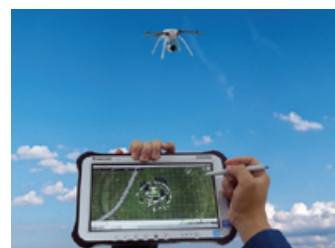




Realizing Integrated Data Transmission and Flight Control for Hengneng's UAV

| Client | Beijing Hengneng Technology Co., Ltd.
| Product | Toughpad FZ-G1

In recent years, unmanned aerial vehicles (UAVs) have emerged as versatile players in multiple fields, such as in electric power, geographical mapping, fire protection, and disaster relief, due to their advantage of being free from the restrictions of a complex environment. Panasonic Toughbook and Toughpad have been used extensively in aerial photography data transmission for industrial UAV ground stations and flight control terminals due to their adaptability in complex working environments. Beijing Hengneng Technology Co., Ltd. is a China's provider of UAV big data analysis and solutions, a leader of high-end UAVs. Its major product, the industrial "Eagle" UAV, features industry-leading wind-resistant performance and security strategy functions such as automatic return in case of loss of communication, and double satellite systems, enabling it to execute tasks in various complex and real environments.



Why Toughpad FZ-G1 was chosen

Point 1

Visible, high-brightness screen even under strong light

Point 2

Tough and durable protection

Point 3

Portable size and weight



Two years ago, Hengneng Technology installed fully automated flight control software into a Panasonic Toughpad FZ-G1—the model series that has been comprehensively adopted as the image transmission and control terminal for the "Eagle."

"The Panasonic Toughpad FZ-G1 is more advanced than a joystick in UAV control. It is expected that Toughpad FZ-G1 will replace joysticks for flight control just like digital cameras replaced film cameras. The largest advantages of the Toughpad FZ-G1 involve simple operation, strong portability, and a level of protection up to IP65." said Hengneng's product manager. Hengneng's industrial "Eagle" UAV is powered by Panasonic Toughpad FZ-G1 solution, which integrates data transmission for UAV ground stations and flight control.

[Background to introduction: Revolutionizing traditional UAV control terminals](#)

The use of Panasonic Toughpad FZ-G1 simplifies UAV data transmission and control.

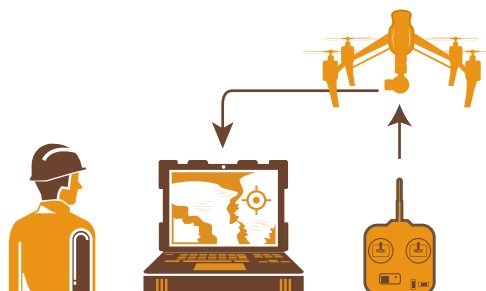
At present, most of the UAV ground stations mainly rely on joystick remote controllers (referred to as "joystick controllers" for short) for the operation and control of UAVs, and

uses tablets or laptops as the display platform for the live images returned by UAVs. (See the following figure for applications.)

As for the above-mentioned operation method, Hengneng Technology considers that this method comes with the disadvantage of complex operation, singular PC function, and poor portability. To upgrade this traditional operation method, Hengneng Technology has decided to install fully automated flight control software into a tablet to use it as a control terminal, so as to replace the complicated joystick operation, thus realizing the integrated image data transmission and control of UAVs.

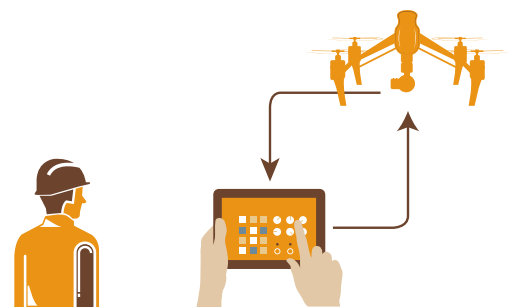
Regarding the selection of terminals for control and data display, Hengneng Technology's product technology manager said, "Using a tablet to operate UAVs, we can always hold it, or also, put it on the holder or table in contrast to other devices."

"Additionally, as the usage environment of UAV controls often involves harsh outdoor conditions, the product size, weight, heat dissipation, screen luminance, and level of protection are critical factors. By testing many products, we finally realized that Panasonic Toughpad FZ-G1 is the most satisfactory choice."



New UAV control solution

Hengneng's UAV, powered by Panasonic Toughpad FZ-G1 as supporting equipment, is not controlled via a joystick controller; instead, the flight control mode is graphically displayed via the control software in computer language. In other words, the entire control and display comes through one piece of equipment: Panasonic Toughpad FZ-G1. Panasonic Toughpad FZ-G1 controls the flight route and location of UAVs, and can receive data even in complex environments, thus enables to be applied for various site environments in a wide range of industries. Such a simplified operation mode enables users unfamiliar with remote sensing technology to operate the equipment easily and rapidly. The stability and durability as well as the ultra-long battery life of Panasonic Toughpad FZ-G1 greatly help the end users of UAVs.



Product: Toughpad FZ-G1