
Version	0.1.9
Updates	Improve: Latency.

4 After-sale Service

Please visit the SIYI Technology support page at [Service and Support - SIYI Technology | Empowering and Building an Intelligent Robot Ecology](#) for the latest after-sales and warranty information.