



Small drones = BIG impact



| **Runner** | **Sentinel** | **Scimitar** | **Scorpion** |

# Core models



## RUNNER

AUTONOMOUS DELIVERY

- Simple operation
- Auto terrain follow
- Rapid deployment
- Weather resistant
- Secure - no data gathering
- Resists RF jamming
- Acts as a radio mast
- 1.2 kg payload - 50km
- 3.5 kg payload - 20km



## SENTINEL

TETHERED DRONE

- Runs directly from vehicle:
  - fixed battery
  - idling vehicle (12volt or 24volt)
  - mains
- European-made drone
- Weather-proof
- Lightweight and flexible
- Rebroadcasts
- Payload agnostic
- Resolves a blackspot
- Extends radio network



## SCIMITAR FPV

FAST & SAFE

- Weather resistant
- Simple operation
- Rapid Deployment
- Small frame
- 2 kg payload
- 15 km range
- 15 min flight time
- >120 km / hour speed



## SCORPION FPV

PROGRAMMED TARGETING

- Rapid assembly
- 2 kg payload
- Range 12-15km
- Flight time: 15 minutes
- 120Km / hour speed

# RUNNER

*AUTONOMOUS DELIVERY = Resists jamming*

- 1.2 kg of payload up to 50 km
- 3.5 kg up to 20 km (Up to 5 kg, if Upgraded)
- **Simple operation**
  - Select co-ordinates from any smart device (no app installation required)
  - Select required height and "GO"
  - Drone flies to selected location
- Follows terrain automatically
- Rapid deployment
- Weather resistant
- Total security - no onboard data gathering
- No radio frequency - resistant to RF jamming
- 'Mast Mode' feature - Runner can act as a radio mast for 1 hour

***Flies with inertia navigation and radar –  
Does not use GPS, which can be jammed.***

# RUNNER Applications

## FOR DELIVERIES : Multiple Payloads



To send water, medical supplies, amunition, it hardware, food etc.

## FOR ELECTRONIC WARFARE (EW)



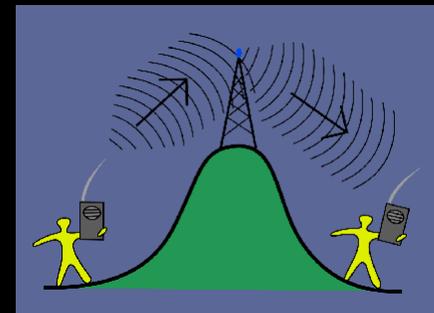
Runner doesn't use radio frequencies (RF) so can carry an RF jammer

## AS A NODE ON A MESH RELAY NETWORK



Having a wave relay radio on several runners would make them look like troop movements – perfect for distraction techniques  
As well as overcoming black spots

## AS A RADIO REPEATER



Having a radio repeater can overcome some of the rf jamming problems that occur when using FPV drones, giving them further range

# RUNNER Deployment

## SWARMING

1 ▶ 100 ◀ 1

One user can operate up to 100 drones with one smart device

This makes it perfect for sending military logistic payloads

In addition, it could be used as a scare tactic - sending hundreds at a time to rout an enemy, even without any kinetic effect payloads

See more on Page 10





## **SENTINEL**

**TETHERED  
DRONE**

## **SENTINEL**

**Safer to Use: NO Flyaway**

**Runs directly from a vehicle with our patented power systems :**

- run from fixed battery
- an idling vehicle ( 12volts or 24volts )
- mains power

**European-made drone systems (i.e. No significant Chinese parts)**

**Weather-proof, lightweight and flexible with high wind resistance**

**Suitable for every military and government agency (including the US)**

**Payload agnostic for ultimate flexibility**

**Proved effective at communications rebroadcast**

- Wipes out a blackspot
- Extends reach of the radio network



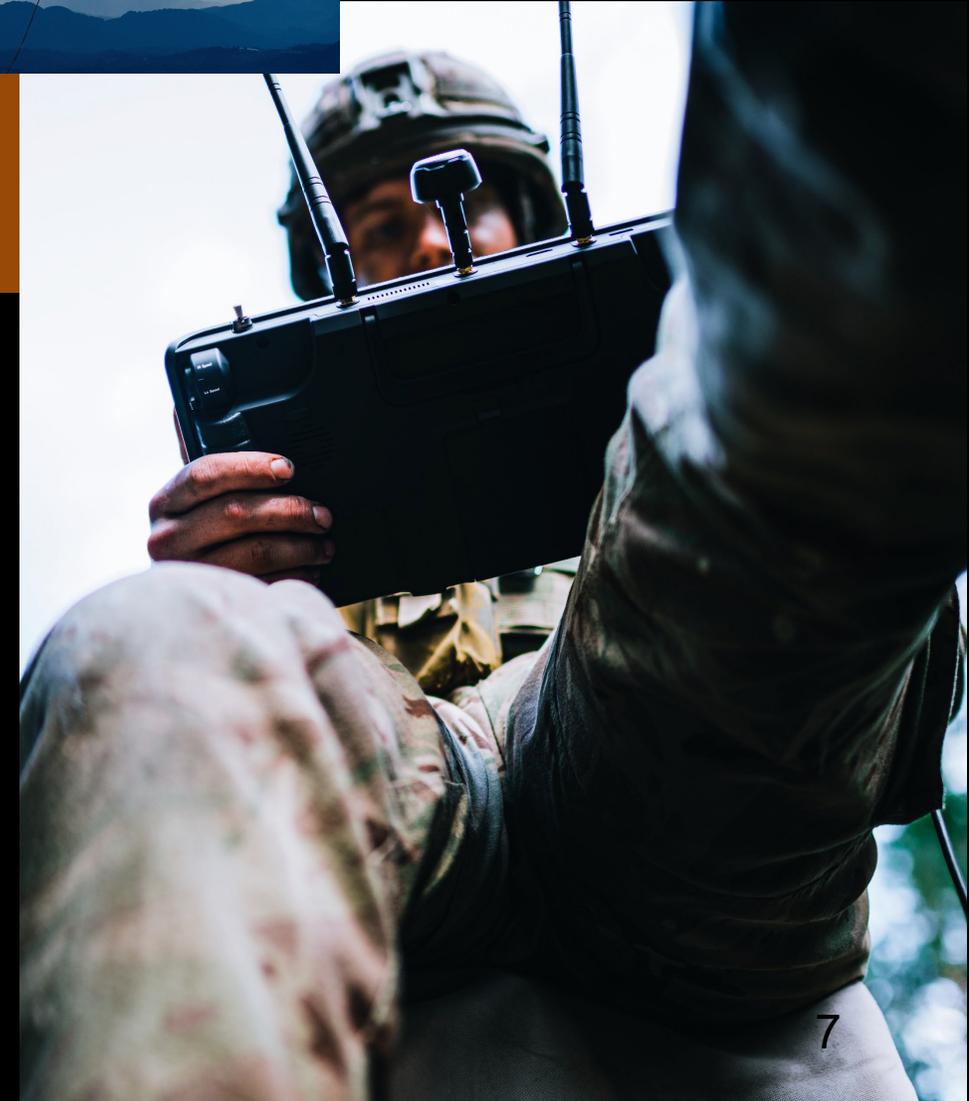
# SENTINEL

## TETHERED DRONE

Versatile.  
Weatherproof.  
Stays aloft for days.



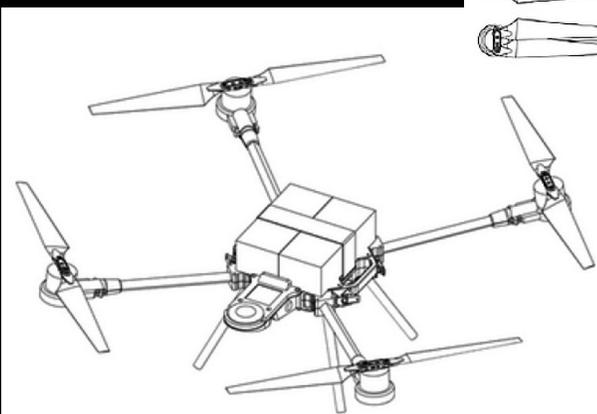
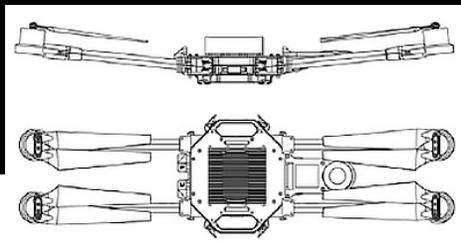
- **NO BATTERY** - Power from a power source via a cable .  
**BENEFIT:** Flying time can be extended from 15-20 minutes to hours.
- **The drone is tethered** to the ground via a power cable  
**BENEFIT:** Broader uses in new areas, including increased intelligence gathering, surveillance and target acquisition.
- **Long Local Airtime**  
**BENEFIT:** They can be used in place of masts – much **QUICKER** to set up, can reach **HIGHER** altitude and are **LIGHTER** to carry
- Ideal for the Military, blue-light, security sectors, Border security, Event monitoring, Prison surveillance, and more.
- Critical national infrastructure security.





# SENTINEL

## Tethered drones made easy Your eye in the sky



|                                                  |                                                                                                                                                                |
|--------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>DRONE TYPE</b>                                | QUADCOPTER                                                                                                                                                     |
| <b>FREQUENCY BAND</b>                            | ~                                                                                                                                                              |
| <b>PAYLOAD CAPACITY</b>                          | UP TO 5 Kilograms                                                                                                                                              |
| <b>NAVIGATION SYSTEMS</b>                        | GPS, ATTI                                                                                                                                                      |
| <b>PROPELLOR TYPE</b>                            | CARBON FIBRE + POLYMER                                                                                                                                         |
| <b>PROPELLOR LENGTH</b>                          | 22 inches (56 cms)                                                                                                                                             |
| <b>MOTORS</b>                                    | 4 x 320 Kilo Volt                                                                                                                                              |
| <b>STANDARD OPERATING POWER</b>                  | 300 watt TYPICAL / 1000 watt MAXIMUM                                                                                                                           |
| <b>PROCESSOR SPECIFICATION</b>                   | 32BIT ARM@ STM32H753VIT6 CORTEX@-M7,<br>1 MBYTE OF RAM: 192 KBYTES OF TCM RAM                                                                                  |
| <b>OPERATING SOFTWARE</b>                        | NON-CHINESE CONFIGURED AND INSTALLED SOFTWARE                                                                                                                  |
| <b>UNFOLDED DIMENSIONS</b>                       | APPROX. L 750 mm X W 750 mm X H 150 mm                                                                                                                         |
| <b>FOLDED DIMENSIONS</b>                         | APPROX. L 1000 mm X W 290 mm X H 150 mm (WITHOUT<br>OPTIONAL REMOVABLE LANDING LEGS) YES - 6S                                                                  |
| <b>BATTERY BACK-UP ONBOARD INPUTS</b>            | 1800MAH XT90 CONNECTION                                                                                                                                        |
| <b>GROUND POWER INPUT TYPE</b>                   | ETHERNET RJ45<br>MAINS 220 to 240 Volts (MAINS POWER SUPPLY)<br>VEHICLE 12 or 24 Volts (VEHICLE POWER SUPPLY)<br>BATTERY 12 or 24 Volts (VEHICLE POWER SUPPLY) |
| <b>TETHER LENGTH</b>                             | 50 Metres                                                                                                                                                      |
| <b>DATA TRANSFER TYPE &amp; SPEED</b>            | DATA OVER POWER – 10 MB/S, megabytes per second                                                                                                                |
| <b>TETHER BREAKING STRAIN</b>                    | >65 Kilograms                                                                                                                                                  |
| <b>TETHER SYSTEM OPERATING VOLTAGE HAND</b>      | 270 – 400 VDC UP TO                                                                                                                                            |
| <b>CONTROLLER (IFUSED) TRANSMISSION DISTANCE</b> | 20 Kilometres                                                                                                                                                  |
| <b>SIGNAL BANDWIDTH</b>                          | 10 MHZ/ to 20 MHZ                                                                                                                                              |
| <b>MICRO HDMI OUTPUTS</b>                        | 2                                                                                                                                                              |
| <b>SOFTWARE COMPATIBILITY OPERATING</b>          | WINDOWS, ANDROID                                                                                                                                               |
| <b>TEMPERATURE</b>                               | -20° C to +50° C                                                                                                                                               |

# SCIMITAR FPV DRONE

*EASY and TARGETED*



**FAST.  
SAFETY.  
SURPRISE.**

- 2 kg of PAYLOAD
- 15 km OPERATING RANGE
- **Up to 120 km/hour SPEED**
- Low Radar signature
- Simple OPERATION
- Quickly DEPLOYABLE
- 15 Minute FLIGHT TIME
- Weather RESISTANT
- SMALL Frame

# RUNNER and SCIMITAR integration

## SWARMING SCENARIO



Several **RUNNERS** carrying radio repeaters at 200 metres

They rebroadcast the signal to the **SCIMITARS**

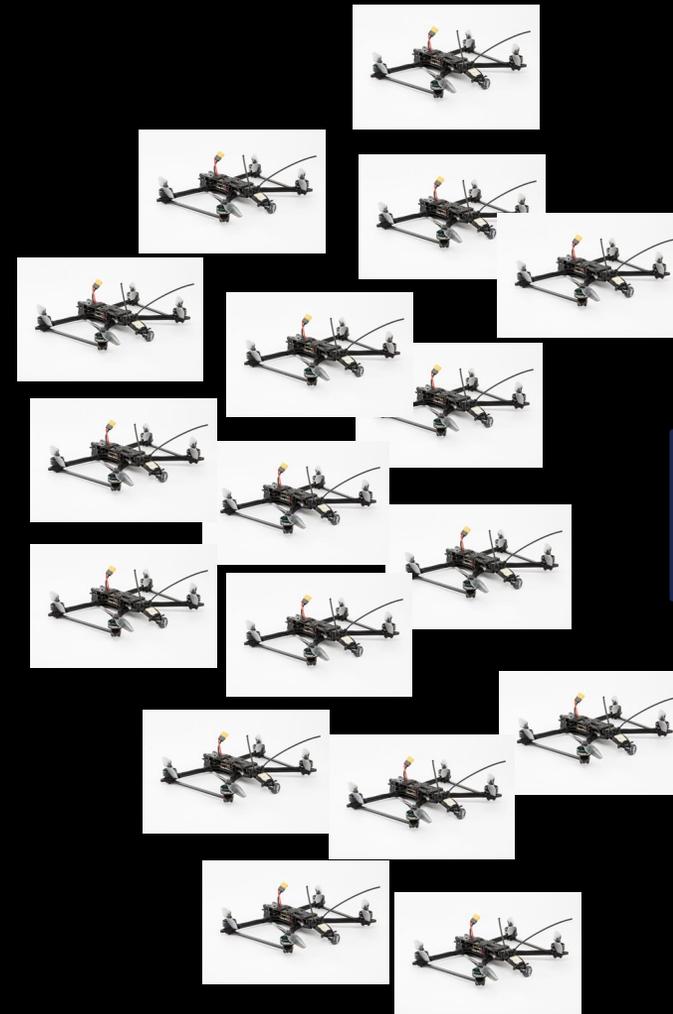


Power of the radios can be increased far above that used at ground level



Overcome radio jamming

Ensure more accurate targeting



# SCORPION FPV

## TARGETING MADE EASY

*Simple-build*  
*Ready to program*

- Rapid assembly
- 12-15 km Range
- Altitude up to 500 metres
- Speed: Rapid 120 km/hour
- Wind Resistant >29 km/hour

The program features provide automatic guidance to the object in the conditions of local electronic warfare, at the final stages of the flight.

(Developed for rapid implementation in Ukraine)



- Folding 7 inch (18 cm) tri-props

- 310 x 295 mm unfolded
- 110 x 435 mm folded

- Flight Processor: STM32F7222

- Motors 1300 Kilovolt F90

- Payload 2 kg

- Enhanced long range radio antenna arrangement and configuration

- INBUILT active VTX cooling for HIGH POWER applications

- Folding design for EASY TRANSPORT

- NO SOLDER assembly  
(completed from parts to finished, in minutes)

- IN THE FIELD repairable (NO soldering)

- Arduino on-board for software programming

- BRITISH designed and made

- Battery – 6s / 22.2 volts / 5600 Mah

# MODEL OVERVIEW

| MODEL              | <br><b>RUNNER</b>                                                                         | <br><b>SENTINEL</b>                                                                                          | <br><b>SCIMITAR</b> FPV                      | <br><b>SCORPION</b> FPV                           |
|--------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|
| <b>TYPE</b>        | Autonomous delivery                                                                                                                                                        | Kevlar Tether                                                                                                                                                                                  | FPV                                                                                                                            | FPV                                                                                                                                 |
| <b>PAYLOAD</b>     | 3.5 Kg (20 km)<br>1.2 Kg (50 km)                                                                                                                                           | Up to 5 kg                                                                                                                                                                                     | 2 kg                                                                                                                           | 2 kg                                                                                                                                |
| <b>FLIGHT TIME</b> | 65 minutes                                                                                                                                                                 | Unlimited flight time<br>50 metre height                                                                                                                                                       | 12 to 15 minutes                                                                                                               | 15 minutes                                                                                                                          |
| <b>RANGE</b>       | 50 km                                                                                                                                                                      | N/A                                                                                                                                                                                            | 15 km                                                                                                                          | 15 km                                                                                                                               |
| <b>FEATURES</b>    | <ul style="list-style-type: none"> <li>▪ Rapid deployment</li> <li>▪ Auto terrain follow</li> <li>▪ Secure<br/>-no data gathering</li> <li>▪ Resists RF Jamming</li> </ul> | <ul style="list-style-type: none"> <li>▪ 12 or 24 volt powered</li> <li>▪ Rebroadcasts</li> <li>▪ Resolves a Blackspot</li> <li>▪ Extends radio Network</li> <li>▪ Payload agnostic</li> </ul> | <ul style="list-style-type: none"> <li>▪ Quickly deployed</li> <li>▪ 120 km/hour speed</li> <li>▪ Simple to operate</li> </ul> | <ul style="list-style-type: none"> <li>▪ Fast 120 km/hour</li> <li>▪ Speed</li> <li>▪ Able to fly in GPS-denied airspace</li> </ul> |



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