
TEKEVER
PUSHING THE BOUNDARIES IN SPACE
Space is playing an increasingly important role for humankind and is an integral part of our economy. From **Space Exploration**, **Earth Observation** and **New Technology Development**, TEKEVER delivers you advanced Technology to push the boundaries in Space.
We do the technology
You do the mission
Together, **TEKEVER**
Visit us at
www.tekever.com

COMMUNICATION SUBSYSTEMS & INTERSATELLITE LINK

GAMALINK is one of the most advanced and flexible software-defined radios on the market. It provides simultaneous support for multiple types of ground and inter-satellite links. It is characterized with high flexibility in frequency allocation, robust RF protocol, ranging measurements and correlation mechanisms embedded in the data communications and networking features allowing different topologies and data relaying. **GAMALINK** is the technology enabler for creating a unique communications network incorporating not only the space, but also the ground segment

SYNTHETIC APERTURE RADAR

GAMASAR technology provides cloud-penetrating and light-independent capability to capture key terrain data for security applications, resource management, environmental monitoring and others. Identification and rapid response to environmental or event-based phenomena (e.g. oil spill, forest fire) is invaluable in situations of emergency. Flexibility of TEKEVER solution allows installation in any platform of choice: either UAV or SAR-enabled satellite, providing users with low-latency data upon mission request.

GAMALINK

SDR-based Inter-Satellite Link (ISL) for flexible in-orbit connectivity

GAMALINK is a RF communications platform, optimised for in--orbit connectivity. It supports point-to-point and multi-node packet-oriented communications and offers seamless ranging, range rate and time correlation/synchronisation capability together with data exchange. It is the perfect enabler for formation flying, swarm missions or radio science applications.

KEY SPECS

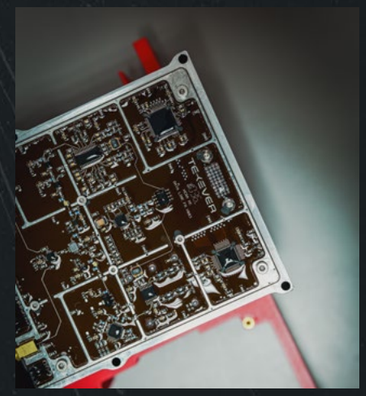
Communications Range	10 cm to 1000+ km
Frequency Band	S-band (2.2 to 2.45 GHz)
RF Output Power	100mW to 4W
Net Data Rate	10kbps to 500kbps (adaptive)
Supply Voltage	22V to 32V unregulated
Data Interfaces	2 x RS-422 (up to 460800 baud) 2 x PPS input
Ranging Accuracy	Better than 50 cm (3-sigma)
Range Rate Accuracy	Better than 1 mm/s with 60s of integration time
Time Correlation Accuracy	Better than 1 ms (at interface level)
Radiation Protection	Qualified for TID up to 20krad SEE/SEL tolerant.

CONFIGURATION OPTIONS

GAMALINK is available in two different configurations:

- Deep Space version, with a robust mechanical housing, providing additional radiation shielding.
- New Space version, more compact and streamlined design, compatible with the CubeSat form factor.

	Deep Space	New Space
Dimensions	160 x 120 x 65 mm	96 x 94 x 45 mm
Mass	910g	450g



THEY TRUST US

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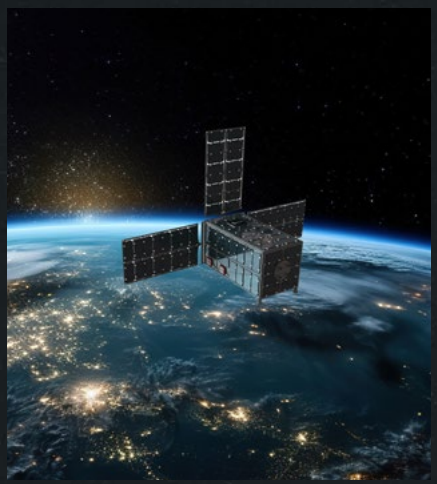
Case Studies

ESA HERA MISSION

Learn more at:

TEKEVER will provide its Inter-Satellite Link (ISL) technology for the **ESA Hera Mission**. The **ESA's Hera** spacecraft is set to journey to Didymos, a 780-meter-diameter asteroid, in November 2024. Its mission is to assess the aftermath of the collision between NASA's DART spacecraft and Dimorphos, a moonlet orbiting Didymos, which is scheduled for September 26, 2022. **Hera** is expected to reach the two asteroids in late 2026 and will gather critical data, including the size of DART's crater and the mass and structure of Dimorphos.
TEKEVER's ISL technology deploys a communications and relative positioning infrastructure, enabling the three satellites involved in the mission to communicate with each other and make more precise measurements. This unique capability of combining communications and position determination in a single piece of equipment will be an essential component of the **Hera Mission**.

The data collected during this mission will be crucial in advancing our understanding of kinetic impact, potentially leading to a repeatable and well-understood planetary defense technique that can protect the Earth from inbound asteroids in the future.



ESA PROBA 3 MISSION

Learn more at:

TEKEVER is also involved in the **ESA PROBA-3 Mission**, providing the Inter-Satellite Link critical subsystem based on **GAMALINK** technology for the validation of formation flying technologies. **PROBA-3** is the third small satellite technology development and demonstration precursor mission within ESA's GSTP (General Support Technology Program) series. The primary mission objective is to demonstrate the technologies required for formation flying of multiple spacecraft in the fields of space science, Earth Observation, and surveillance. This involves the in-orbit validation of new Formation Flying (FF) techniques and technologies through a series of precision FF maneuvers, including formation acquisition, high-precision pointing, reorientation, maintenance, resizing, rotation, and slew.

Achieving precise formation flying opens up a whole new era for science and applications. Future missions could be assembled on a much larger scale. Applications of interest include Earth observation as well as in-orbit satellite servicing.

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You do the mission

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