LUNA NG

Technical Data

Dimensions: Wing span 5.3 m, length 3.0 m, height 1.1 m.

Weight: Take-off weight up to 90 kg.

Power Plant: 10 kw multi fuel injection engine, electrical power supply by battery backed generator.

Performance: Typical reconnaissance air speed 90 km/h. Ceiling > 5.000 m ISA altitude.

Endurance: more than 12 hours, depending on payload and mission profile.

Guidance: Preprogrammed (3D waypoint list) using high resolution digital maps or high resolution aerial images; and/or remotely controlled. Mission program can be altered in flight. Differential GPS navigation and/or data link auto tracking (via range and azimuth data), option for automatic return flight to base.

Avionics: Inertial Navigation System, autopilot and aircraft system management are fully digital. Sensor package includes attitude gyro, rate of turn sensors, magnetic compass, air data sensors and accelerometers.

Reconnaissance Sensors: Cameras: Tiltable sensor platform with up to 7 color zoom and IR zoom video, -arrays, -turrets, -high-definition, -hyperspectral, forward looking pilot color video. Synthetic Aperture Radar (SAR), SIGINT-sensors, CBRN-sensors.
Optional: Data link relay payload for beyond line-of-sight reconnaissance and communication, Encryption, GCS hand off function.

Data Link: Microwave link (C-band), tracking antennas in air vehicle and ground station. Command uplink, control and video/telemetry in real-time, jamming resistant.

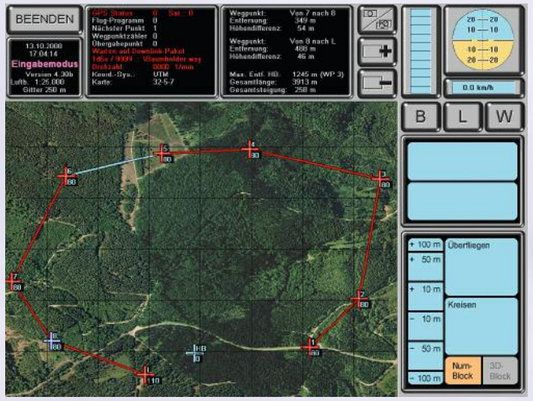
Data Link range: more than 100 km.

Ground control station (GCS): Modular LUNA TUAS GCS design to fit in any vehicle or container. Advanced human-machine-interface (HMI).

Launch: Light-weight bungee catapult, foldable for transport.

Recovery: Net landing with automatic landing via differential GPS; or automatic parachute landing

Technical data are subject to change (without notice).



Mission planning with aerial-photo or map

LUNA NG Ground Control Station in air-transportable protected all-terrain vehicle

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LUNA NG

Tactical Unmanned Aircraft System

LUNA NG Tactical Unmanned Aircraft System (TUAS)

The LUNA NG tactical unmanned aircraft system (TUAS)

LUNA NG TUAS is based on the combat proven LUNA TUAS. Both are all-weather, easy to operate tactical unmanned aircraft systems (TUAS) for real-time, day and night, command and control, communications, computers, intelligence, surveillance, and reconnaissance (C4ISR).
Three complementary aircraft platforms (LUNA, LUNA NG and the MUSECO helicopter) enable the commander to choose the best aircraft fit for his fast changing, specific mission needs. This offers effective C4ISR at ranges of more than 100 km with an endurance exceeding 12 hours, maintaining situational awareness around the clock by on-the-fly platform exchange.
Designed to accommodate multiple payloads, the versatile LUNA TUAS is successfully supporting peacekeeping missions in several countries, such as Kosovo and Afghanistan since year 2000. The system has been upgraded several times and is combat proven in different climates under severe weather conditions in difficult terrain (arctic, desert, jungle), leading to legendary operational effectiveness. The LUNA TUAS is a cost effective and reliable solution for military and civilian applications around the globe.
The new MUSECO helicopter and the new fixed-wing LUNA NG represent a significant leap in capability from what is already best in class performance of the LUNA TUAS.
As the system is heavily supported by easy to use automated processes, handling the LUNA NG TUAS is quick and does not require personnel with aeronautical skills. Full crew training is accomplished within very short timeframes.
The performance of LUNA NG TUAS is superior to many bigger and more expensive unmanned aircraft systems due to its modular system structure.

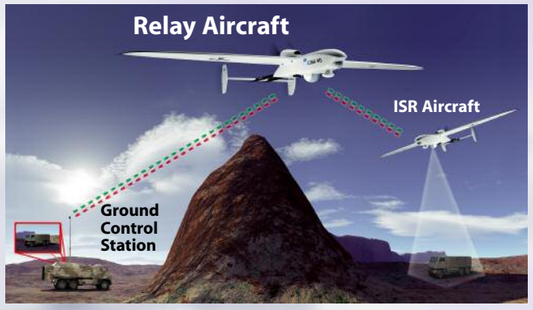
LUNA NG TUAS deployment by helicopter, using jeeps as Ground Control Station and transport vehicles

All system components of LUNA NG can be transported in and operated from protected vehicles or portable shelters by a small crew, allowing rapid deployment by medium transport helicopters.
Taking advantage of the rapid technical progress in equipment, the modular concept of LUNA NG will ensure that the user is always at the cutting edge of technology.

LUNA NG ready for take-off within a few minutes

The new LUNA NG Aircraft

The light-weight LUNA NG aircraft is designed as a powered high-performance plane made of glass and carbon fiber reinforced plastics (CFRP) for long endurance and low acoustic, thermal and radar signatures.
A unique feature of LUNA and LUNA NG is its ability to perform glides without engine power with no acoustic signature and to restart the engine at any time. This permits operations in true acoustic stealth.
The data link transmits reconnaissance and system data from the UAV to the ground control station in real-time. LUNA NG is also able to perform fully automated reconnaissance and surveillance missions, without the need of any radio emissions.



ISR with a relay payload – even in radio-shadow

Another unique feature of LUNA and LUNA NG is its inherent crash safety due to its glider performance and reliable parachute release and landing system.
The LUNA and LUNA NG TUAS aircraft can be easily equipped with a data link relay payload, which turns the UAV into a flying relay platform, enabling beyond line-of-sight operation of the unmanned ISR aircraft.
Due to its modular, multi payload concept LUNA NG can be fitted with up to three state-of-the-art payloads, including but not limited to: Synthetic Aperture Radar (SAR), high resolution digital photo or video cameras, onboard data storage, meteorological sensors, radio relay, sensors for land mine detection, EW payloads, gas and particle samplers, or radioactivity contamination sensors (CBRN).

LUNA NG, a reliable and mature unmanned aircraft system

Ground Control Station

Its modular system design means that the LUNA NG TUAS Ground Control Station (GCS) can be installed in any vehicle or container/shelter. It is fitted with several work stations equipped with high definition (full HD) color monitors for real-time aerial image evaluation, mission planning and aircraft control (virtual cockpit).
Complete mission playback for post mission evaluation, simulation and training can be performed in the LUNA NG Ground Control Station.
Mission schedules can be modified in flight. In mountainous terrain and on long distance missions it is a particular advantage that LUNA NG aircraft can be handed over from one ground station to another one.
A number of mission planning tools are available to the operator: 2D or 3D allegation of standard maps, satellite or aerial images.

Protected workstations for LUNA NG operator

Launch and Recovery

As runway independent systems, the LUNA and LUNA NG aircraft can be operated from almost any terrain. The aircraft are launched by a noiseless bungee catapult, which is light-weight, easy to handle and can be folded for transportation. Recovery is fully automatic in a net-landing-system or by parachute. Airfields are not necessary for operations. The effect: LUNA TUAS deliver first class results much quicker than bigger and more expensive UAS.

LUNA NG Net recovery system