TELEDYNE FLIR

SKYRANGER® R70 ECOSYSTEM

The Category Defining Multi-Mission Small UAS

THE LEADING SUPPLIER OF

SMALL UNMANNED SYSTEMS TO GOVERNMENT, DEFENSE, AND PUBLIC SAFETY CUSTOMERS, WORLDWIDE

OVER 25,000

platforms and payloads deployed into the most demanding operating environments

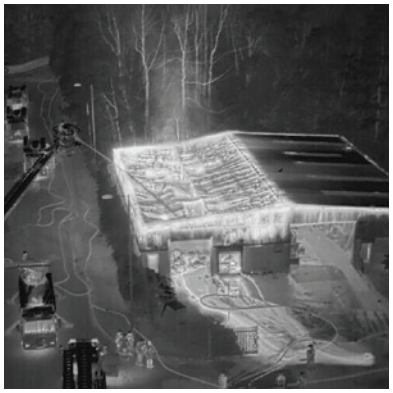
OVER 1,000

personnel dedicated to innovation and customer success

SEARCH & RESCUE

TACTICAL OPERATIONS

DISASTER & EMERGENCY RESPONSE



CRASH RECONSTRUCTION

NETWORK RETRANS

PERSISTENT OVERWATCH

SKYRANGER R70

YOUR SMALL UAS MULTI-TOOL

ADAPTIVE. RUGGEDIZED. INNOVATIVE.

The SkyRanger R70 is an adaptable and resilient sUAS platform, delivering a wide range of payload capabilities with the agility and single-operator deployment footprint of a proven small UAS.

ONE PLATFORM, MANY MISSIONS

The SkyRanger's 3.5kg carrying capacity, open payload architecture, and dynamic and responsive flight control, provides an unprecedented level of flexibility in a single VTOL UAS.

FREE-FLYING, TETHERED, OR VEHICLE INTEGRATED

The SkyRanger can be easily adapted in the field for all primary modes of UAS operation. No tools or engineers required.

SKYRANGER R70

MULTI-MISSION UAS

RUGGED & RELIABLE

Carbon fiber and magnesium airframe, tested to IP-54 and military standards

INTELLIGENT & AUTONOMOUS

Multiple NVIDIA processors for AI on the edge

PAYLOADS UP TO 3.5KG

Easily attach, carry and deliver payloads up to 3.5kg (7.7 lbs)

FLEXIBLE & MODULAR

Application and Unmanned Development Kit for payloads and software

Various standard options and accessories shown above. Contact us for details.

FLEXIBLE/MODULAR DESIGN + RUGGED ENVIRONMENTAL TOLERANCES + EDGE OF NETWORK AI + MULTI-MODAL SENSING

= PRECISE OPERATION IN CONTESTED DOMAINS & ALL WEATHER CONDITIONS

CARBON FIBER + MAGNESIUM IP-RATED AIRFRAME

- Compact design is deployable in minutes by a single operator
- Tested to IP-54 and military standards

4X REDUNDANT BATTERIES

- Maintains safe flight, even under single battery failure
- < 99Wh batteries enable transport on commercial aircraft
- Provides backup power under tethered flight

2X REDUNDANT NAVIGATION SYSTEMS

Maintains safe flight in high-risk operating environments, even under complete subsystem failure

FRONT-FACING EO/IR CAMERA

- Provides ISR and situational awareness
- Primary forward collision avoidance sensor*
- High definition daylight video and 320x240 infrared imaging

ONBOARD TX2 PROCESSOR

- Maximum edge of network compute power for AI & autonomy
- Developer access via Unmanned Development Kit

MODULAR PROPULSION SYSTEM

Optimize SkyRanger for different missions by simply switching arms and props

4X COMPUTER VISION CAMERAS

- Provides autonomous launch and recovery in close quarters or from moving platforms
- Enables position hold in contested electromagnetic environments
- Provides sensing input for lateral collision avoidance*

MULTI-USE PAYLOAD ARCHITECTURE

Future proof – Payload Development Kit enables Teledyne FLIR, partners, and users to quickly develop and deploy sophisticated, integrated payloads

ACCESSORY PORT

Provides mechanical integration for auxiliary hardware; Block 2 airframe only

LASER ALTIMETER

Maintains consistent altitude over uneven terrain for safe BvLOS operations

*Dependent on future software upgrade

FREE FLIGHT OPERATION

ANYWHERE, ANY TIME

SkyRanger executes the most complex and demanding missions up to 15,000’ MSL, in winds gusting to 90 kph (56mph),in rain and snow, and at temperatures from -20°C to 50°C (-4° F to +122° F).

BOUNDLESS VERSATILITY

Four electromechanical interface points allow the integration of a wide range of sensors and accessories including imaging, CBRNe, LIDAR and communications payloads weighing up to 3.5kg (7.7 lbs).

LOWER COGNITIVE LOAD

Automated and autonomous navigation ensures safe and effective operation, even in denied environments or challenging launch and recovery locations.

SKYRANGER R70

TETHERED OPERATION

ADAPTABILITY

Quickly switch from tethered to free flying operations. In the unlikely event of loss of tether power, aircraft batteries offer an alternative power source.

PERSISTENT OPERATION

The SkyRanger Tether Kit enables persistent operation at a fixed location, delivering both aircraft power and datalink over a secure and RF-quiet link.

MISSION COVERAGE

Rated to carry 2kg (4.4 lbs)*, the Tether Kit supports the latest in the StormCaster payload family, as well as other payloads including tactical radios.

*Requires Block 2 Tether Kit and Block 2 airframe.


TELEDYNE
FLIR
SPORT
F150

VEHICLE INTEGRATED OPERATION

MULTIPLE OPERATING MODES

Launch, recovery, and operation of the UAS - free flying or tethered - from stationary or moving vehicles in both land and maritime environments.

INTEGRATION WITH VEHICLE SYSTEMS

UAS vehicle integration provides power, command & control, and secure storage for SkyRanger, allowing UAS operators to control the UAS locally from inside the vehicle or remotely.

SKYRANGER R70

MULTI-ROLE PAYLOADS

IMAGING PAYLOADS

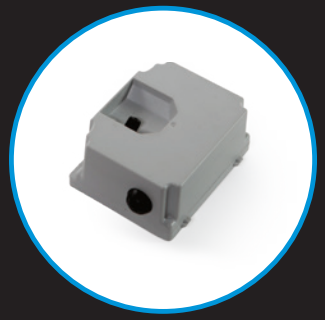
Multiple imaging payloads are available that offer continuous zoom LWIR, ultra low-light imaging, and high fidelity daylight and thermal.

CBRNE PAYLOADS

The MUVE C360 multi-gas detector, the B330 continuous biological detector, and R430 radiation detector are integrated, swappable CBRNe payload solutions.

CONTINUOUS AIRCRAFT OPERATIONS

The Tether Kit is a modular, highly transportable system enabling persistent mission support, delivering power and data for extended, secure RF-quiet operation.



CARRY & DELIVERY PAYLOAD

Osprey has the ability to carry or drop payloads up to 7.7 lbs; provides ability to construct simple payloads in the field.

PAYLOAD DEVELOPMENT KIT

Extends payload development to end-users and third-party integrators, enabling the rapid development of application specific payloads.

FLEXIBLE PAYLOAD ARCHITECTURE

PAYLOAD DEVELOPMENT KIT (PDK)

Extends payload development to end-users and third-party integrators, enabling the rapid development of application-specific payloads for the SkyRanger platform.

LEVERAGE A FULL SET OF PAYLOAD DEVELOPMENT TOOLS

ELECTRICAL + MECHANICAL + SOFTWARE INTEGRATION

Enables full integration with the SkyRanger airframe, including:

- Mechanical mounting
- Power from aircraft batteries
- Sensor data from aircraft (e.g. GPS)
- Secure IP networking for payload data

VIBRATION-ISOLATING MECHANICAL AIRFRAME DESIGN

Minimizes the need to deploy dedicated stabilization into the payload

SUPPLEMENTARY EO/IR PAYLOAD

Provides day/night ISR capability while flying non-optical payloads

EXPANDED PAYLOAD SWAP ENVELOPE

Able to carry integrated payloads up to 3.5 kg (7.7lbs)

IMAGING PAYLOAD

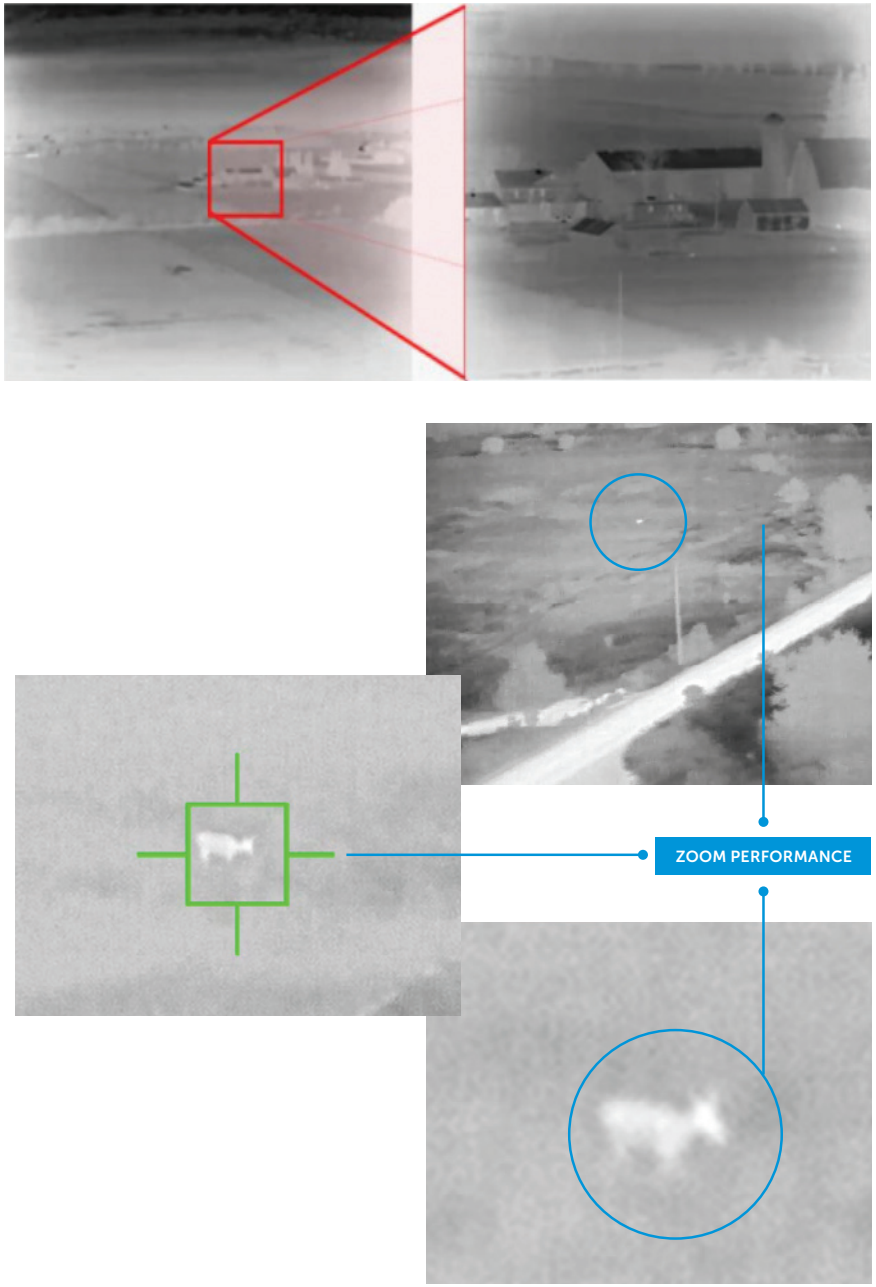
STORMCASTER™-T

CONTINUOUS ZOOM LWIR IMAGING

The StormCaster-T continuous zoom LWIR payload supports detection, recognition, identification and target acquisition day or night, with maximum range and time on station.

PERFORMANCE SPECIFICATIONS

SENSOR	Boson, 12µm, 30Hz/9Hz
RESOLUTION	640 x 512
FIELDS OF VIEW	31° to 6° optical continuous zoom 2° with digital zoom
GIMBAL LINE-OF-SIGHT STABILIZATION	< 0.3 mRad
GIMBAL STABILIZATION	3 axis (pitch, roll, yaw)
GIMBAL VIBRATION ISOLATION	6 axis passive on aircraft
CONTROLLABLE RANGES OF MOTION	Pitch: +20/-90 degrees Yaw: +/- 180 degrees
SLEW RATE	60 deg/s
WEIGHT	1kg (2.2 lbs)
DIMENSIONS	196mm (W) x 159 (L) x 223mm (H) 7.7" (W) x 6.2" (L) x 8.7"(H)
OPERATING TEMPERATURE	-20° C to 45° C (-4° F to 113° F)



Zoom Performance:
Comparative Imagery for 15mm to 75mm continuous zoom

IMAGING PAYLOAD

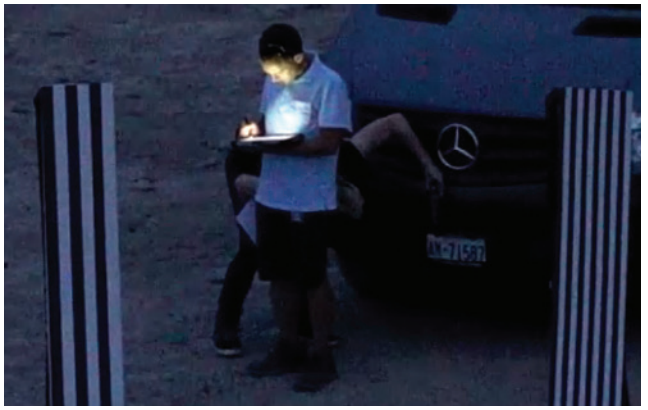
STORMCASTER™-L

ULTRA LOW-LIGHT ISR, TRACKING AND MAPPING

The StormCaster-L ultra low-light imaging payload offers unmatched ISR, tracking and mapping performance during twilight and nighttime operations.

PERFORMANCE SPECIFICATIONS

RESOLUTION	4240 x 2832 max, 12.2 MP
FIELDS OF VIEW	39° optical, 11° with digital zoom
GIMBAL LINE-OF-SIGHT STABILIZATION	< 0.3 mRad
GIMBAL STABILIZATION	3 axis (pitch, roll, yaw)
GIMBAL VIBRATION ISOLATION	6 axis passive on aircraft
CONTROLLABLE RANGES OF MOTION	Pitch: +20/-90 degrees Yaw: +/- 180 degrees
SLEW RATE	60 deg/s
WEIGHT	1.3kg (2.9 lbs)
DIMENSIONS	196mm (W) x 201mm (L) x 239mm (H) 7.7" (W) x 7.9" (L) x 9.4"(H)
OPERATING TEMPERATURE	0° C to 45° C (32° F to 113° F)



License plate ID at 0.06 lux

ISR at 0.06 lux

Color discrimination : > 1hr before sunrise

IMAGING PAYLOAD

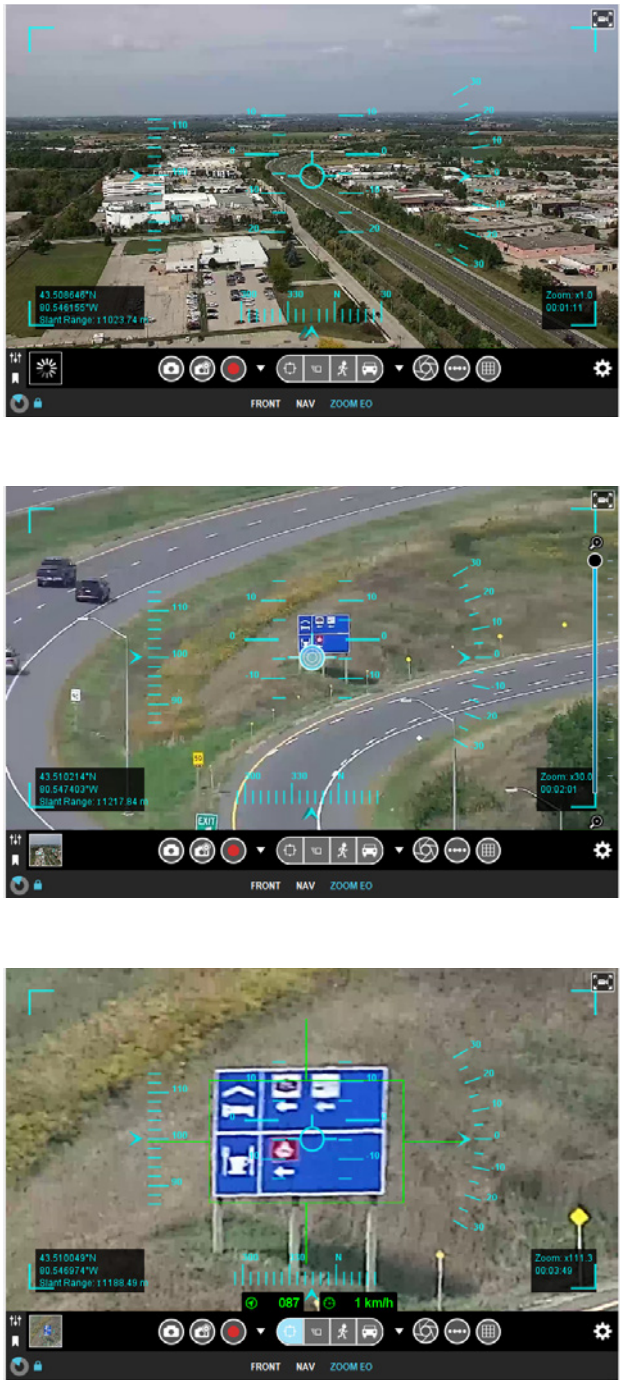
STORMCASTER™-E

LONG-RANGE ZOOM IMAGING PAYLOAD

The StormCaster-E is a fully integrated electro-optical camera payload with 30x enhanced optical zoom to support detection, recognition and identification at extended target range. Designed for demanding applications that require clear and precise imagery across daylight and low light conditions.

PERFORMANCE SPECIFICATIONS

RESOLUTION	1080p/ 60
FIELDS OF VIEW	58.1° – 2.3°
ZOOM	30x Enhanced Optical, 4x Digital
GIMBAL LINE-OF-SIGHT STABILIZATION	< 0.3 mRad
GIMBAL STABILIZATION	3 axis (pitch, roll, yaw)
CONTROLLABLE RANGES OF MOTION	Pitch +20/-100 degrees Yaw +/- 180 degrees
WEIGHT	1.1 kg (2.4 lbs)
DIMENSIONS	196mm (W) x 140mm (L) x 191mm (H) 7.7” (W) x 5.5” (L) x 7.5”(H)
OPERATING TEMPERATURE	-20°C to 50°C (-4°F to 122°F)



Zoom performance: Comparative imagery across 1x, 30x, 120x zoom range

IMAGING PAYLOAD

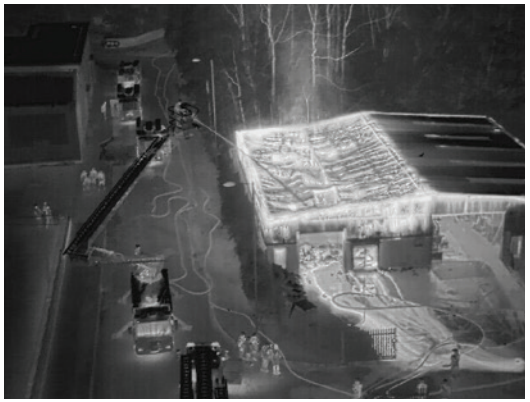
EO/IR MK-II

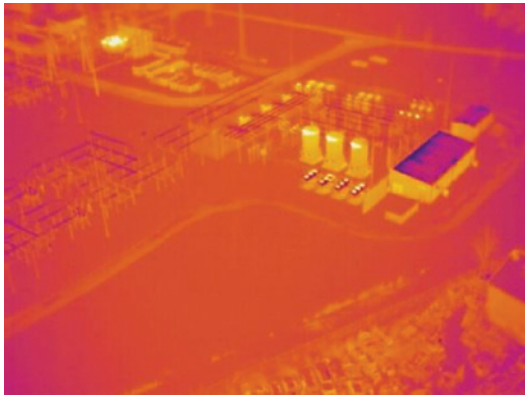
HIGH-FIDELITY INFRARED

The EO/IR Mk-II delivers high-fidelity daylight and thermal imagery in a weather-resistant, 3-axis stabilized gimbal.

PERFORMANCE SPECIFICATIONS

MAKE & MODEL	SONY FCB_MA132 + FLIR TAU2
IMAGE STILLS	EO: 13 Megapixels (4192 x 3104 pixels) IR: (640 x 512 pixels)
FIELD OF VIEW	58° / 45° (13mm) or 32° (19mm)
ZOOM	4x digital
VIDEO RESOLUTION	640 x 512 / 8.33 FPS H.264 recorded
COLOR PALETTES	White-hot, Black-hot, Rainbow, Ironbow
GIMBAL STABILIZATION	3-Axis
CONTROLLABLE RANGES OF MOTION	Pitch: +/- 60˚ Yaw: +/- 20˚
VIDEO METADATA	Embedded STANAG 4609 KLV Metadata
DIGITAL ENHANCEMENTS	Active Contrast Enhancement (ACE) Digital Detail Enhancement (DDE) Information Based Histogram Equalization (IBHEQ) Isotherms
ENVIRONMENTAL TOLERANCES	IP-54, MIL-STD-810G for salt mist/rain
WEIGHT	20 oz (1.25 lbs)





CAPTURE DAYLIGHT AND THERMAL IMAGERY AT THE SAME TIME

Ideal for both day and night operations, the EO/IR Mk-II imaging payload provides:

- Enhanced thermal (IR) imagery in a range of color palettes – white-hot, black-hot, rainbow, and ironbow
- Secure HD 1080p video streaming to the pilot and remote personnel anywhere in the world
- Choice of IR lenses – 19 mm focal length (tactical applications) and 13 mm (thermal mapping or SAR applications)
- Advanced radiometric temperature measurement, accurate to +/- 90° F

IMAGING PAYLOAD

TRILLIUM HD40-XV

Utilizing the payload development kit, Trillium Engineering has integrated its HD40-XV EO payload onto the SkyRanger R70 platform. The payload's 33x optical zoom visible camera provides long distance ISR while providing sharp, clear, actionable imagery in support of the mission.

PERFORMANCE SPECIFICATIONS

SHUTTER TYPE	Global
ZOOM	33x Optical
FIELD OF VIEW	60° - 2.1° Digital to 1.0°
VIDEO RESOLUTION	720p
REMOVABLE MEMORY	No
GIMBAL STABILIZATION	2 axis
CONTROLLABLE RANGES OF MOTION	Pitch: +30/-80 degrees Yaw: +/- 180 degrees
VIDEO METADATA	Embedded STANAG 4609 KLV Metadata
ENVIRONMENTAL PERFORMANCE	All weather operations IP-54 compliant
WEIGHT	36 oz (2.25 lbs)
OPERATING TEMPERATURE	-20° C to +50° C (-4° F to 122° F)

Zoom Performance: Comparative imagery across 1-66x zoom range

trillium

DETECTION PAYLOAD

MUVE™ C360

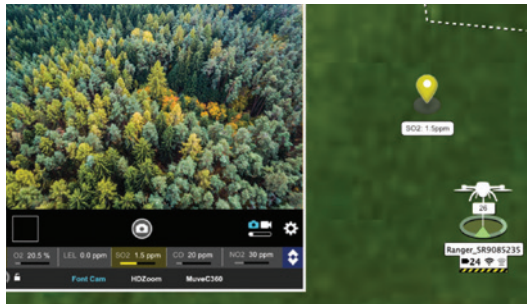
INTEGRATED MULTI-GAS DETECTOR FOR UNMANNED AERIAL SYSTEM

The MUVE™ C360 is a multi-gas detector completely integrated with an unmanned aerial system (UAS) to provide real-time continuous monitoring of chemical hazards while on the move. The sensor block boasts 8-channels, which includes a photoionization detector (PID), Lower Explosive Limit (LEL) detector, and six other sensors.

PERFORMANCE SPECIFICATIONS

SENSOR BLOCK TECHNOLOGY	
Sensors	CO, Cl_2, O_2, NO_2, H_2S, SO_2, LEL
PID	VOC 10.6 eV (ppm)
FLIR Calibration Station	Proprietary automatic calibration design, includes tubing and power adaptor
SAMPLING & ANALYSIS	
Sample Introduction	Actively pumped via integrated snorkel
Sampling Rate	300 ml/min minimum
Sampling & Analysis	Real-time detection
SYSTEM INTERFACE	
Display & Alerts	Mission Control Station (MCS)
Wireless Range	Determined by the UAS range
Data Storage	Sensor data and flight information logged on tablet
Training Requirements	<30 mins for operator; 4 hours for advanced user

POWER	
Input Voltage	12V SkyRanger R70; 12V Calibration Station
Battery Specification	Powered by the UAS
Cold Start Time	90 seconds from cold start
ENVIRONMENTAL	
Operating Temp	-4 to 122 °F (-20 to 50 °C)
Operating Humidity	10 to 93%, non-condensing
Storage Temp	-22 to 158 °F (-30 to 70 °C)
Protection	IP43-rated
PHYSICAL FEATURES	
Dimensions (L x W x H)	6.5 x 2.3 x 2.0" (16.51 x 5.84 x 5.08 cm) - C360 only
Total Payload Weight	1.5 lb (680.39 g) - C360 with dock and snorkel
Integration Dock	Proprietary quick-connect mount for UAS and FLIR Calibration Station



DETECTION PAYLOAD

MUVE™ B330

CONTINUOUS BIOLOGICAL DETECTOR AND COLLECTOR

The MUVE B330 is a Continuous Biological Detector and Collector purpose-designed for unmanned aerial systems (UAS) to provide real-time continuous monitoring of biological threats while on the move. The B330 leverages the legacy design and performance of the IBAC product line in a SWaP-optimized configuration.

PERFORMANCE SPECIFICATIONS

TECHNOLOGY	UV Laser Induced Fluorescence (LIF)
COMMUNICATION	Ethernet
SAMPLING & ANALYSIS	
SAMPLE INTRODUCTION	Airborne particles; triggered aerosol sample collector
SAMPLE PHASE	Aerosol; flow rate 4.0 L/min (0.14 ft3/min)
THREATS	Spores, vegetative bacteria, viruses, and toxins; particle size: 0.7 – 10 microns
SENSITIVITY	<100 particles/L of air
SAMPLING & ANALYSIS	Continuous sampling when in operation
SAMPLE COLLECTION	Integrated sample collection
SYSTEM INTERFACE	
DISPLAY & ALERTS	Mission Control Station (MCS)
OUTPUTS	Alarm Status, Diagnostics Status, Collector Status
DATA STORAGE	16 GB internal storage
TRAINING REQUIREMENTS	<8 hrs
POWER	
INPUT VOLTAGE	16-36 VDC
POWER CONSUMPTION	10W (normal operation), 12W (collector running)
COLD START TIME	<5 mins
ENVIRONMENTAL	
OPERATING TEMP (AMBIENT)	-26 to 120 °F (-32 to 49 °C)
OPERATING HUMIDITY	5% to 99%, non-condensing
STORAGE TEMP	-38 to 126 °F (-39 to 52 °C)
INTEGRATED SAMPLE COLLECTOR SPECIFICATIONS	
SAMPLING METHOD	Dry collection
POWER CONSUMPTION	2 watts
MAX FLOW RATE	30 L/min
PARTICLE SIZE	1 to 10 microns
COLLECTION MEDIA	Sample Disk
SAMPLE RECOVERY	Sample extraction from sample disk in vial with liquid buffer
PHYSICAL FEATURES	
DIMENSIONS (L X W X H)	7.6 x 7.6 x 8.5 in (19.3 x 19.3 x 21.6 cm)
WEIGHT	3.17 lbs (1.44 kg)
ENCLOSURE	Windform® SP (Composite polyamide based, carbon filled)

DETECTION PAYLOAD

MUVE™ R430

RADIONUCLIDE IDENTIFICATION DEVICE FOR UNMANNED AERIAL SYSTEMS

The MUVE R430 is a radiation detector designed for unmanned aerial systems (UAS) used to detect, locate, measure, map, and identify radioactive sources from above. The R430 is integrated into the Mission Control Software (MCS) providing visible and audible alerts that expedite response measures. The R430 provides a balance of size and weight for various situations including survey, emergency response, and environmental monitoring.

PERFORMANCE SPECIFICATIONS

TECHNOLOGY	Radionuclide identification device (RID); Gamma and Gamma/ Neutron models
GAMMA DETECTOR – NAL (TI)	1.77 x 1.77 x 1.77" (45 x 45 x 45 mm) cubic detector with silicon photomultiplier (SiPM)
HIGH DOSE GAMMA DETECTOR – NAL (TI)	Energy Compensated Geiger Müller (GM) Tube
NEUTRON DETECTOR – ZnS (GN MODEL ONLY)	27 x 58 x 5 mm moderated panels (2 each)
ENERGY RANGE (GAMMA)	20 keV – 3MeV
GAMMA SENSITIVITY (Cs-137)	1610 cps/µSv/h
NEUTRON SENSITIVITY	> 4 cps/nv
GAMMA SPECTRUM LENGTH	1024 channels
DOSE RATE RANGE (Cs-137)	10 µrem/h – 1 rem/h ± 10%, 100 nSv/h – 10 mSv/h ± 10%
DOSE RATE RANGE ID MODE (Cs-137)	0.1 µrem/h – 5mrem/h, 1 nSv/H – 50 µSv/h
OVERLOAD DOSE RATE RANGE	1 – 1000 rem/h, 10 mSv/h – 10 Sv/h
STABILIZATION	Sourceless gain stabilization
LINEARIZATION	Real time linearization of gamma energy
TYPICAL RESOLUTION	≤ 7% FWHM at 662 keV (20 °C)
SERVICE INTERVAL	5-year factory maintenance
SYSTEMS INTERFACE	
COMMUNICATIONS	USB-C, UAS interface port
DATA STORAGE	8GB internal memory
SOFTWARE	Onboard webserver software
DATA FILE FORMAT	According to ANSI N42.42
SAMPLING & ANALYSIS	
SAMPLE INTRODUCTION	Absorption of EM gamma and neutron emissions
THREATS	Detects neutron and gamma radiation emitted from natural occurrences in the environment, special nuclear material, industrial, or medical material
NUCLIDE IDENTIFICATION	According to ANSI N42.42
LIBRARY CATEGORIES	SNM, IND, MED, NORM
TIME TO IDENTIFICATION	From a few seconds to a few minutes

CONTINUOUS AIRCRAFT OPERATION

TETHER KIT

The Tether Kit enables continuous operation of the aircraft and attached payloads delivering power and data for secure and RF-quiet operations. Payload lift capacity supports a broad spectrum of mission sets. Intelligent altitude management maximizes operational envelope while minimizing operator burden.

PERFORMANCE SPECIFICATIONS

TETHER LENGTH	328ft
DATA RATE	50 Mbps
MAX CEILING	13,000 ft MSL
PAYLOAD	2 kg (4.4 lbs)
GROUND STATION VELOCITY	19.3 kph (12 mph)
FLIGHT DURATION	24 hours*
ENVIRONMENTAL TOLERANCE	IP54
WIND TOLERANCE	Up to 45 km/hr (28 mph) at AGL of 100 m (320 ft) with payload weighing 1.5 kg (3.3 lbs)
OPERATING TEMPERATURE	-10°C to 50°C (14° F to 122° F)
POWER	120V/60Hz or 230V/50Hz

* Dependent on environmental conditions.

TETHERED FLIGHT ON THE MOVE

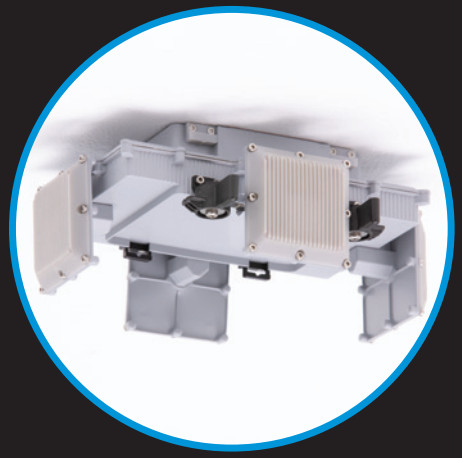
TETHERED FLIGHT WITH STORMCASTER-T AND TRAK

Elistair Safe-T2 ground station shown

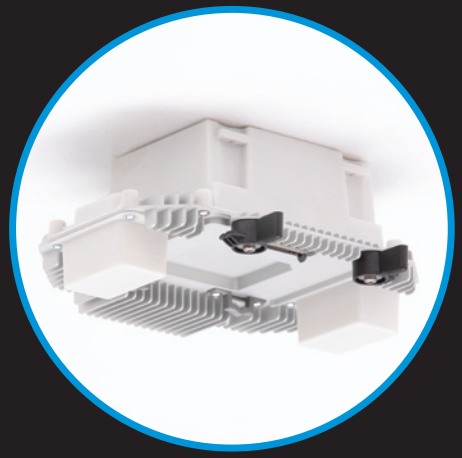
SKYRANGER R70

TACTICAL NETWORKING

INTEGRATED TACTICAL NETWORKING

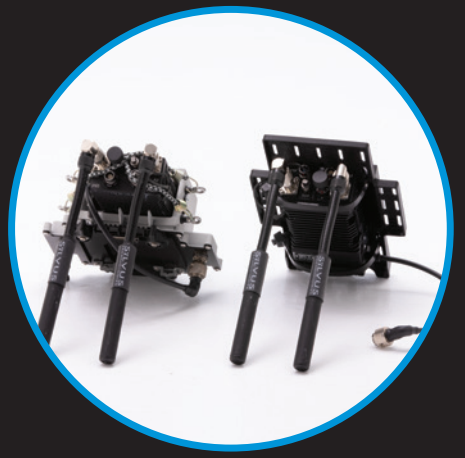


Radionor Interposer



Silvus Interposer

TACTICAL RADIO ADAPTOR KIT (TRAK)



TRAK

- Multiple, field-adaptable tactical networking integrations, including Silvus, Radionor, Wave Relay MPU 5, Trellisware
- Provides C2/downlink from aircraft via "interposer"
- Provides BLOS network retransmission

- **Advanced Tactical Networking Support (Silvus)**
  - C2, video, mesh re-trans and GUI integrated network stats when using Silvus interposer
  - One-Click Interaction: set any tactical radio node as Home, Track, or Follow

OSPREY - CARRY & DELIVERY PAYLOAD

CARRY ALMOST ANYTHING UP TO 3.5KG (7.7LBS)

Individual First Aid Kit

Water Purification Kit

FirstLook

Small Pelican Case

Life Vest

Tactical Radio

Unattended Ground Sensor

UNMANNED DEVELOPMENT KIT (UDK)

A SECURE AND COMPREHENSIVE OPEN ARCHITECTURE FOR UNMATCHED ADAPTABILITY

PAYLOAD DEVELOPMENT KIT (PDK)

Extends payload development to end-users and third-party integrators, enabling the rapid development of application-specific payloads for the SkyRanger R70 platform.

- Includes electromechanical tools and software libraries
- Provides access to key SkyRanger functions & subsystems including power, telemetry, and networking
- GUI and data visualization inside Mission Control Station (MCS) ground control software

Rapid Prototyping Kit

APPLICATION DEVELOPMENT KIT (ADK)

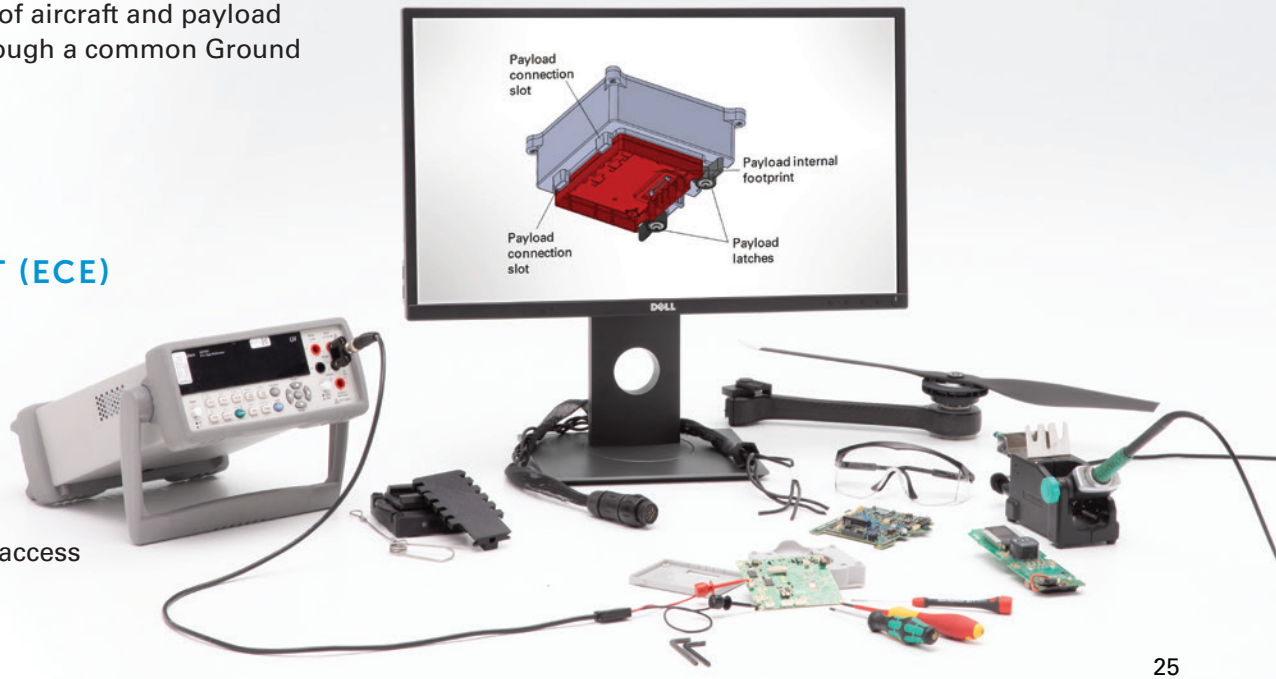
Provides partners and integrators access to a full suite of aircraft and payload controls, including the ability to control SkyRanger through a common Ground Control Station (GCS).

- Includes C/C++ headers and supporting libraries
- Compatible with Linux and Android

EMBEDDED COMPUTING ENVIRONMENT (ECE)

Allows developers to run embedded applications on the SkyRanger R70 platform

- Secure, root access to a segregated portion of aircraft (CPU) and/or base station (CPU & GPU) hardware to deploy custom software applications at the edge of the network
- Built-in ADK support enables developer applications access to aircraft controls, telemetry and video for scripted/ autonomous applications



ELECTRONIC LOG BOOK & SQUADVIEW®

2nd generation software solution for operations management, data distribution and data analysis across UAS, UGS, fixed location and handheld sensor platforms

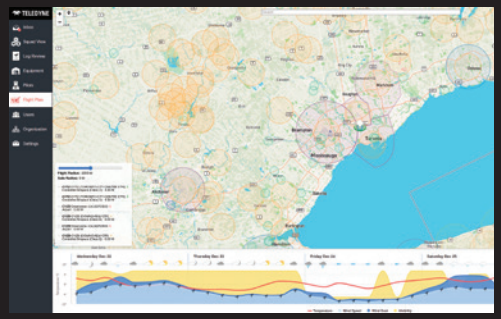
Foundation for scalable, compliant, and integrated unmanned systems operations in Public Safety and Industrial segments

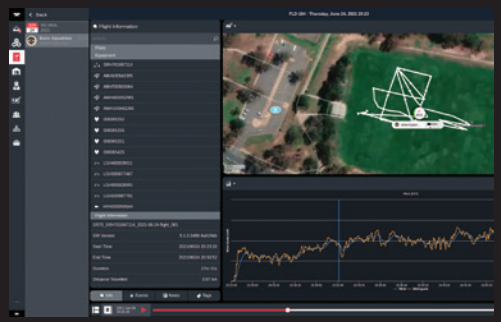
Web and mobile (iOS, Android) client software provides end-to-end mission planning, execution, and post-operations capability

ELECTRONIC LOG BOOK

FLEET, PILOT & MISSION MANAGEMENT

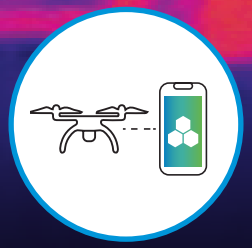
- Plan operations based on weather, airspace access, and asset/personnel status
- Provide real-time common operating picture
- Review and analyze mission data
- Track and enforce pilot currency
- Maintain equipment health and perform predictive maintenance
- Portable, scalable solutions supports deployment on public cloud private cloud or on-premises as required





SQUADVIEW

REMOTE SITUATIONAL AWARENESS

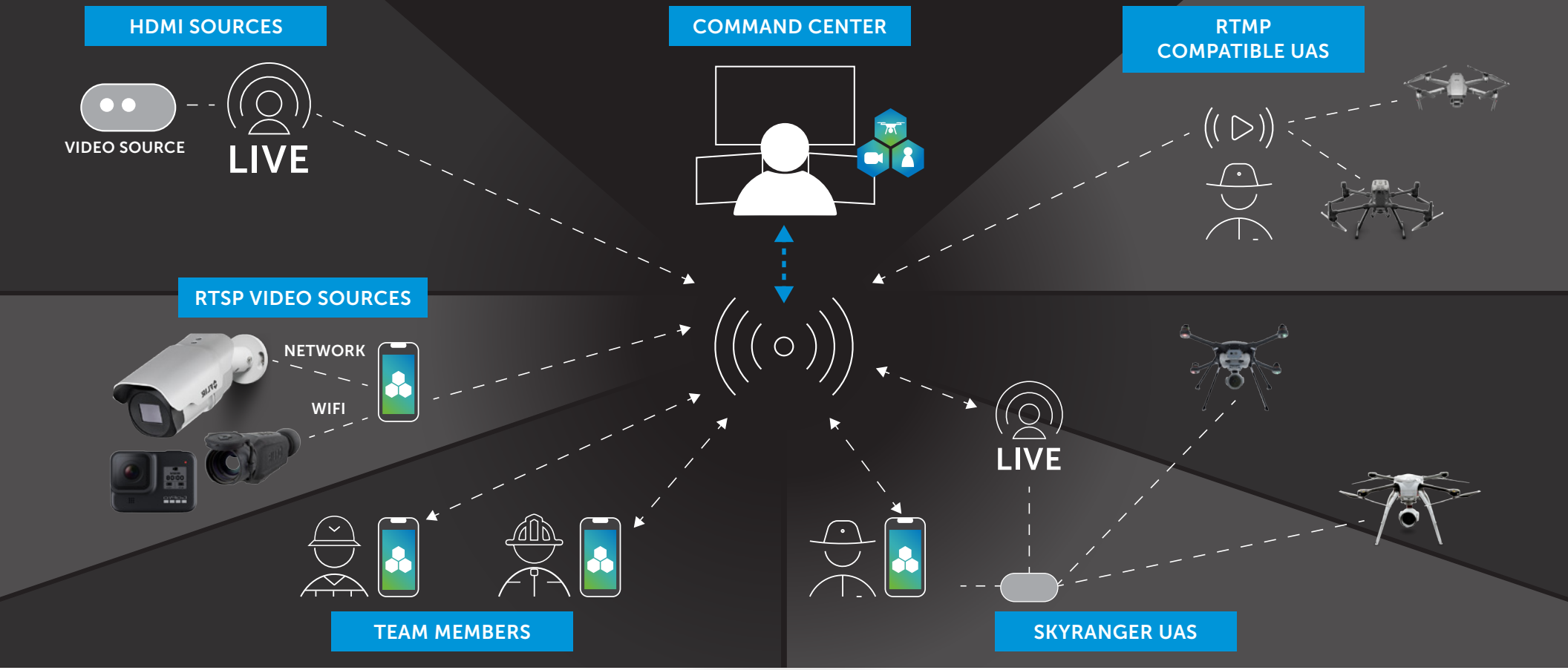


View local UAS video feeds (mission personnel see what the drone sees)

Broadcast mobile device video and PLI to other mission participants

Distribute data over cellular networks to the common operating picture

LIGHTWEIGHT, FLEXIBLE SOLUTIONS FOR YOUR MISSION CRITICAL DATA



ELB/SV UNMANNED AERIAL SYSTEM COMPATIBILITY

KEY:	BLACK HORNET	DJI	SR R60	SR R70
EQUIPMENT MANAGEMENT	✓	✓	✓	✓
FLIGHT REPLAY & ANALYSIS	✓		✓	✓
LIVE VIDEO		LIVE	COMING SOON LIVE	LIVE
LIVE TELEMETRY			COMING SOON	✓

LOWER COGNITIVE LOAD, GREATER MISSION EFFECT

High resolution sensing, edge-of-network AI, and advanced computer vision algorithms convert data into actionable intelligence, delivered to the point of decision in Teledyne FLIR GCS or Customer C2 systems.

AUTOMATED TARGET CLASSIFICATION, TRACKING, ANALYSIS, METADATA ENHANCEMENT & DATA SHARING

LOWER COGNITIVE LOAD, MORE IMMEDIATE OPERATIONAL EFFECT

ADAPTIVE TARGET TRACKER: REPOSITIONS GIMBAL & AIRCRAFT

AI-TRAINED CLASSIFICATION OF "VEHICLE"

COMPUTER VISION SUB-CLASSIFICATION OF MOVING VS STATIONARY

TARGET GEOLOCATION AND SLANT RANGE

MULTIPLE SENSOR TYPES AND FIELDS OF VIEW

TARGET ANALYTICS (HEADING, SPEED)

AUGMENTED REALITY OVERLAY

MISSION INTEGRATION: SHARE/HANDOFF TO OTHER PERSONNEL

ADVANCED SOFTWARE AUTOMATION AND AUTONOMY SIMPLIFIES UAS OPERATIONS, AND KEEPS PERSONNEL FOCUSED ON THE MISSION

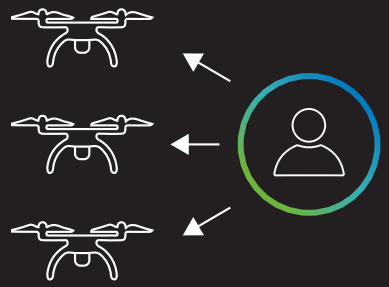
Advanced software automation and autonomy simplifies UAS operations, and keeps personnel focused on the mission

DARK MODE

UAS can execute semi-autonomous missions without an active C2 link to the operator

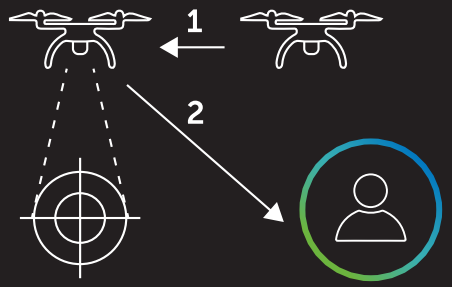
MULTI-AIRCRAFT CONTROL

A single operator can control up to 16 UAS, each performing coordinated automated tasks



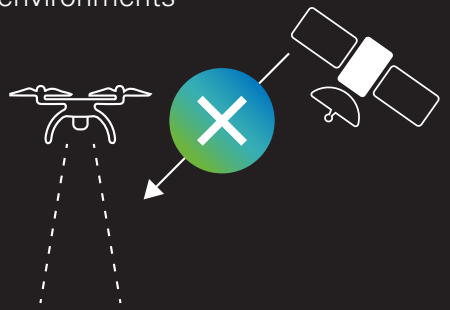
AIR

Achieve continuous eyes-on-target through Autonomous In-air Replacement (AIR) and target handoff



GPS-DENIED OPERATION

UAS employs computer vision and dead reckoning to hold position and navigate in GPS-denied or degraded environments

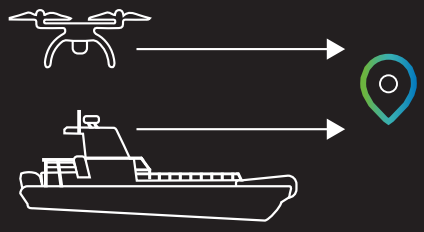


AUTONOMOUS LAUNCH & RECOVERY

UAS can land onto fixed or moving platforms without operator control

FOLLOW ME

UAS can follow, track, or recover to any known person, vehicle or location at a defined standoff



TYPICAL CONFIGURATION

ACCESSORIES

XL Batteries

Increase free-flight mission time by 60%. Up to 59 minutes with EO/IR Frontcam Payload

8 Bay Battery Charger

SKYRANGER R70

PERFORMANCE SPECIFICATIONS

Height	45cm (17.7″)
Total Length	1.35m (53″) Propeller tip to propeller tip
Weight	5 kg (11 lbs)
Typical Endurance*	Over 40 minutes with standard propulsion system Tether Kit available Up to 59 minutes with new XL Battery Packs * Endurance specifications measured with Forward EO/IR payload; actual flight time varies based on payload and operating conditions
Max. Speed	Ground speed 50kph (31mph) Max ascent speed 4m/s (13ft/s) Max descent speed 3m/s (9ft/s)
Temperature	-20°C to 50°C (-4°F to 122°F)
Wind	65kph sustained, 90kph gusting (40mph, 56mph)
Precipitation	Tested to IP-54 and military standards
Frequency	915Mhz, 922Mhz, 2.2Ghz + other frequencies and waveforms
Radio Range	Up to 8km (5 miles) with standard base station
Mission Data	AES encryption
Launch Time	3-5 minutes

ADAPTIVE. RUGGEDIZED. INNOVATIVE.

ONE PLATFORM, MANY MISSIONS

FREE-FLYING, TETHERED, OR VEHICLE INTEGRATED

MISSION COVERAGE SUSTAINED PERSISTENCE

With Teledyne FLIR's Multi-Aircraft Autonomous Flight Controls

EXPANDABLE PAYLOAD UP TO 3.5KG (7.7LBS)

With Teledyne FLIR's Payload Development Kit for Enhanced Payload Flexibility

INGRESS RATING IP-54/MIL-STD-810G*

Teledyne FLIR UAS are Reliable and Proven in the Harshest of Battlefield Conditions

*Conforms to select elements

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