



MILKOR

AIR | LAND | SEA | CYBER



MILKOR

AEROSPACE DIVISION

TABLE OF CONTENTS

03.

CORE
CAPABILITIES

05.

MILKOR
380 UAV
TECHINICAL
SPECIFICATIONS

06.

MILKOR
380 UAV
CONFIGURATIONS

07.

MILKOR
380 UAV
EXTERNAL
PAYLOADS

08.

COMMUNICATION
& RANGE

09.

GROUND
CONTROL
STATION

10.

OPERATIONAL
USE CASES

11.

ADDITIONAL
CAPABILITIES

14.

MILKOR
GLOBAL
FOOTPRINT

ABOUT

The Milkor Aerospace Division (MAD) is a specialised department within the Milkor Group dedicated to advancing aerospace and defense technologies. We focus on the comprehensive design, development, and manufacture of cutting-edge unmanned aerial systems (UAS), leveraging the latest innovations in hardware and software to deliver reliable and adaptable solutions for modern defense needs. In addition to creating new systems, our Aerospace division excels in modernising existing platforms, enhancing their capabilities with advanced avionics, communication systems, and payload integration.

We strive to push the boundaries of current technologies to ensure our clients are equipped with the most sophisticated tools for mission success.



CORE CAPABILITIES

COMPREHENSIVE AEROSPACE ENGINEERING EXPERTISE

Milkor Aerospace Division (MAD) pushes the boundaries of aerospace innovation through its comprehensive suite of capabilities. From aircraft design to advanced hardware and software development, MAD sets new benchmarks in the industry. Our expertise in simulation, modelling, and systems integration enables us to deliver solutions that not only meet but exceed current standards.



AIRCRAFT DESIGN

From concept to certification, including aerodynamic analysis and structural design.



HARDWARE ARCHITECTURE

High-speed digital electronics, power systems, and RF systems development.



SOFTWARE DESIGN

Embedded systems, firmware, and OS development, customised to user.



SIMULATION AND MODELLING

Advanced tools for RF, fluid dynamics, structural analysis, and virtual testing.



SYSTEMS INTEGRATION

Seamless functionality in complex environments, including aircraft modernisation.

MILKOR 380





SYSTEM FEATURES

- Fully Autonomous Flight
- Dual Redundant Communication Systems
- BLOS and LOS Communication Systems
- Fully Containerised for Rapid and Robust Deployment



CUSTOMISABLE PAYLOADS

- Optronic Payloads (With or Without Laser Designation)
- Synthetic Aperture Radar
- SATCOM
- Electronic Warfare Payloads
- Both Electronic and Mechanical Countermeasures



TECHNICAL SPECIFICATIONS

Maximum Range	4 000+ km
Maximum Endurance	30 h
Service Ceiling	30 000 ft
Max Operational Altitude	23 000 ft
Length	9 m
Wingspan	18.6 m
MTOW	1 500 kg
Max Payload	220 kg
Fuel Capacity	315 kg
Maximum Speed	250 km/h
Cruise Speed	110 – 150 km/h
Fuel Type	110 LL Avgas/93 UL Mogas

The Milkor 380 is a versatile aerial platform designed for multiple missions. Including, but not limited to, surveillance, reconnaissance, and opportunistic engagement operations. It offers a wide range of payload options, making it a reliable guardian in the sky capable of carrying out extended range missions with long endurance. With a central hardpoint capacity of 400 kg, inner and outer wing hard point capacities of 150 kg and 80 kg respectively, the Milkor 380 is able to be customised to a dynamic range of end user requirements.

CONFIGURATIONS



INTELLIGENCE, SURVEILLANCE, AND RECONNAISSANCE (ISR)

- Electro-Optical/Infrared (EO/IR)
- Visual Detection and Ranging (ViDAR)
- Synthetic Aperture Radar/
inverse Synthetic Aperture Radar
(SAR/iSAR)



TACTICAL ENGAGEMENT AND PROTECTIVE COUNTERMEASURES

- Electro-Optic / Infrared / Laser
Designation (EO/IR/LD)
- Laser Guided Rocket (LGR)
- Precision-Guided Munition (PGM)

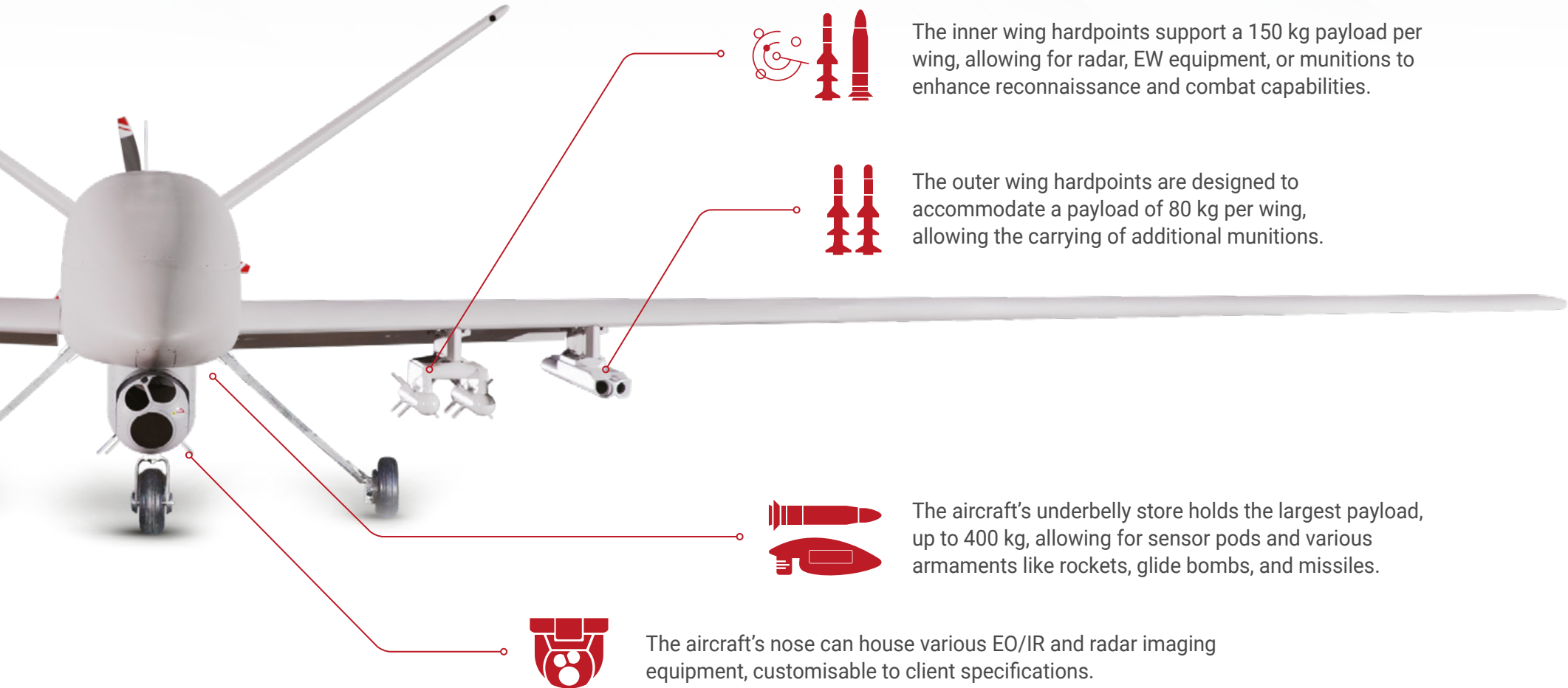


COASTAL MONITORING AND MARITIME RECONNAISSANCE

- Electro-Optical/Infrared (EO/IR)
- Synthetic Aperture Radar (SAR)
- Side Looking Airborne Radar (SLAR)

MILKOR 380

EXTERNAL PAYLOADS



COMMUNICATION & RANGE

SECURE, LONG-RANGE, LOW-LATENCY SOLUTIONS



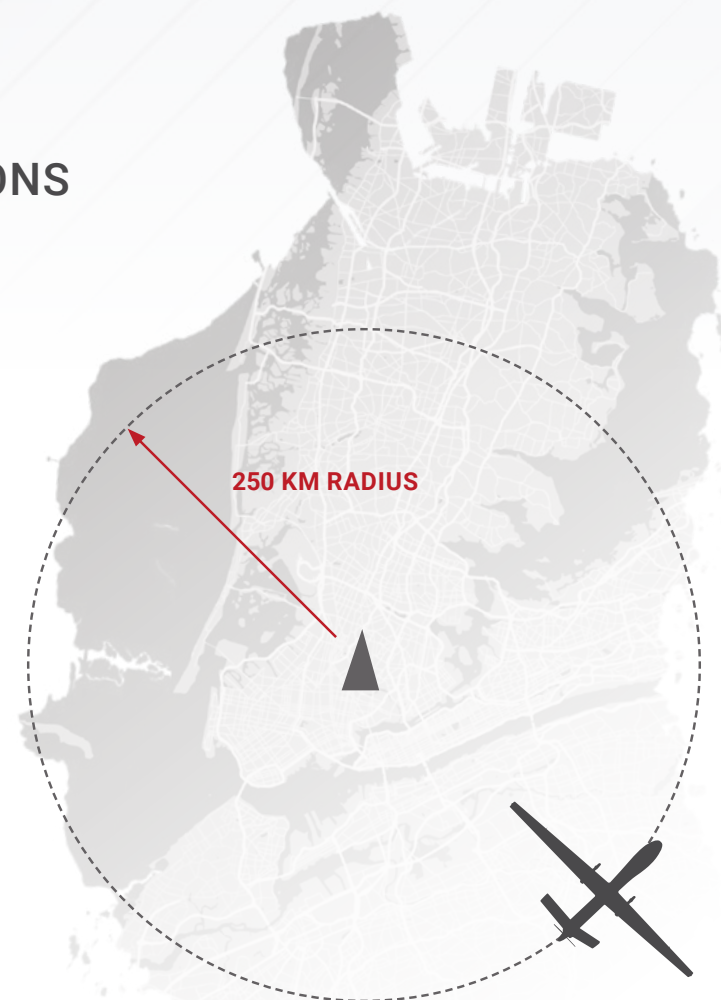
CAPABILITIES

- Optimised for long range line of sight (LOS) applications up to 250 km
- High bandwidth, video streaming over Ethernet
- Low latency design (less than 200 ms)
- Integrated encryption (AES 256)
- Built-in ranging function (<100m at 100 km)
- STANAG 4586 compliant management interface



VALUE POINTS

- Reliable long range LOS communication solution for UAS needs
- IP based for range extension and remote operations
- Networkable
- Compact and lightweight
- Heat sinks are configurable to client specification
- Installation possible in any orientation
- ITAR free



Automatic handover between data links.

GROUND CONTROL STATION

VERSATILE UAV COMMAND CENTRE



MODULAR DESIGN Containerised GCS with modular setup for rapid deployment and operational flexibility.



ALL-WEATHER CAPABILITY Designed to operate reliably in diverse weather conditions.



COMMUNICATION SYSTEMS Advanced systems ensure secure, real-time data transmission between UAVs and operators.



ENHANCED OPERATOR COMFORT Ergonomic design with climate control and noise reduction for efficient operation.



SCALABILITY AND CUSTOMISATION Adaptable to support multiple UAVs and mission types, meeting various operational demands.



INTEGRATED MONITORING AND CONTROL Centralised platform for mission planning, UAV control, payload management, and data analysis, enhancing efficiency and situational awareness.



OPERATIONAL USE CASES

The unmanned variants feature advanced autonomy systems, allowing seamless switching between manned and unmanned modes via a tactical ground control station. This station operates through 4G, RF, or SATCOM, depending on mission needs.

The versatility of the Milkor 380 system allows it to be used for various unmanned operations such as:



Disaster Response and Assessment



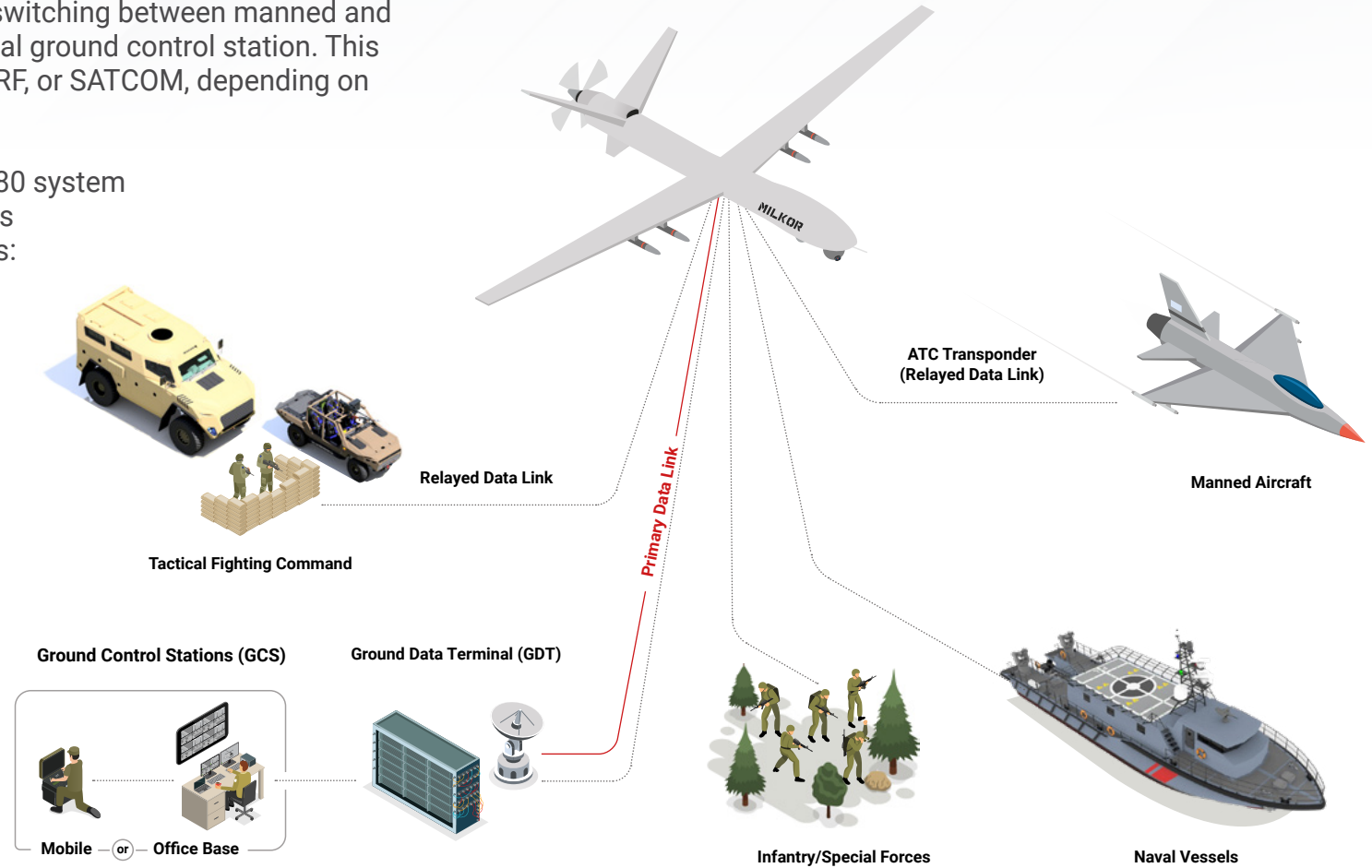
Sovereignty Patrol



Maritime Surveillance



Route Mapping and Tracking



ADDITIONAL CAPABILITIES



TACTICAL TRAINING

MAD offers year-long tactical UAV training, split between South Africa and the end user's country. It covers local air traffic laws, system theory, and practical skills. The program includes operator training for GCS operation and technician training for maintenance of UCAV, GDT, GCS, and PDU components, ensuring comprehensive understanding and operational proficiency.



FLIGHT TESTING

Our flight testing capabilities support system identification, acceptance testing, and new payload integration for aircraft. We gather essential data to accurately model dynamics and validate design specifications, ensuring seamless payload integration and optimal performance. This process minimises risks and ensures efficient, reliable modifications tailored to operational needs.

OPERATIONAL TRAINING

All elements involved in preparing the UCAV for flight and setting up the Ground Control Station, this includes safety checks.

FLIGHT TRAINING

All elements involved with flying the UCAV using the Ground Control Station as well as emergency scenario handling.

MAINTENANCE TRAINING

Elements for UCAV pre/post-flight servicing, ensuring safety and reliability. Includes composite structure repair training.





LEADING AEROSPACE INNOVATION FROM CONCEPT TO DEPLOYMENT

Milkor Aerospace Division (MAD) is a leader in aerospace innovation, capable of taking an aircraft from concept to operational deployment on the front lines. We specialise in modernising existing aircraft, integrating diverse payloads, and developing advanced firmware, software, and hardware solutions. Our high-fidelity simulation environment ensures precision and reliability in all our projects. As a powerful force in the industry, MAD is equipped to meet all your aerospace needs with cutting-edge technology and unmatched expertise.



MILKOR

MILKOR 881

MILKOR

MILKOR

GLOBAL FOOTPRINT



62 000+
SYSTEMS SUPPLIED



56+
COUNTRIES



45
YEARS



5
GLOBAL OFFICES

Correct at time of printing





+971 2 552 7831 | info@milkor.ae | www.milkor.ae
Tawazun Industrial Park, Abu Dhabi United Arab Emirates, P.O Box 147011



+27 12 333 3134 | info@milkor.com | www.milkor.com
Unit 18 & 20, Diamond Park, 70 Jakaranda Street, Hennospark Centurion, South Africa