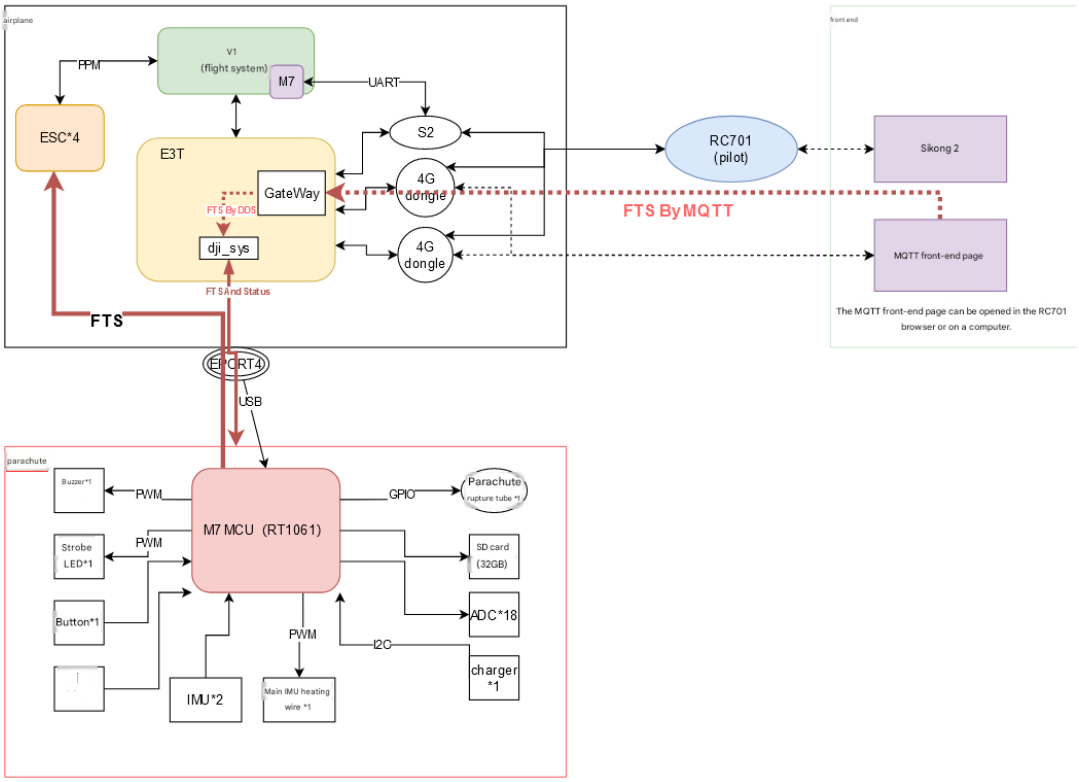
# DJI Matrice 400 FTS Description Report

# Revision Log

| Version | Revision Reason | Revised by | Date |
|---|---|---|---|
| V1.0 | Official Release | Bruce Cheung | 2026.8.26 |
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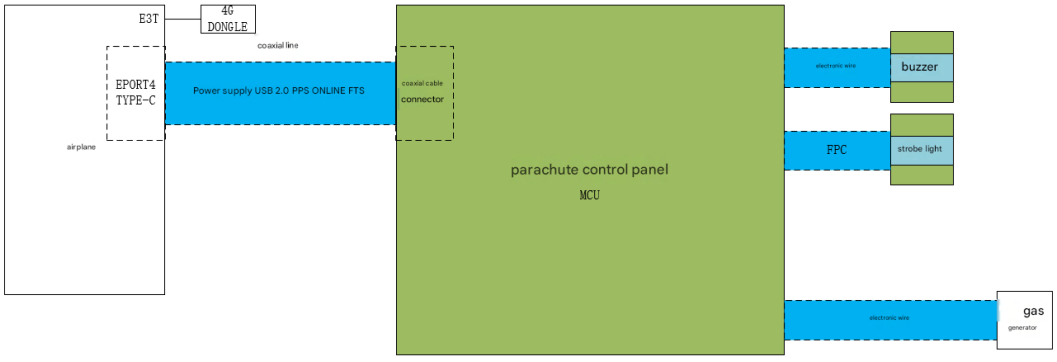
# 1. Solution Hardware Link Diagram

- System Operation Block Diagram

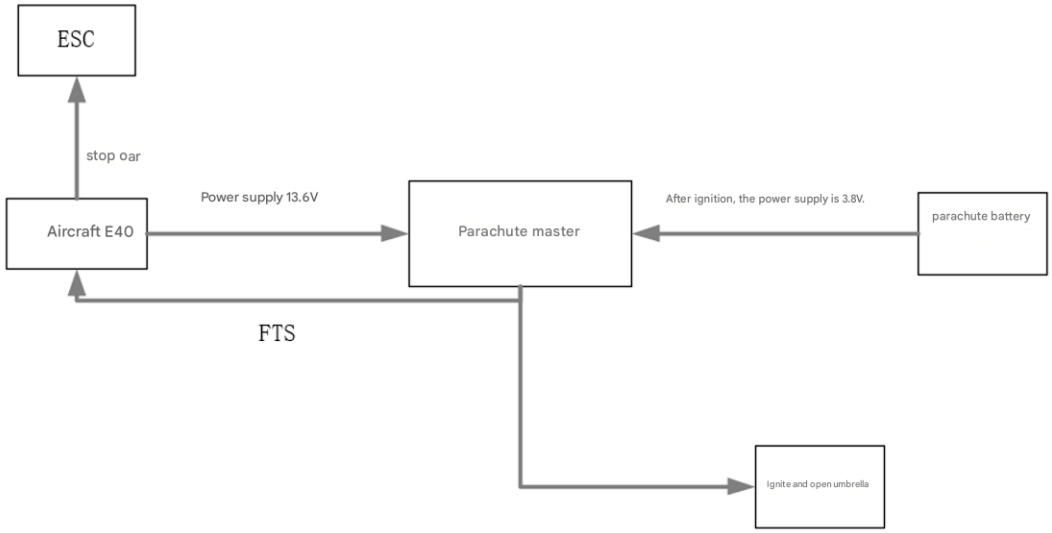



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- FTS Module Hardware Block Diagram

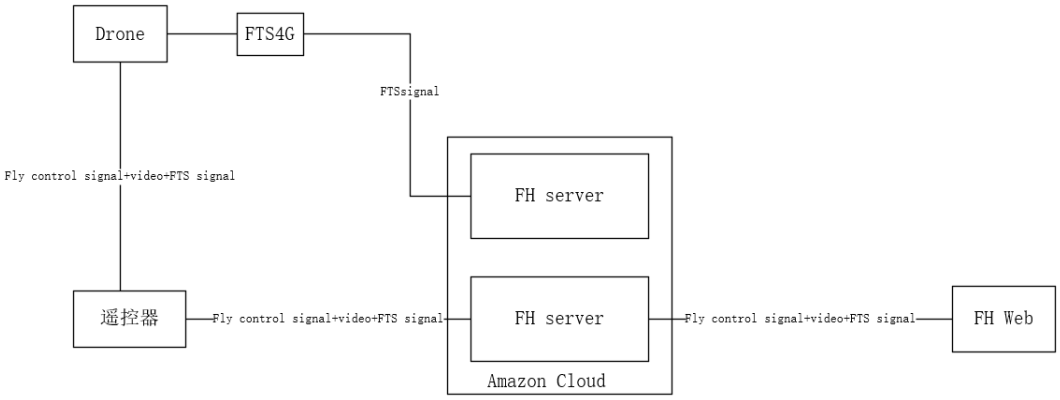


- Power supply topology diagram




Note: The parachute is powered by the aircraft before ignition, and by its own battery after ignition.

## 2. Detailed Link Diagram of FTS System




# FTS Working Principle

Introduction

This module is an independent hardware function module built into the aircraft. One end is physically connected to the four motor drivers of the aircraft, which can trigger the motors to stop propellers; the other end is physically connected to the parachute, which

can receive propeller stop commands from the parachute. The parachute is connected to the server through the aircraft's 4G communication module, which can receive commands from the user interface.

### Aircraft propeller stopping principle

The parachute sends a 500Hz PWM wave to the aircraft's E4 port via a specific pin on the USB . This pin is directly connected to the ESC (Electronic Speed Controller) on the aircraft . Upon receiving the 500Hz PWM, the ESC stops the propellers at maximum speed.

### FTS triggering method

The FTS module has two modes: automatic triggering and manual triggering.

(1) Automatic triggering: When the parachute determines that the opening conditions are met, it can directly trigger the FTS propeller stop via hardware, and then trigger the parachute to open, preventing the propeller blades from getting tangled in the parachute.

(2) Manual triggering: The aircraft has a built-in independent 4G network card that connects to the Flighthub2 server . When the user manually triggers the FTS propeller stop or manually opens the parachute through the Flighthub2 UI page or the UI page on the remote controller, the command is transmitted to the parachute, and the parachute will use hardware to control the FTS propeller stop.

# Independence Design Principle

**Code and Execution Environment Independence**

- The FTS software runs on an independent MCU or an independent memory partition/MPU region separate from the flight control (FCU) and video transmission software.
- The FTS does not use any operating system services from the flight controller (e.g., task scheduling, memory allocation, file system).

- Even if the flight control software completely fails (runaway, deadlock, or crash), the FTS software remains capable of responding normally to external termination commands.

**Communication Link Independence**

- FTS commands are transmitted via a dedicated FTS link (4G link) that is independent from the flight control remote control and video transmission link.
- The flight control software cannot generate or simulate FTS trigger signals.
- FTS commands issued from the ground station (FH Web, FH Server) are sent directly to the FTS module without passing through the flight controller.