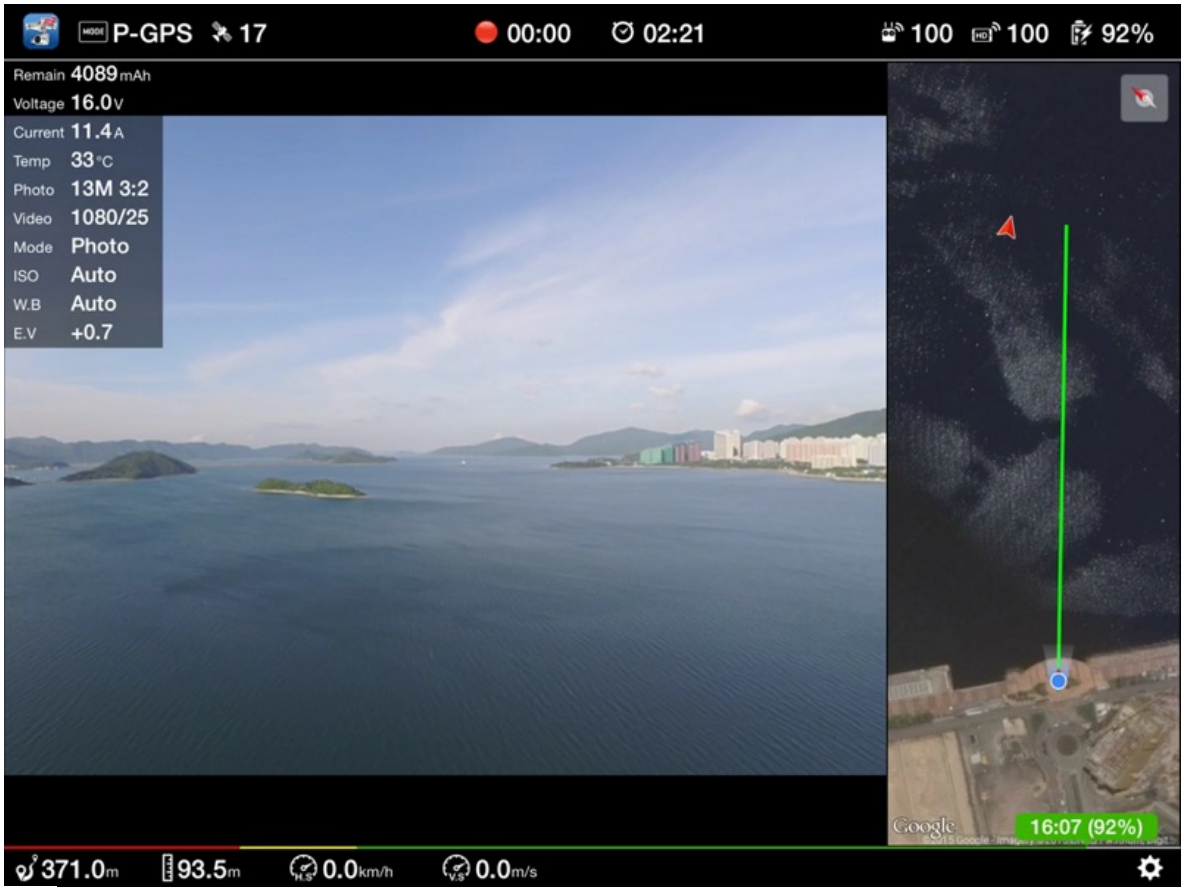
Camera Overview

FPV Camera brings a complete new FPV flying experience for DJI Phantom 3 Pro/Adv and Inspire 1 with innovative Navigation Map to let experienced pilots flying safer and more enjoyable. Pilots can configure displaying up-to 12 Custom Telemetry data to know more aircraft details in real-time.

Navigation Map

Navigation Map consists of an accurate Google Map (instead of Apple Map in DJI GO/Pilot) framework and indicators of Home, Pilot, Aircraft, Pilot Wand. These indicators are shown on the map all time with auto-zoom and auto-bearing capabilities. This allows pilot having better idea of where are Aircraft and Home/Pilot location on the map.

iPad Navigation Map and FPV live video can be displayed with P-in-P (above) or Side-by-Side (below) layout. Custom Telemetry can be shown in either Horizontal (above) or Vertical (below).



 - Display the Pilot point and orientation of iDevice. Location Services is required, and the app needs ALLOW LOCATION ACCESS.

 - When Home point is locked and shown explicitly at correct location on the map, it means you are safe to takeoff.

 - Aircraft GPS location and orientation on the map.

• Pilot Wand – Helps to maintain pilot's line-of-sight (LOS) toward Aircraft with different color for current RF signal strength (strong>weak, green>yellow>orange>red). It's available after takeoff if Pilot Wand option enabled.

• Auto-zoom – Navigation Map keeps zooming in/out based on flying distance between Aircraft and Home/Pilot.

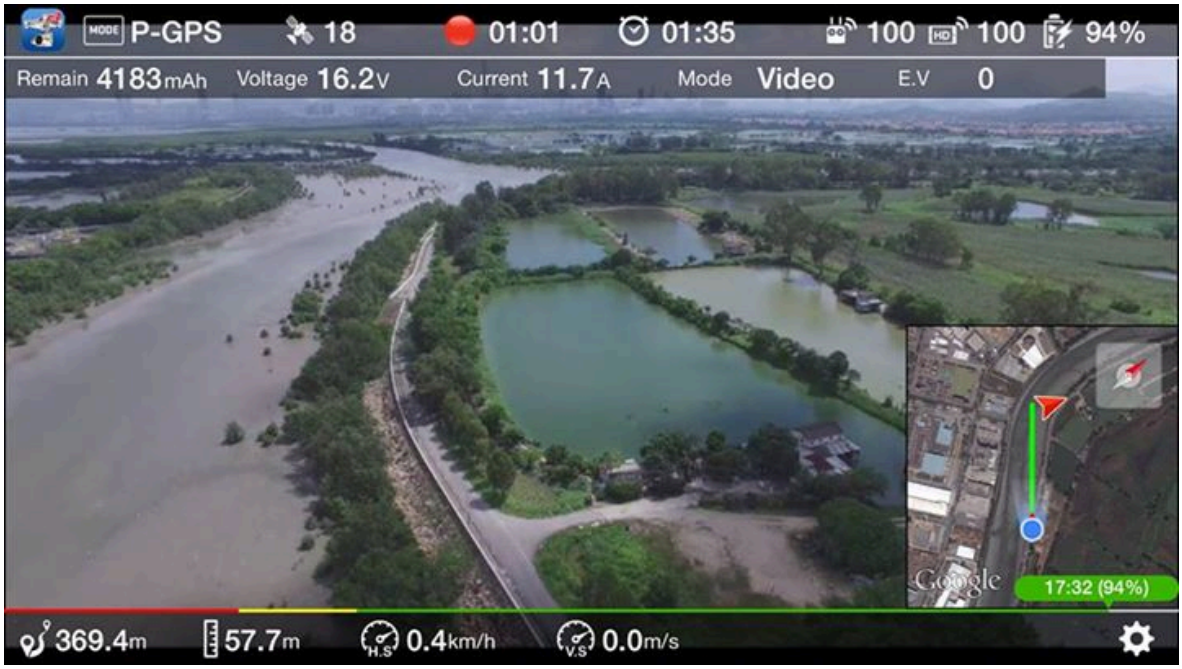
• Auto-bearing – The map rotates per iPhone/iPad orientation.

• FPV/Map Toggle – With P-in-P layout, tap the small window to toggle between Navigation Map or FPV live video showing in the main screen.

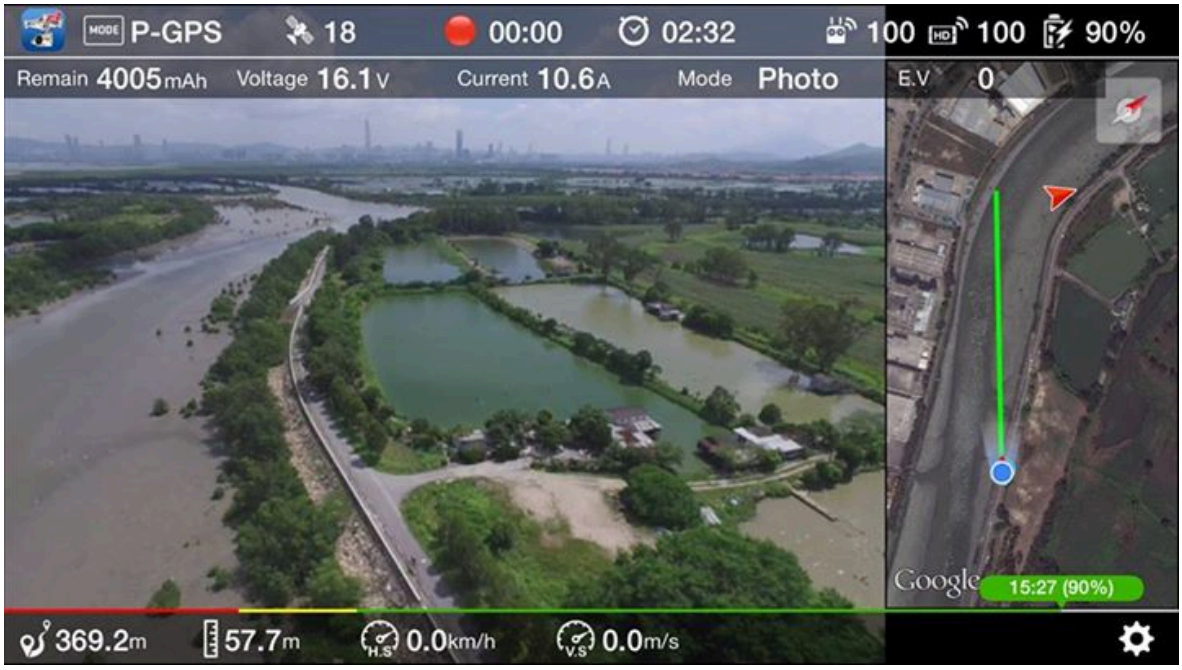
• Combine Home/Pilot Point: On Wi-Fi only (non-GPS) iPad, Pilot point is usually inaccurate. This option allows you to relocate Pilot point to Home point on the map. It's suggested to enable this option if you are

using Wi-Fi only iPad.
• Map Type: Change of different map type (Normal, Satellite, Hybrid, Terrain). Please make sure you cache the same map type.
• Zoom Level – Adjust the auto-zoom level to ensure Home, Pilot, Phantom indicators fitting well in Navigation Map per your preferred zoom scale.
• Map Transparent – Adjust Navigation Map transparent scale for P-in-P layout.
• Caching Navigation Map – If your iDevice doesn't have internet access during flight, then you may need to cache Google Map in advance for offline use as below.
(1) Toggle map view to full map in P-in-P layout with internet access.
(2) Make sure you cache the same Map Type (Normal, Satellite, Hybrid, Terrain) as needed.
(3) Zoom in/out and pan the map at required location for caching.

C2 Button – Allow to toggle between Side-by-Side and 2 views of P-in-P by a single click with both hands staying on remote controller.



iPhone Navigation Map and FPV live video can be displayed with P-in-P (above) or Side-by-Side (below) layout.



FPV Settings

• Measurement Unit: Toggle unit of measure between Metric and Imperial

• Battery Meter: Toggle On/Off Battery Meter to display estimated remaining flight time 99:99 (XX%) based on custom battery warning % level.

• Auto Recording: It starts/stops video recording automatically when turning on/off motor. This is a handy feature to avoid forgetting start/stop video recording.

• Advanced > Video Hardware Decoder: Enable/disable using GPU hardware decoding.

• Advanced > Return-To-Home Altitude: Adjust Return-To-Home altitude in failsafe mode.

• Advanced > Channel: Auto (by default) option selects channel 13 to 20 automatically within 2.4 GHz ISM band. You are recommended to use Auto option. If you want to select Channel 1..32 manually, please check with your local authority regarding permitted radio frequency.

Camera Settings

• Aspect Ratio: Toggle between 16:9 or 4:3 screen aspect ratio. 4:3 is only effective for Photo mode.

• Camera Mode: Toggle shooting Photo or Video. When it's under Photo mode, Auto Recording would not start. When it's under Video

mode, Aspect Ratio is switched to 16:9 automatically.
• Tilt Gain: Adjust slider to control gimbal tilting speed of progressive tilting.
• Gimbal Roll Adjustment: Select gimbal adjustment type of Disable/ Auto/Manual. "Auto" means to check and adjust gimbal leveling every 2 seconds. "Manual" means to adjust and save gimbal roll angle per "Manual Gimbal Roll" setting below, which is similar to "Adjust Gimbal Roll" in DJI GO/Pilot app.
• Manual Gimbal Roll: Adjust gimbal roll manually with 0.1° precision. Sometimes it's hard to adjust 0.1° with touchscreen slider, you may use right-dial (Camera Settings Dial) for tiny adjustment.

Custom Warning
• Low Battery: Display “Low Battery” message and “beep” sound to remind battery dropping below custom level (Disable, 20%-40%).
• Critical Battery: Display “Low Battery” message and “beep” sound to remind battery dropping below custom level (Disable, 20%-40%).
• RC Signal: Display “RC Signal weak” message when the RC signal dropping below custom level (Disable, 10-90).
• HD Signal: Display “HD Signal weak” message when the RC signal dropping below custom level (Disable, 10-90).
• Pilot/Home Distance: Display “Exceeding Pilot/Home Distance” message when Home and Pilot exceeding the custom defined distance (Disable, 10m-200m). In general, the distance between Home and Pilot should not be too far away. In case of the Home point is set to somewhere far away from Pilot, it may imply incorrect GPS location of Home/Pilot.
• Satellite: Display “Insufficient Satellite” message when the number of satellites dropping below custom level (Disable, 6-9).
• Speed: Display “Speeding” message when the aircraft flying faster than the custom speed limit (Disable, 39.6, 43.2, 46.8, 50.4, 54.0, 57.6, 61.2, 64.8 km/h).
• Weak Battery: Display “Weak Battery cell#9, 9.999V, 999mV lower” when any battery cell has lower voltage than other cells more than custom level (Disable, 20mV, 40mV, 60mV, 80mV, 100mV, 150mV, 200mV).

Gesture Control

Gesture is available on FPV live video screen excluding map area (as shown above in Radar Map). We minimize using solid buttons in user interface design to maximize viewable screen area.

• Screen Capture (one-finger swipe-right) to Camera Roll
• Settings Menu (one-finger swipe-left)
• Camera Tilt-up/down SLOWER (swipe up/down SHORTER and HOLD, release to stop)
• Camera Tilt-up/down FASTER (swipe up/down LONGER and HOLD, release to stop)
• Camera Shutter (one-finger double-tap) if Camera Mode is set to Photo. If it's recording video, you may need to stop recording and change Camera Mode to Photo.
• Progressive tilting gesture allows superb control of camera tilting on iPhone/iPad screen. It is similar to tilting wheel (left dial) of the remote controller. The more you turn, the faster the tilting. With aid of Tilt Gain option, you can further adjust tilting speed from extremely slow to super fast.

Custom Telemetry

FPV Camera provides up-to 12 customizable items of telemetry data.

• Display Telemetry Data: Toggle On/Off to show custom telemetry items
• Display Telemetry Label: Toggle On/Off to show custom telemetry labels
• Telemetry Position: Vertical or Horizontal

Items indicated with (Label) below are available as custom telemetry.

- (Temp) Battery Temperature (C)
- (Temp) Battery Temperature (F)
- (Current) Battery Current (A)
- (Remain) Battery Remaining Capacity (mAh)
- (Voltage) Battery Voltage (V)
- (Cycle) Battery Discharge
- (Full) Battery Full Charge Capacity (mAh)
- (Life) Battery Life (%)
- (Level) Battery Level (%)
- (Cell 1) Battery Cell 1 Voltage (V)

- (Cell 2) Battery Cell 2 Voltage (V)
- (Cell 3) Battery Cell 3 Voltage (V)
- (Cell 4) Battery Cell 4 Voltage (V)
- (Cell 5) Battery Cell 5 Voltage (V)
- (Cell 6) Battery Cell 6 Voltage (V)
- (Pitch) Phantom Pitch
- (Roll) Phantom Roll
- (Yaw) Phantom Yaw
- (Sats) Phantom Satellite
- (Height) Phantom Height (ft, m)
- (Lat) Phantom Latitude
- (Long) Phantom Longitude
- (Dist) Phantom Distance (ft, m)
- (Speed) Phantom Speed (mph, km/h)
- (H.S) Phantom H.Speed (mph, km/h)
- (V.S) Phantom V.Speed (ft/s, m/s)
- (ISO) Camera ISO
- (W.B) Camera White Balance
- (Exp) Camera Exposure Metering
- (Format) Camera Photo Format
- (E.V) Camera Exposure Compensation
- (Flick) Camera Anti Flicker
- (Sharp) Camera Sharpness
- (Cont) Camera Contrast
- (Photo) Camera Photo Size
- (Video) Camera Recording Resolution
- (Video) Camera Video Standard
- (Format) Camera Video Storage Format
- (Mode) Camera Mode
- (SD) SD Capture Count
- (SD) SD Total Size
- (SD) SD Remain Size
- (RC) RC Battery Level
- (iOS) iDevice Battery Level
- (CPU) CPU Usage
- (RTH) Return-To-Home Altitude

Touchless UI

- Many pilots prefer to keep both hands on the remote controller. Our unique and creative "Touchless UI" allows pilots to control the app without touching screen.
- • Press and hold C2 button 2 seconds to pop-up Settings menu.
- • Use right-dial to scroll through the menu, and click right-dial to select an item or a sub-menu.
- • For slider, click right-dial to enter and turn right-dial to proper value then click right-dial again to set the value.
- • Click C2 once to go back to previous menu.

Known Issues

• FPV Camera does not intend to replace or duplicate DJI GO/Pilot app, while certain features and settings of DJI app are excluded. Most of these settings (such as MC Settings, RC Settings, Image Transmission Setting, Aircraft Battery, Gimbal Param Settings, etc.) are stored on Phantom, remote controller or battery. Once you set them with DJI Pilot, you can fly with FPV Camera inheriting those settings.
• Navigation Map is developed with Google Map SDK. If your country (such as China) could not access Google Map, then Navigation Map would not show any mapping content.