ROC T1

AI Inspection assistant box for transmission lines

ROC T1

Shooting correction

Backlight adjustment

Live streaming

智轻光电
ZHIQING PHOTOELECTRIC

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ROC T1

AI Inspection assistant box for transmission lines

① AI Module

② WiFi Antenna

③ DC IN

④ USB 2.0

⑤ HDMI

⑥ 4G Antenna

⑦ Display

⑧ 12V2A DC

Introduction

The ROC T1 is an edge computing device with an AI smart chip, a network communication module and external power supply. This device has a built-in AI algorithm model that can work offline and control the drone's gimbal, camera, or other equipment according to the recognition results. This AI Box is capable of providing real-time results that can be visualized from the remote control or in an external display, television or computer by connecting them to the AI Box via HDMI cable.

Compatibility

This device is compatible with DJI Phantom and MAVIC SE drones.

Hardware

It has an AI smart chip (Cambrian MLU220), a 4G communication module, Access Point, an independent power supply, among other components.

Inspection Process

4G
RTK Signal

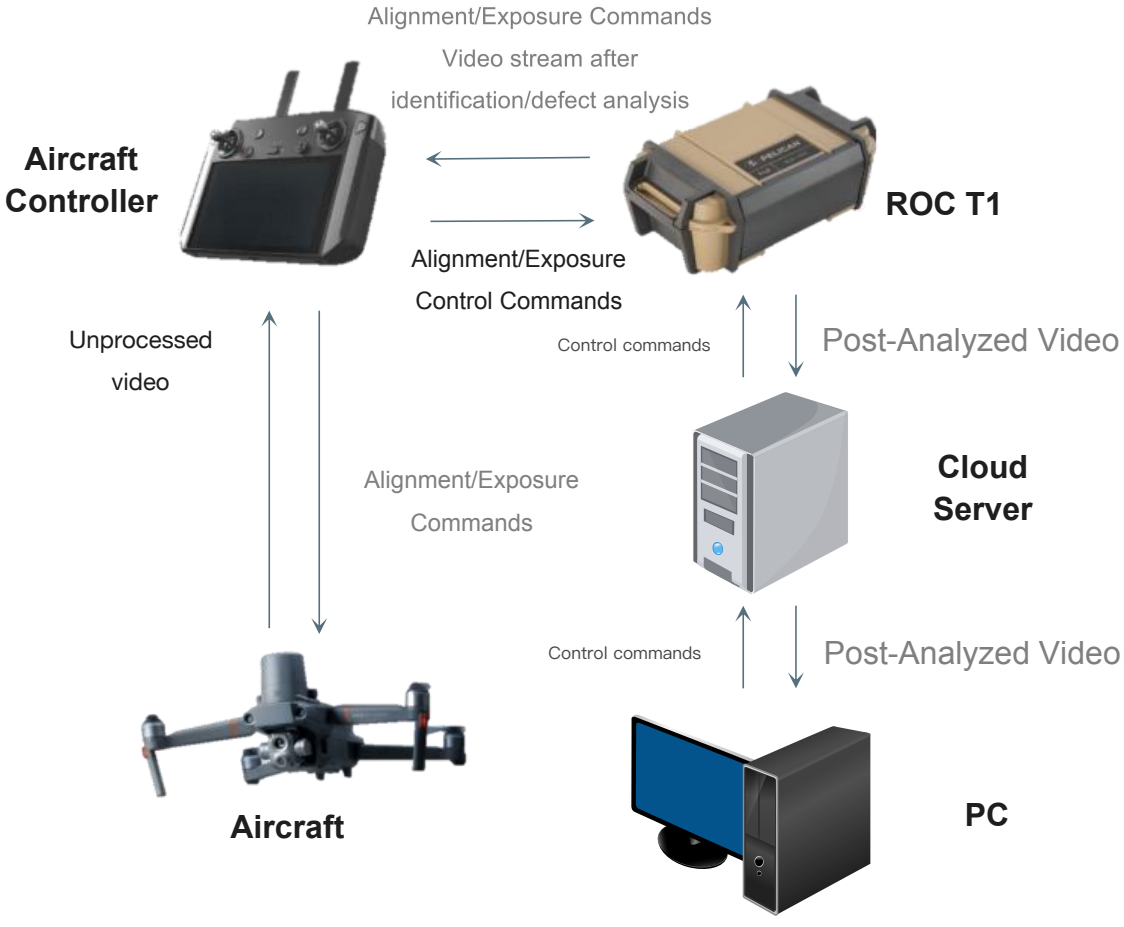
2.4G WiFi real-time
video stream

- Take photos
- Record videos
- Control aircraft

- 2h Battery life
- Interchangeable

1. Detects 48+ elements.
2. Supports .xml and .kml formats.
3. Automatic target focus
4. Backlight adjustment.
4. Reduce hover wait time.

Information Processing.

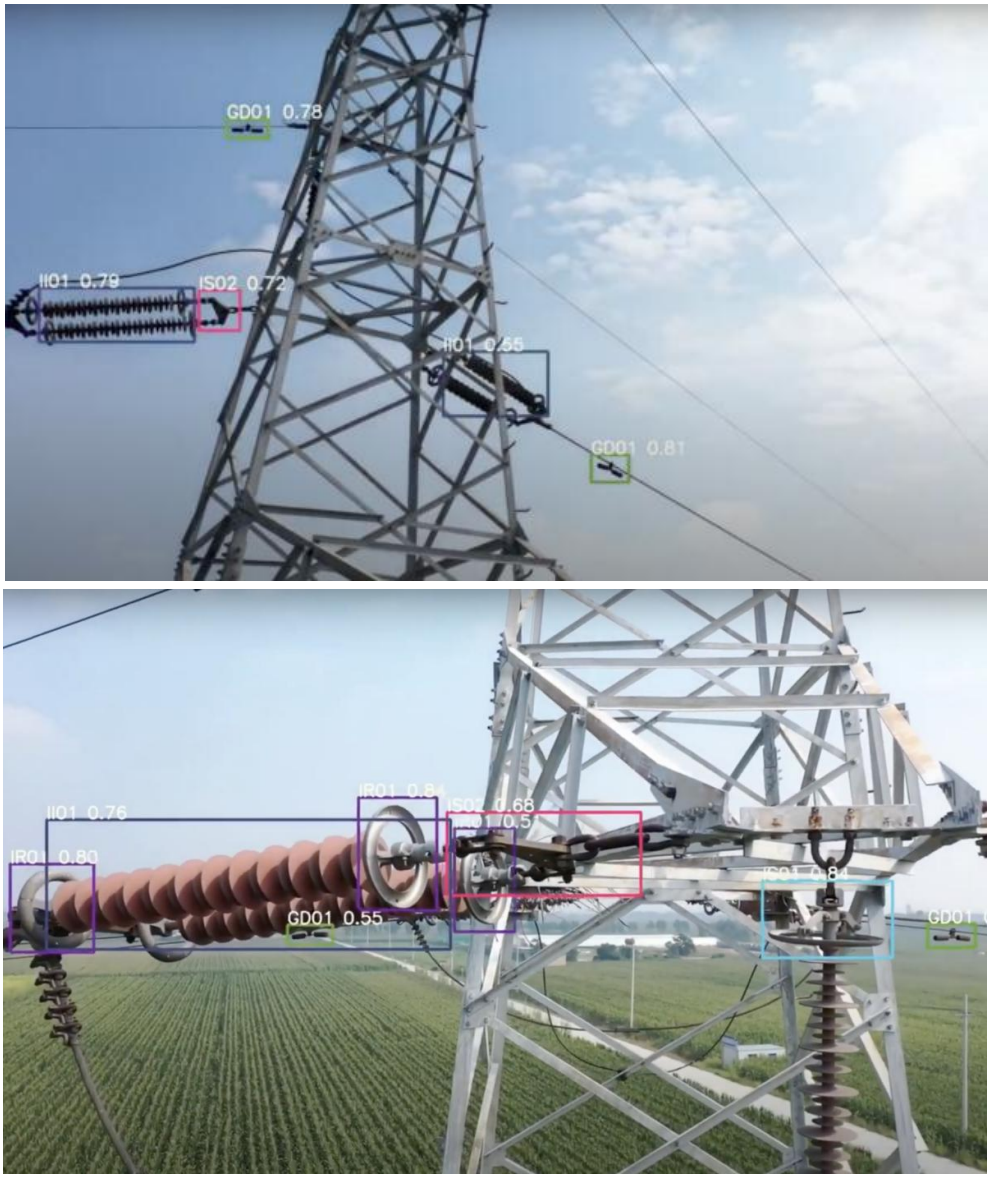


Inspection Process

1. Obtain the cloud points from the inspected tower.
2. Connecting the ROC T1 to the DJI's remote control.
3. Confirm the connection using the specialized ZQ App.
4. Start the inspection by pressing start inside the ZQ APP, and start receiving the analyzed results in real-time.
5. Remove the ROC T1 microSD to obtain the post-analyzed information.

Note: It is also possible to upload and process the data using a cloud server.

Inspection results



Picture 1: Object recognition

Picture 2: Picture processing

By using the ROC T1 it is possible to obtain a high degree of consistence while taking photos. Enabling the user to use the latest pictures and compare them with previously taken images to detect any changes and analyze the existence of a defect.

1st Picture | 2nd Picture | 3rd Picture | 4th Picture

Overall Information			
Battery Life	8 hours	**AI Microchip**	Cambrian MLU220
Communication	4G and WiFi antenna	**Recognition speed**	25 FPS
Accuracy	85%	**Objects**	48 Plus