MyFlyDream

TeleFlyPro

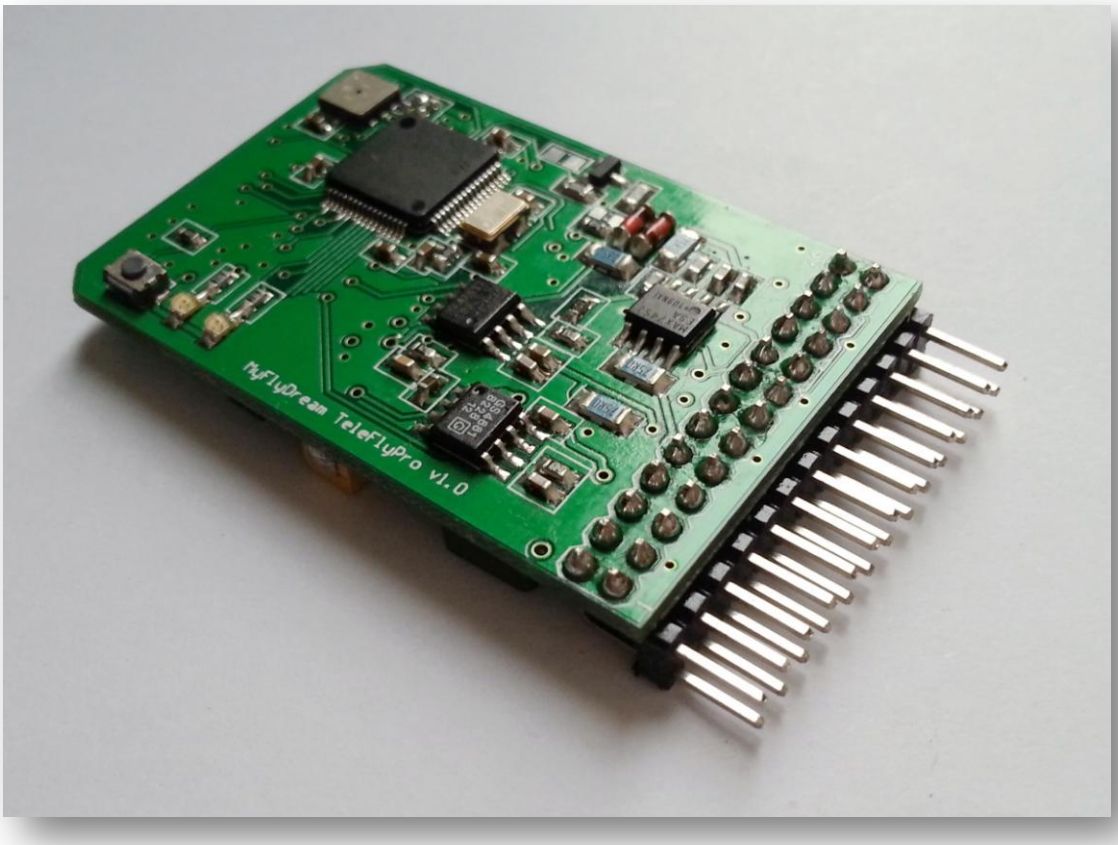
V1.04

www.MyFlyDream.com

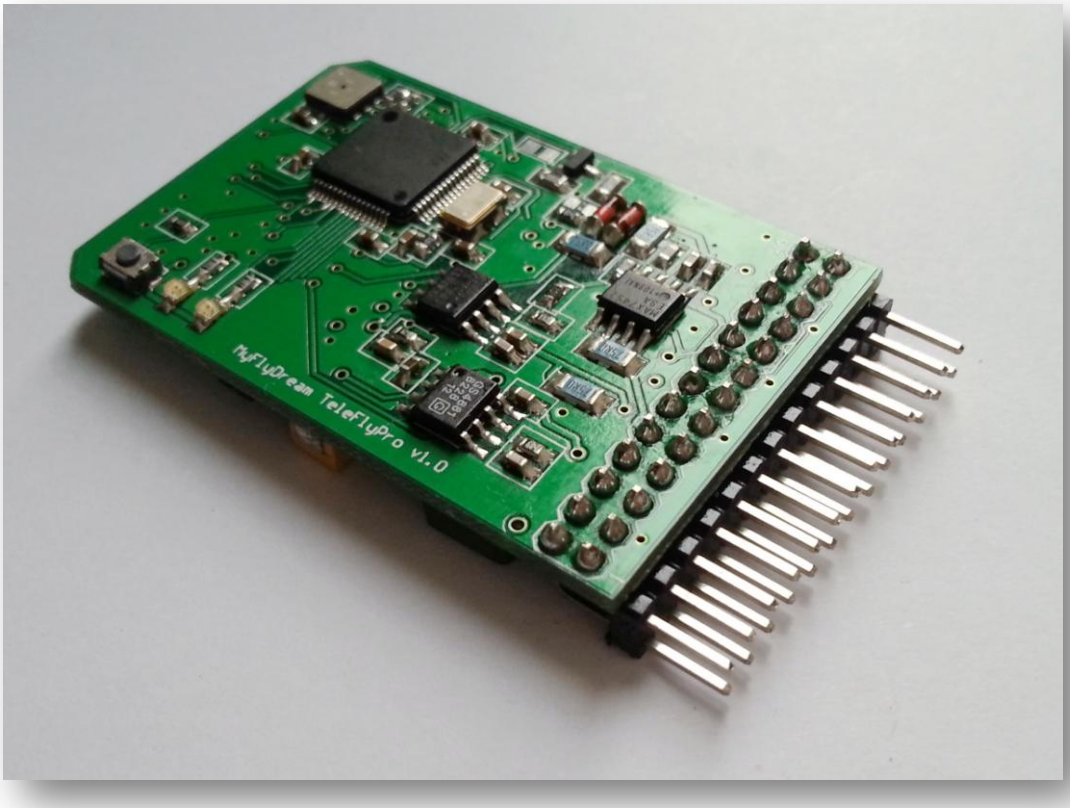
Notes

Thank you for purchasing the MyFlyDream TeleFlyPro (hereinafter referred to as TFPro).

- Please follow this manual to get familiar with the TFPro and to operate it correctly.
- The TFPro is designed for use with RC-models only. Please use it in compliance with applicable local laws. The reliability and accuracy of the tracking system depend on a number of factors. A strong electromagnetic interference, strong winds, bad GPS status and other reasons may cause a bad result. Please consider the risk and take it yourself. Any loss or damage caused by the TFPro is not our responsibility.
- We reserve the right to continuously improve the product performance, so this document may be not in full compliance with the TFPro you purchased. The latest version of this document will be available at our website:
  www.MyFlyDream.com



1.Hardware and features



ID	Name
A	MyFlyDream TeleFlyPro
B	Cables for Camera and VideoTX
C	SetHome switch

MFD TeleFlyPro is an enhance unit for MFD AAT(AutoAntennaTracker) system.
The main function of TeleFlyPro is to modulate the tracking data into Video signal. The video signal can be transmitted via a common Video-TX /RX module. With a V5.0 or newer AATDriver, the AAT system is able to demodulate the tracking data from the video signal and use it to track the plane.

TFPro's advanced features include:

1) Modulating tracking data both into video signal. It's more reliable and works with most VTX/RX without audio channel compatibility issues.
2) TFPro has advanced ,pixel-level black/white OSD function. OSD can be disable if it's not used.
3) TFPro uses a barometer to measure the altitude instead of GPS. The tracker now tracks more accurately than before.
4) An optional 100Amp current sensor is available if user needs to measure the current/voltage of the power system of the plane.

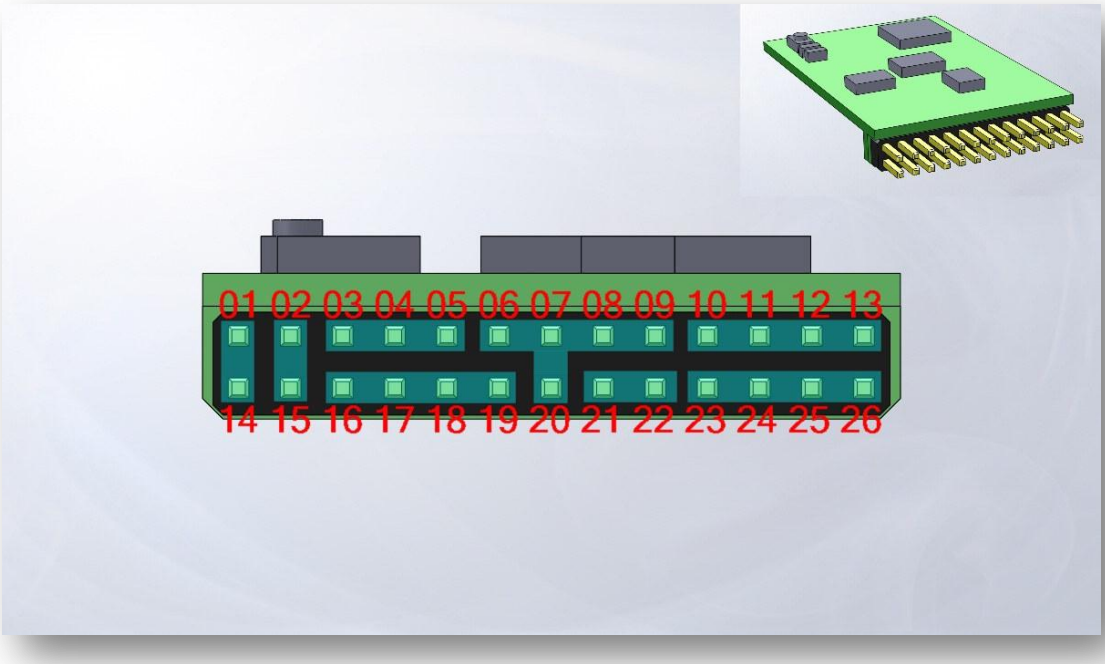
5) Support NMEA/UBX protocol GPS. Work with almost all kind of GPS with proper wiring, including DJI system.

- If you need a full-function AutoPilot device for you plane, we recommend our MFD AutoPilot product.

Specification

Weight	10g
Power supply	7~20V (recommended 12V)
Current consume	<200ma@12V(included GPS, without other electronics)

2. Wiring

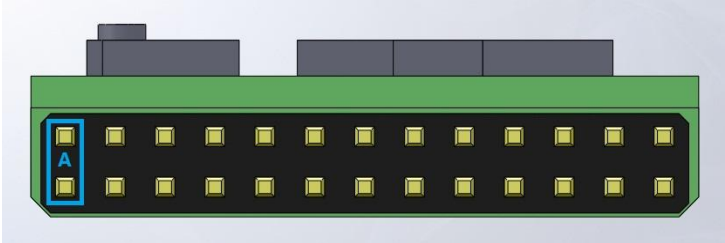


The picture above shows TFPro's connection ports from A~J:

Port	Description
A) Power	PIN#1,PIN#14
B) CAM/VTX power	PIN#2,PIN#15
C) Camera	PIN#3,PIN#4,PIN#5
D) VideoTX	PIN#16,PIN#17,PIN#18,PIN#19
E) Sensors	PIN#6,PIN#7,PIN#8,PIN#9,PIN#20
F) DATA	PIN#10,PIN#11,PIN#12,PIN#13
G) SetHome	PIN#21,PIN#22

H) GPS	PIN#23,PIN#24,PIN#25,PIN#26

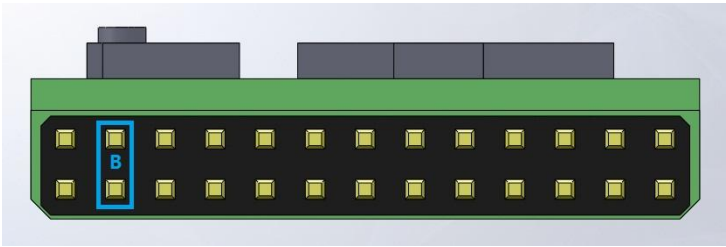
A) Power



This port supplies power to the TFPro. The TFPro has its own switching power unit so it can be powered from 7-20V. But if you want to share this power with the camera and the video transmitter, we recommend you to power the AP with a 3S lipo since most of the camera and video TX need 12V.

pins	Use for
PIN#1	12V positive
PIN#14	Ground or negative

B) CAM/VTX Power



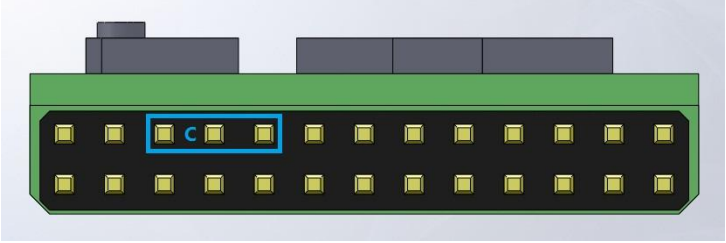
PIN#2 is connected with PIN#1 internal. PIN#15 is the power supply pin for Camera and VideoTX.

So if you want to share the Power with CAM/VTX, just plug a jumper cap to PortB (PIN#2 and PIN#15).

If you want to use a separate power for CAM/VTX, please connect it to PIN#15.

pins	Use for
PIN#2	TeleFlyPro Power
PIN#15	Camera/VideoTX Power

C) Camera

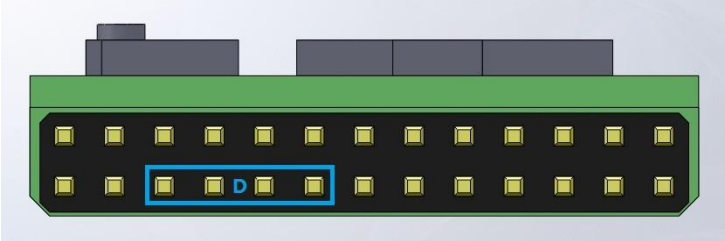


Connect your camera to this port.

pins	Use for
PIN#3	GND

PIN#4	Power supply to camera
PIN#5	Video input

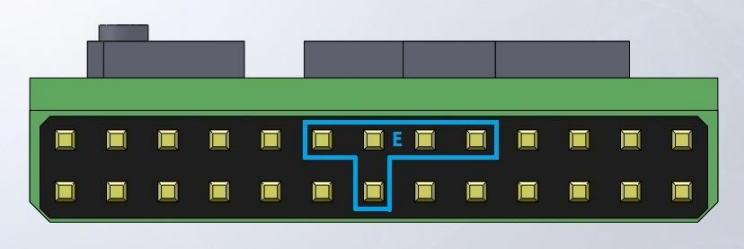
D) VideoTX



Connect the VideoTX to this port.

pins	Use for
PIN#16	GND
PIN#17	Power supply to VideoTX
PIN#18	Video output
PIN#19	Audio output (Useless in the new TeleFlyPro since 2014-APR-01)

E) Sensors



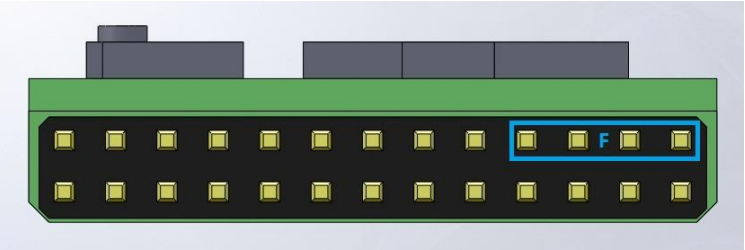
This port is for current sensor, battery voltage sensor and RSSI input.

The Current sensor has a 4pin connector. Please plug the connector to PIN#6~PIN#9. Please notice that the black wire of the current sensor should be aligned to PIN#9.

After connecting the current sensor, the PIN#20 is for RSSI input is still visible. Connect the RSSI signal from your RX to it. The RSSI input is buffered inside the TFPro. So there is no need to use any external circuit to buffer your RSSI signal any more.

pins	Use for
PIN#6	Voltage sensor
PIN#7	Current sensor
PIN#8	+5V power supply to the sensor board
PIN#9	GND
PIN#20	RSSI

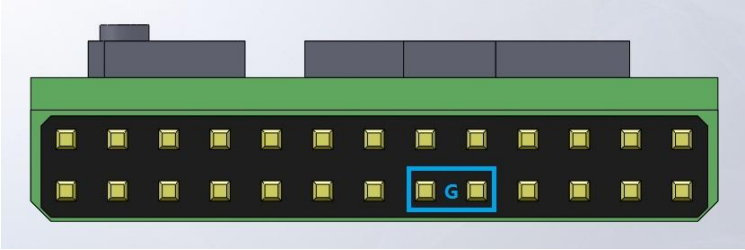
F) Data



This port is used for the optional telemetry data radio.

pins	Use for
PIN#10	TX
PIN#11	RX
PIN#12	+5V
PIN#13	GND

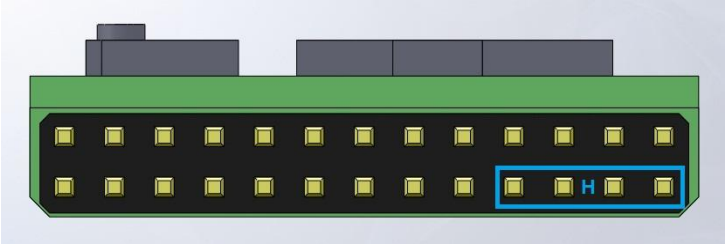
G) SetHome



This port is for the SetHome switch. TFPro comes with a blue micro button switch. Please connect it to here. We need to use it to set “home coordinate” for the tracker.

pins	Use for
PIN#21	SetHome
PIN#22	GND

H) GPS



This port is for the GPS unit.

pins	Use for
PIN#23	TX (The GPS comes with the AP doesn’t need it. Just leave it alone)
PIN#24	RX (To the GPS TX wire) .
PIN#25	3.3V power supply to the GPS.
PIN#26	Ground

3.Operating Instructions

The procedure of using TFPro with your tracking system:

1). Detect the GPS baudrate.

TFPro needs to recognize the GPS baudrate for the initial use. Please hold SetHome button and power on TFPro. 2 LEDs on TFPro will blink alternately. Once TFPro recognize the GPS the 2 LEDs will stay solid on. After your GPS is recognized please power off the TFPro. You don't need to do it any more unless you use a different GPS with TFPro.

TFPro supports these baudrates: 9600,19200,38400,57600,115200bps.

Default setting is 38400bps. You will see the entire procedure on OSD screen of detecting GPS.

2). Check the downlink status

Power on the plane and your tracker. If everything works, the RX LED of AATDriver should blink very fast. That means AATDriver V5 is able to demodulate tracking data from Video signal well. RX Blinking is the most important thing you need to ensure before you do any test in the field.

Troubleshooting:

If your RX LED doesn't blink at all, you must check if you have MFD OSD picture on your monitor.

NO I can't see OSD: TeleFlyPro needs a video input signal to generate its output video signal. Please check if you already power on your camera, and feed the video signal to TeleFlyPro properly.

YES I can see OSD: Many DVRs will erase the tracking data from the video signal on its VID-OUT. Please try to skip the DVR and use the original video signal to solve the problem.

Press the SetHome button of TFPro for a few seconds. The tracker should "BEEP" while you holding the button. That means the tracker receives the SetHome command successfully. Tracker will BEEP continuously if you don't have enough GPS satellites locked to warm you. That's normal.

3). SetHome and take off

The blinking RED led on TFPro indicates the GPS status. More satellites are locked, faster the LED blinks. The RED led will be solid on once the GPS locks 10 or more satellites. And it won't blink no GPS is detected.

After we get enough satellites (usually we need 8 or more), press the SetHome button for 2 seconds or longer until you hear the tracker Beeping.

Now you can launch your plane.

The tracker will start to track once the plane leaves 10 meters away.

Other tips:

1.Press the button on TFPro mainboard (beside the LEDs) to switch OSD mode circularly:

PAL->Disable->NTSC-> Disable ->PAL-> Disable…..

2.Hold the button on TFPro for 5 seconds or longer to reset all configuration.

3.For the details about firmware update, please refer to the MFD AutoPilot manual.

4. Q&A

Q:How to connect to a DJI GPS?

A: Please open the GPS and solder a wire to get the GPS TX data. As the brown wire shown in the bellow picture. Connect this wire to PIN#24 (GPS RX) of TFPro.