



NIBBIO

The Nibbio Tactical Recce System is the SELEX GALILEO solution for deep, fast and undetected reconnaissance needs in critical missions to acquire real time information (e.g. time-critical targets identification) in hostile scenarios. The system brings together SELEX GALILEO experience in UAV and target systems, electro-optic and radar payloads and avionic systems, providing the best answer to deep penetration and fast reconnaissance requirements aimed at highly defended high-value targets.

GENERAL DESCRIPTION

The system is made of a fast, reliable, high performance, high subsonic drone, a Ground Control Station and a wide array of payloads. The drone platform is the tactical evolution of the SELEX GALILEO well known Mirach 100/5 Aerial Target, currently used by major European and NATO Armed Forces with a certified mission reliability of more than 98%. It is mainly aimed at promptly responding to “On Call”, fast, deep, recce operations.

The Nibbio can be launched from aircraft or from ground and mobile platforms, including ships, by means of two JATO boosters, in day/night and adverse weather conditions.

It can be parachute recovered on ground, with its payloads and structure protected by an airbag system, or at sea.

The Nibbio drone can perform “Launch and Forget” missions in fully automatic mode.

MAIN FEATURES

- High reliable aerial platform (98% NATO certified mission reliability in Aerial Target roles);
- Modular fuselage, with a wide selection of ready-to-be-installed payload;
- JATO assisted launch from ground and ship or aircraft launch;
- Recovered on ground (parachute + airbags) or at sea (parachute);
- Improved survivability, due to low radar and IR signatures, chaff and flares dispensers, high-subsonic speed and outstanding manoeuvrability;
- System flexibility and significant end-user customization.

FEATURING STATE-OF-THE-ART TECHNOLOGY

The air vehicle fuselage is modular and operator-friendly for fast maintenance or system reconfiguration, allowing to choose from payload suites ranging from IRLS to digital pan camera, EO/IR, SAR for IMINT missions and ESM suite, specifically designed to localize and fingerprint electromagnetic sources (e.g. radar stations), for ELINT operations.

The aircraft has been designed to continuously sustain up to 6g-load factor for high performance manoeuvres and survivability and is furthermore assured by its inherently low signature, high-subsonic speed and outstanding agility together with optional protection suites of jammers, chaff and flares.

The flight plan and the payload management are stored inside the aircraft before the flight either by Ground Control Station link or by a flash disk or similar inserted into the aircraft.

Fully automatic, silent missions do not require a Ground Control Station and all pre-launch operations can be performed by a laptop PC.

The drone flight plan can be partially or entirely re-tasked at any point of the mission, should the need arise, both in Line of Sight operations, via command uplink in real-time (in “Click and Go” mode), and in BLOS (Beyond Line of Sight) positions via satellite link.



GROUND CONTROL STATION

In deep penetration pre-programmed reconnaissance missions, the drone transmits sensor imagery and data to the Ground Control Station either while in Line of Sight or BLOS, if supported by a relay communication platform. When in BLOS and silent missions, data will be stored and later transmitted to the GCS as soon as the link is reestablished.

The flexible payload and data link interface allows the Nibbio System to address multi-payload capability, as well as end-user payload customization and integration.

TECHNICAL SPECIFICATIONS

Physical

Length:	4,10 m
Wingspan:	2,30 m
Height:	0,90 m
Fuselage diameter:	0,40 m
MTOW:	360 Kg

Performances (ISA conditions)

Max payload weight:	70 Kg
Max mission range:	400 Km
Max airspeed:	0,84 Mach
Altitude envelope:	5 ÷ 12.500 m

Payloads

EO/IR
SAR
Maritime surveillance radar
Jammers, Chaff/Flares dispenser
NBC sensors