# Fiber Optic Digitizing Module Manual

# **Equipment Specifications** Sky End Device name:

5.5V~26V Power Supply: Body size: Body weight: 31±2g

Device Name: Power supply mode: 5.5V~26V Body size: 54±2g Body weight:

Fiber Optic Interface: Fiber Type:

Data Interface:

Video Format:

Data Direction:

Data format:

FC Interface Single Mode – Single Fiber SH1.0

NTSC/PAL/SECAM Bidirectional TTL/SBUS

Speed: 0~1Mbps Wavelength single mode: 1310 (9/125µm) +1550 single mode fiber 0 ~ 20km Transmission distance:

Fiber Optic Drum Specifications

# 10km fiber optic drum Size:

Shell material: Light specification: 0.25mm 942g±10g Weight: Outlet nozzle:

10km 15km 20km D108\*L271.5 Acrylonitrile-styrene-butadiene copolymer

### 15km fiber optic drum D110\*L351 Size: Acrylonitrile-styrene-butadiene copolymer Shell material: Light specification: 0.25mm

Weight:

Outlet nozzle: 20kmfiber optic drum D131.6\*L263 Size: Acrylonitrile-styrene-butadiene copolymer

1403g±15g

Shell material: Light specification: 0.25mm Weight: Outlet nozzle:

1841g±20g

Sky End fiber optic interface

**LED Indicator** 

SH1.0 serial port

SH1.0 serial port

Video output port

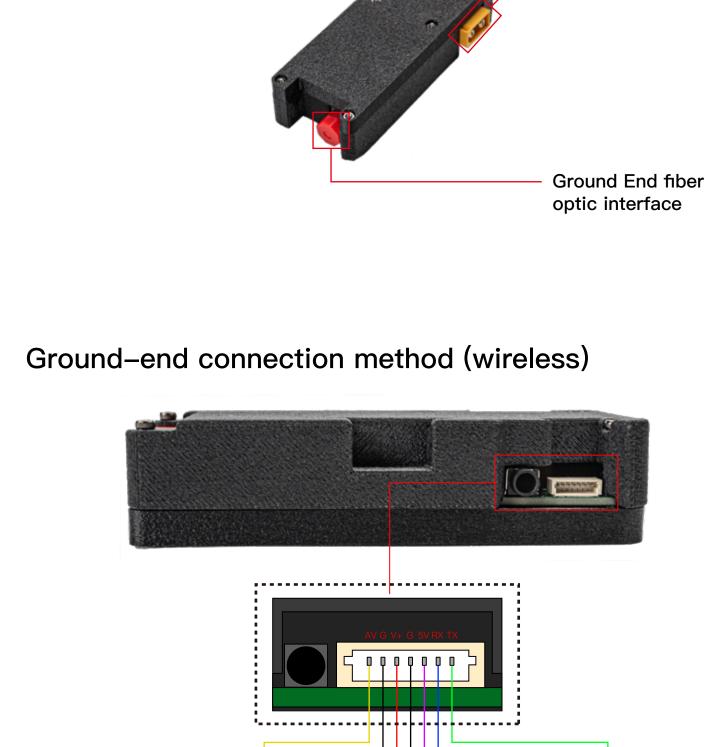
Power connector

G 5 T R

**LED** Indicator

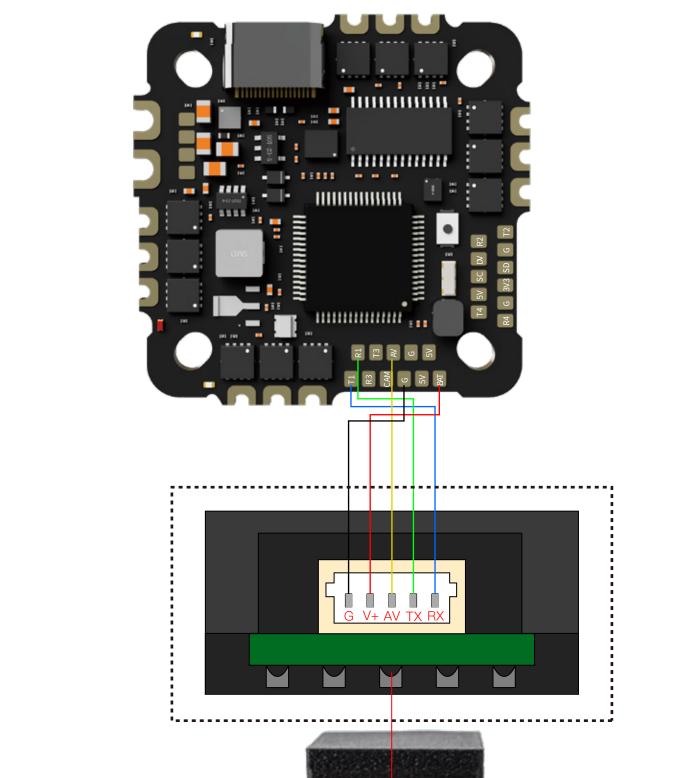
Schematic diagram of the sky end

Schematic diagram of the ground end



# **VTX** Receiver

Schematic diagram of connection between ground end and map transmission and receiver



Schematic diagram of the connection between the sky end and the flight control

0

0

Excessive fiber bending angle

Schematic diagram of sky end indicator Power indicator

Fiber Optic Mapping Indicator

**Ground end Indicator Diagram** 

Fiber Optic Mapping Indicator

Image Signal Indicator

Data signal indicator

Power indicator

Image Signal Indicator

Data Signal Indicator

**LED Indicator Definition** 

**Installation Angle Diagram** 

- **Installation Precautions**

aircraft should be paid extra attention to.

speed flight in the glue area.

Use steps

optical fiber disk.

block FC interface.

**Ground Side Wireless Connection** 

"Ground terminal connection mode 1 (wireless)".

away from the UAV propeller to avoid entanglement.

connected to the FC port on the ground end.

Preparation before using the optical disk

1, Be sure to remove the transportation protection tie and 4 protection snaps before using the

2, the optical fiber disk outlet FC fiber optic port of the protective shell before use need to

① Connect the SH1.0 cable from the sky terminal to the flight controller as shown in the diagram

③ Fix the sky end and fiber optic disk, pay attention to the fiber optic nozzle as far as possible

⑤ Insert the lithium battery of the ground end into the ground end connector after it is fully

Ground End

(Note: do not take the buckle directly out of the fiber will be broken.)

remove, draw out the optical fiber into the ground end of the module.

2 Connect the ground SH1.0 line to the receiver and the map transmitter.

1, Fiber optic disk installation, fiber optic disk outlet nozzle should be as far away as possible

from the propeller, but to pay extra attention to the aircraft gravity. The center of gravity of the

2, Fiber optic disk installation should be based on the aircraft's tilt angle, the mounting bracket

should be reserved for a certain angle (as shown in the figure). Installation The mounting angle

3, Fiber optic winding uses special glue, the first 200 meters of distance is the glue application

area, in this area the flight speed of the aircraft should be controlled at a constant speed of 0.5

mph. The flight speed of the aircraft should be controlled within 30km/h or 8m/s to avoid high

should be close to the tilt angle, so that the fiber optic disk outlet angle is horizontal.

# accident. 4 Connect the fiber optic harness, connect the FC ports on both ends of the fiber optic disk to the FC port on the sky end and the FC port on the ground end, and note that the nozzle end is

charged. (As Figure 2)

- Figure 1
- **Precautions**

below the limit voltage, do not reverse the positive and negative poles.

Fiber Optic Drum

- Figure 2 1. The input voltage 11.1-26v is within the safe range, please do not exceed or fall
- 2. Do not make the optical fiber folding circle, to avoid being cut by sharp objects and lead to fiber breakage. 3. Pay attention to the protection of fiber optic connectors and FC interfaces, avoid dust and oil and water, save the interface protection cover well twisted. 4. Store in a cool, dry and light-proof area. 5. Fiber optic disk precision structure, gently take and put, vertical storage.

- Ground End
- 96\*37\*23mm
- 63\*37\*23mm

- - Sky End
- **Ground End**