



THE FUTURE OF MULTI-MISSION SMALL UAS

SkyRanger R70

Developed for the most demanding UAS operators within the defense, security, and public safety markets, the SkyRanger R70 establishes a new benchmark for small UAS performance and reliability. With its expanded carrying capacity, open architecture, and advanced autonomy and artificial intelligence, the R70 is redefining what's possible with a small VTOL UAS.

The R70's multi-mission payloads provide ISR and payload delivery capabilities previously limited to much larger UAS. Optical sensors include the HDZoom 30 providing eyes-on-target at distances up to 5 km and the EO/IR Mk-II for high-fidelity daylight and thermal imagery streamed securely anywhere in the world. With the Osprey, R70 operators can rapidly attach, carry and deliver nearly any object up to 2 kg for forward resupply, asset extraction or other specialized missions.

FEATURES

AUTONOMOUS AND INTELLIGENT

With multiple embedded NVIDIA TX2 processors, the R70 is a flying supercomputer with an engine for real-time artificial intelligence at the network edge, including object detection and classification. Four dedicated computer vision cameras enable autonomous operations and flights in GPS-denied environments.

CARRY MULTI-MISSION PAYLOADS UP TO 2 KG

With the new Osprey carry and delivery payload, R70 operators can attach and deliver nearly any object up to 2 kg such as radios, ground sensors, medkits, and more. The R70 adds a new front-mounted EO/IR payload (with image fusion) to supplement bottom-mounted, non-camera payloads.

RESILIENT AND BATTLE-TESTED

The R70's carbon fiber and magnesium airframe is tested to IP-54/MIL-810G environmental tolerances. In flight the R70 can withstand sustained winds up to 65 kph, and operate up to 15,000' MSL. Mission success is underpinned by a robust digital MIMO communications link and two independent navigation subsystems. The R70 is able to execute semi-autonomous missions without an active wireless link for operations in denied RF environments.

FLEXIBLE & MODULAR

The R70's Payload Development Kit further extends payload development to end users, enabling the rapid development of other mission-specific payloads for the R70 platform. The R70 also offers an ADK to interface with other control applications across a set of secure APIs.

APPLICATIONS

IMMEDIATE ISR

CLANDESTINE OPERATIONS

PAYLOAD DELIVERY

SITUATIONAL AWARENESS

BEYOND LINE-OF-SIGHT
RECONNAISSANCE

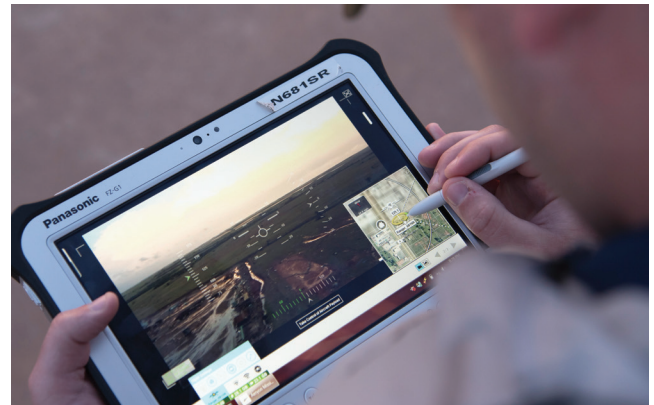
FORCE PROTECTION

SPECIFICATIONS

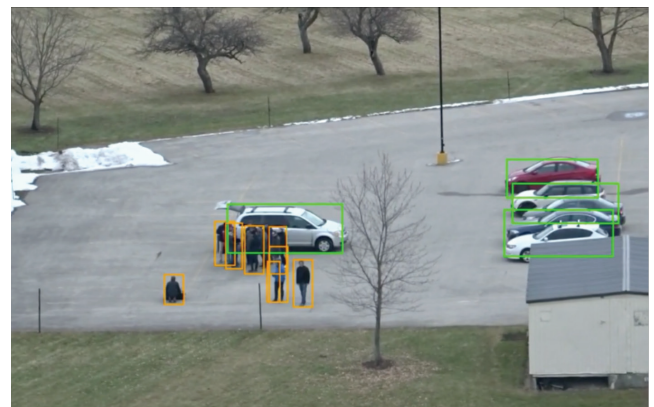
Item Specification	
Total Length	80cm (31.5in) from motor mount to motor mount
Weight	Aircraft 4.5kg (9.9lbs) – Airframe, arms, legs, 4 batteries, no payload Standard pack 8.5kg (18.7lbs) – Aircraft, Base Station, HDZoom 30
Payloads	
Hot-Swappable	Yes
Custom	Supported through the R70 Payload Development Kit (PDK)
Carry, Drop, Emplace	Osprey: Up to 2kg (4.4lbs)
Day Imager	HDZoom 30, EO/IR MK-II, Forward EO/IR
Night Imager	EO/IR MK-II, Forward EO/IR
Image Stills	HDZoom 30: 20 megapixels (5184 x 3888 pixels) EO/IR MK-II: 13 megapixels (4192 x 3104 pixels) / (640 x 512 pixels)
Zoom	HDZoom 30: 30x optical 60x digital EO/IR MK-II: 4x digital Forward EO/IR: NA
Field of View	HDZoom 30: 68.6° to 2.6° (30x), 1.3° (60x) EO/IR MK-II: 58° / 45° (13mm) or 32° (19mm) Forward EO/IR: 90° / 57°
Video Resolution	HDZoom 30: 1080p60 H.264 HD recorded EO/IR MK-II: 640 x 512 / 8.33 FPS H.264 recorded Forward EO/IR: 1920 x 1080 / 160 x 120
Video Metadata	Embedded STANAG 4609 KLV metadata
Performance	
Typical Endurance*	50 minutes with high-endurance propulsion system Over 40 minutes with standard propulsion system <i>* Endurance specifications measured with Forward EO/IR payload; actual flight time varies based on payload and operating conditions</i>
Max. Speed	Ground speed 50kph (31mph) Max ascent speed 4m/s (13ft/s) Max descent speed 3m/s (9ft/s)
Environment	
Temperature	-30°C to 50°C (-22°F to 122°F)
Wind	65kph sustained, 90kph gusting (40mph, 56mph)
Precipitation	IP-54, MIL-STD-810G for salt mist/rain
Data Link	
Frequency	915MHz, 922MHz, 2.2GHz, 2.489GHz + other frequencies
Radio Range	Up to 8km (5 miles) with standard base station
Mission Data	AES 256 bit encryption with secure key exchange
Launch Time	3-5 minutes



Carry payloads up to 2 kg



Intuitive, tablet-based GCS



Object detection and classification

AMERICAS

FLIR Systems, Inc.
Corporate Headquarters
27700 SW Parkway Ave
Wilsonville, OR 97070
Office: +1 877.773.3547

FLIR Systems, Inc.
DC Headquarters
1201 S. Joyce Street
Suite C006
Arlington, VA 22202
Office: +1 703.682.3400

FLIR Systems, Inc.
7055 Troy Hill Dr. Suite 300
Elkridge, MD 21075
Office: +1 877.692.2120

FLIR Systems, Inc.
575 Kumpf Dr.
Waterloo, ON N2V 1K3, Canada
Office: +1 519.489.6726

FLIR Systems, Inc.
1001 17th St #680
Denver, CO 80202
Office: +1 720.442.7410

EUROPE

FLIR Systems
2 Kings Hill Avenue - Kings Hill
West Malling, Kent ME19 4AQ
United Kingdom
Office: +44 (0)1732 220 011
Fax: +44 (0)1732 843 707

MIDDLE EAST

FLIR Systems B.V. - Abu Dhabi
Wadi Al Fey St.
Building 60, Office # 302
New Ministries Exit / Khalifa Park Area
Abu Dhabi, U.A.E.
Office: +971 2 666 1561
e-Fax: +1 503 914 1591

FLIR Systems Saudi Arabia
Office 127, First Floor
Akaria Plaza Building, Olaya Street
Riyadh, 11481, Saudi Arabia
Office: +966 11 464 5323
Fax: +966 11 464 0438

ASIA

FLIR Systems Japan K.K.
Meguro Tokyu Bldg. 5F, 2-13-17
Kami-Osaki, Shinagawa-ku.
Tokyo, 141-0021, Japan
Office: +81-3-6721-6648

For More Information contact
surveillance_sales@flir.com

www.flir.com
NASDAQ: FLIR

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