MARTLET **MI-1**

TACTICAL MICRO UAS

HEIGHT TECHNOLOGIES

DATASHEET

MADE IN NETHERLANDS

ACT ON AERIAL INTELLIGENCE

The MI-1 is a portable short-range recon (SRR) drone, ideal for monitoring high-risk situations where decisions need to be made quickly. The system is designed to make minimal noise for covert day and night observation.

The frame and propellers of the Martlet MI-1 are all built with aviation-grade carbon composite, kevlar, and glass fiber materials - because every 1% counts..

AIRCRAFT OPERATING ENVELOPE

FORM FACTOR	L	W	H	
Frame size	40	40	15	cm
Frame size folded	28	20	15	cm
Proppeller size		13		inch
Empty weight		1000		grams
Weight with battery		1450		grams
Max take-off weight		1600		grams

ENVIRONMENT

Operational temperature	-20 – +50	°C
Precipitation	IP54	

SPEED

Max wind speed	25	knots
Max airspeed	35	knots
Max speed	18	m/s
Cruising speed	9	m/s
Ascent speed	4	m/s
Descent speed	3.5	m/s

ENDURANCE MAX & WITH PAYLOADS

Max flight time	45	min
DragonEye [3X]	40	min
X80	40	min

PERFORMANCE

Covert distance (sound)	120*	meter
Typical deployment time	< 1	min
Typical radio range (RLoS)	5	km
Theoretical range	45	km

** At 120m AGL*

ALTITUDE LIMITS

AMSL	2000	meter
AGL	500	meter

MARTLET GROUND CONTROL STATION

SPECIFICATIONS

Weight	927 grams
Dimensions (LxWxH)	25.6 x 14 x 6.8 cm
Connections	USB-C 3.0, Nett Warrior EUD compatible
Radio Options	Silvus, Microhard, Doodle Labs, and more
Operating Software	Android 11 (Windows 11 on request)
CPU	Qualcomm® SDM660 2.2/1.843GHz
Memory	4GB (LPDDR4)
Display	7” WXGA 1280 x800 px, 750nit
Certification	MIL-STD-810-H
Compliance	CE, ROHS compliant
Precipitation	IP65
Operational Temperature	-20 – +50 °C

MARTLET GCS

The Martlet Ground Control Station (GCS) is a durable, portable control unit equipped with MIL-STD components. Designed for single-operator use in any environment or weather condition and interoperable on all Martlet UAV systems. With Nett Warrior compatibility and Swappable Radio Modules (SRM), this tactical controller provides exceptional interoperability and radio-agnostic capabilities. In addition to its internal battery, two swappable batteries enable continuous operation.

DATALINK SPECIFICATIONS

Encryption	AES256 / AES128	bit
Frequency range	2025 – 2500 (+5000 – 5200)	MHz
Max transmitting power	500	mW
Max transmitting distance	15	km
Latency	0.1	sec

HT-SDR DATALINK MODULE

As standard, the Martlet sUAS are equipped with the in-house developed software defined digital datalink has the ability to use a predefined custom encryption-key, to automatically “hop” between frequencies and to operate in a wide range of user-definable NATO harmonized frequency ranges:
2.0 – 2.5 GHz + 5.0 – 5.2 GHz (OPTIONAL)

MARTLET SOFTWARE CAPABILITIES

TARGET ACQUISITION / POINTS OF INTEREST

The software shows the real-time camera footprint on the map, calculates the location of the CAM-footprint and POI in **UTM**, **MGRS** and **GEO** coordinates and can measure various distances that could be valuable to the men on the ground. It enables operators and first responders to maximise situational awareness through advanced aerial intelligence. The Martlet GCS software can load multiple custom (military) maps, giving operators better access to more actionable intelligence when interpreting their live video feed with one of their preloaded maps.

GNSS-DENIED FLIGHTS / DEAD RECKONING

In case of loss of GNSS/GPS or during a jamming or spoofing attack, the system automatically initiates Dead Reckoning Mode, enabling it to fly in GNSS-denied areas.

BINGO FOR MAXIMAL FOCUS

The pilot has a perfect overview of all important indicators for a safe flight. The Bingo parameter calculated the remaining mission time (time remaining before the UAV needs to go back to the home-point). This allows the pilot to fully focus on the mission. The system always ensures a timely flight back to the desired landing location.

MI-1 PAYLOAD OPTIONS

MICRO STABILIZED GIMBALLED CAMERAS

The DragonEye and X80 are part of our family of dual EO/IR sensors, leaders in micro-stabilised gimbal mounted cameras. Built for long-range observation, the dual EO/IR and EO-only payloads offer HD image quality and unmatched X40- or X80-fold zoom to capture detailed images such as number plates and faces.

GEOLOCATION

The POI function captures the position of the camera, and its line of sight, and extracts the location of observed objects with < 10 meter accuracy to enhance real-time intelligence.

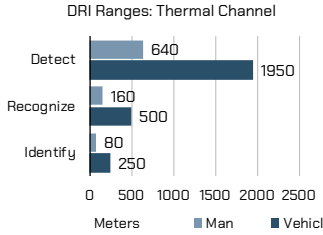
DRAGONEYE (DUAL EO/IR)

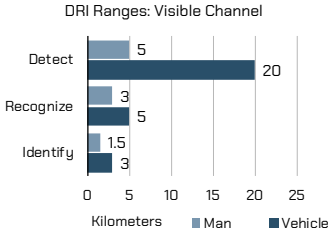
X80 (EO)

MI-1 PAYLOAD OPTIONS

DRAGONEYE

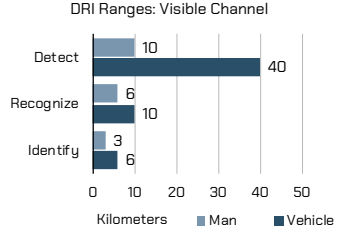
EO resolution	1280 x 720 px
EO zoom	x20 + x2 (total x40) continious
EO HFOV	60° WFOV – 3° NFOV – 1.5° DFOV
LWIR resolution	640 x 480 px
LWIR zoom	x4 continious
LWIR HFOV	32° W.FOV – 8° DFOV





X80

EO resolution	1280 x 720 px
EO zoom	x40 + x2 (total x80) continious
EO HFOV	60° WFOV – 1.5° NFOV – 0.75° DFOV



MARTLET MI-1 | SYSTEM CONTENT

RUGGED BACKPACK / UN3840 CERTIFIED TRANSPORT CASE

IN THE CASE / BACKPACK

- Martlet MI-1 UAV system
- Martlet Ground Control Station
- 3x Flight batteries (7200 mAh | 14.8 V)
- Flight battery charger
- GCS charger
- Spare props set
- Toolset

MARTLET MI-1 | MADE FOR ISTAR

CLASS-I MICRO UAS

MADE FOR ISTAR OPERATIONS

HEIGHT TECHNOLOGIES

SEE WITHOUT BEING SEEN

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