# TDS
## Tethered Drone Systems ®

**continuous flight**

**secure communications**

**multiple applications**



100M ABOVE THE RUNWAY

The tethered drone can be mains or generator powered, enabling autonomous flight and a multitude of potential applications.

It provides live data streaming and releases workers from dangerous or time-consuming tasks.

# Continuous flight, secure communications and multiple applications

**TDS** Tethered Drone Systems ®

## The Technology

- Can carry a variety of payloads to meet many use cases

- Flight ceiling: 120m (400ft) AGL – CAA regulations

- Flight time restricted only by ground power supply

- Ground power supply: 240 VAC either mains (13A) or generated power

- Tether supplied with transformed DC voltage

- Secure bi-directional communication via fibre optics in the tether for UAS controls and payload data

- TCP/IP payload interface with variable power supply

- Automated tether management via dynamic winch

- Cross platform multi-user web interface for real time system control over Ethernet

- Secure user authentication and user management

- Control through either local or remote networks with FIPS-140 TLS encryption

- Multiple levels of redundancy for safety
  – on board battery backup for power failure to deliver a safe landing.

- Virtually impossible UAS flyaway when emergency procedures are engaged

## The Future

- Development and upgrade to the power and communications system

- Tether enabling high bandwidth fibre optic communication for UAS control and secure payload data transfer

- Upgraded power delivery will take the UAV to a new 300m ceiling with varied payloads or allow an increased payload at a 100m ceiling

## Communications

Deploy a radio repeater to improve communication on and off shore. Or a temporary 4/5G phone mast to provide emergency cover or for events such as festivals or shows.

## Broadcasting

Aerial shots offer great viewer experiences for broadcast events. 4K cameras with optical zoom, 3 axis gimbal control and high speed secure image transfer. Autonomous or remote flying provides greater flexibility and reduces costs.

## Military

Fully encrypted data transmission and the ability to transmit over the entire operational area from a rapidly deployable asset. Interchangeable payloads enable force protection duties using CCTV operated with complete autonomy.

## Agriculture

Free flying drones have limited flying times and data transfer issues. The Tethered Drone has virtually unlimted flight times and full data security. Interchangeable payloads, such as a CCTV camera, enhance farm security and crop management.

## Security

Camera systems with 4K and X30+ optical zoom lens, plus thermal imaging with full gimbal control. Secure high-speed data transfer to the ground and onward to any location offers an ideal solution.

## Emergency Response

In many situations restricted flight time and the danger of RF jamming create a hazard. The Tethered Drone provides flight times of 24+ hours and totally secure data transfer for real time operational viewing of CCTV and thermal images plus localised WiFi to support operations.

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