

GOV SAT

**Aim Secure.
Aim High.**

DELIVERING HIGH GRADE SECURE,
NON-PREEMPTIBLE, RELIABLE AND
ACCESSIBLE SATELLITE COMMUNICATION
SERVICES FOR GOVERNMENTAL,
DEFENCE AND INSTITUTIONAL USERS.

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01

About GovSat

GovSat is a public-private joint venture between the Luxembourg Government and SES, the world-leading satellite operator. We provide secure, reliable and accessible satellite communication services for governmental, defence and institutional users.

GovSat-1, launched in 2018, features high-powered fully-steerable in X and Mil Ka-band spot beams and an X-band Global beam. It is equipped with anti-jamming features, encrypted telemetry and control, and uses assured frequencies. This enables an array of applications such as connectivity for theatres of operation, interconnection of institutional or defence sites, border control, ISR, peacekeeping as well as various types of communications for air, land and maritime missions.

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Key facts

31.01.18

LAUNCH

GovSat-1 was launched on 31 January 2018 on a Falcon-9 re-used launcher by SpaceX from the Cape Canaveral Air Force Station.



ORBIT

Geostationary orbit at

21.5°E



COVERAGE

Coverage from 50°W to 90°E and 70°N and 70°S:

Europe, Middle East, Africa and substantial maritime coverage over the Mediterranean and Baltic Seas, as well as over the Atlantic and Indian Oceans.

The satellite is dedicated to enabling secure networks and solutions to government, defence and institutional users, and is operated from our own Secure Mission Operations Centre in Luxembourg.

GovSat-1 is a multi-mission satellite that features high power X-band and Military Ka-band payload:



X-BAND

The X-band payload is providing up to 5 high-powered, fully steerable spot beams, as well as an advanced Global X-band beam.

KA-BAND

The Ka-band payload is providing up to 2 high-powered, fully steerable spot beams, as well as an Anchor beam which spans the European continent.

Total of 68 transponder-equivalent units of 36 MHz.

All beams are fully interconnectable with the possibility to cross strap between X and Military Ka-band transponders. End-users can have full control of the steerable beams.

MULTI-MISSION BEAMS

Multi-mission beams enabling high-bandwidth and data-intensive applications over small antennas.

MILITARY KA-BAND

Military Ka-band payload was designed to support mobility applications such as ISR (Intelligence, Surveillance and Reconnaissance) and COTM (Communications on the Move).



02

Aim secure Capacity



GovSat-1 features high-powered fully-steerable spot beams in X-band and Mil Ka-band, and a Global X-band beam. It is equipped with anti-jamming features and a fully encrypted telemetry, tracking and command (TT&C) system. Positioned at 21.5°East, GovSat-1’s coverage reaches from 50°W to 90°E and 70°N to 70°S, enabling secure communication services in Europe, Middle East, Africa and South West Asia with maritime coverage for the Atlantic, Baltic, Mediterranean and Indian Oceans.

Our offering is security enhanced capacity for short and long-term lease from MHz, transponders through to beams with full steering rights in X and Military Ka-band.

HIGH THROUGHPUT SMALL TERMINAL OPERATIONS

- Military frequencies offer high throughput data services along with small terminals.
- Efficient operations, reducing operational expenditures on satellite resources of power, bandwidth or cost.

HIGH RAIN ZONE OPERATIONS (OR DESERT CONDITIONS)

- Military X-band frequencies show less degradation in adverse weather conditions than commercial frequencies in most cases. This results in higher service availability no matter where you are deployed.

HIGH AVAILABILITY OPERATIONS

- Military frequencies are limited and exclusively reserved for use by military or government users.

MILITARY FREQUENCY DIFFERENTIATOR

Condition	X-band	Military Ka-band
High Rain Zone	● ● ● ● ●	● ● ● ● ●
Small remote terminals	● ● ● ● ●	● ● ● ● ●
High Data rates	● ● ● ● ●	● ● ● ● ●
Mobility	● ● ● ● ●	● ● ● ● ●
Fixed Infrastructure	● ● ● ● ●	● ● ● ● ●
Maritime	● ● ● ● ●	● ● ● ● ●
Airborne	● ● ● ● ●	● ● ● ● ●
Challenged geographic area	● ● ● ● ●	● ● ● ● ●
Congested electromagnetic environment (jamming potential)	● ● ● ● ●	● ● ● ● ●
Limited real estate available at remote	● ● ● ● ●	● ● ● ● ●

GovSat-1 Capacity

X-BAND GLOBAL BEAM

POSITION : 21.5 °E

LAUNCH & OPERATION:
Falcon 9, Space X • Q1, 2018

SECURE SATELLITE LINKS :
Anti-jamming, encrypted TT&C



KA MISSION BEAMS

Steerable high power Mil Ka-band mission beams (notional pointing)



KA ANCHOR BEAM

Steerable Mil Ka-band Anchor beam



X-BAND MISSION BEAMS

Up to 5 steerable high-power X-band mission beams

Use our interactive map online to see and test notional pointing possibilities:
govsat.lu/govsat-1-capacity

03 Aim secure Applications



FOR INSTITUTIONAL & GOVERNMENT NEEDS

GovSat-1 delivers secure satcom applications for:

- Peacekeeping missions
- Civil-military inter-agency collaboration (national security...)
- Emergency response
- Disaster recovery
- Critical national infrastructure
- Protection of natural resources
- Remote government offices
- Diplomatic communications



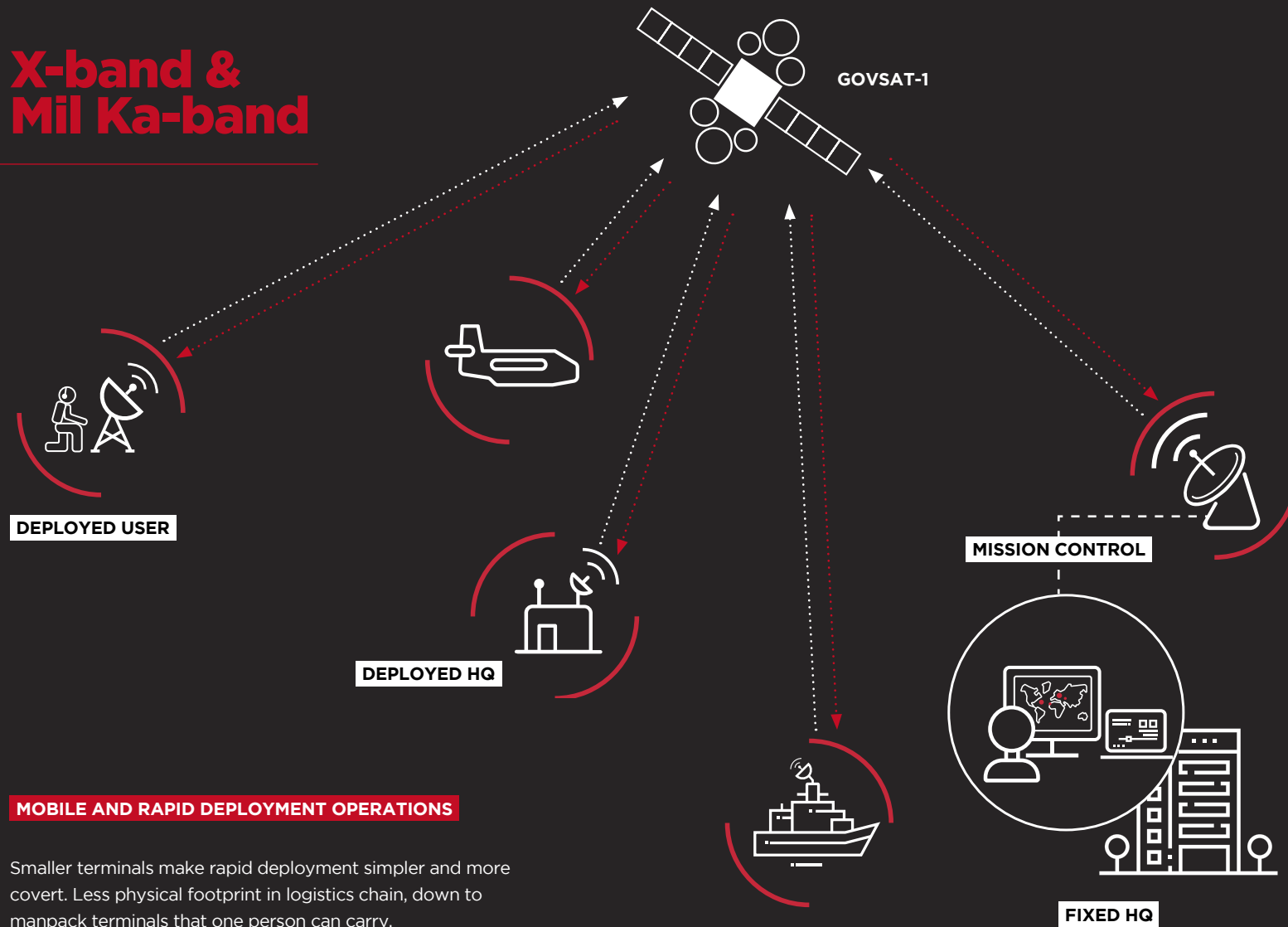
FOR DEFENCE PURPOSES

GovSat-1 is dedicated to secure defence satcom in air, maritime and land applications, including:

- Communication on the Move (COTM)
- Communications on the pause (COTP)
- Intelligence, surveillance and reconnaissance (ISR)
- Border Control
- Deployed Satcom (HQ Communications...)



X-band & Mil Ka-band



MOBILE AND RAPID DEPLOYMENT OPERATIONS

Smaller terminals make rapid deployment simpler and more covert. Less physical footprint in logistics chain, down to manpack terminals that one person can carry.

04

Aim secure Operations

Satcom security is at the core of our philosophy and activities

Satellite communications are an essential component of government and military architectures, due to their strategic importance in supporting worldwide operations. The satellite technology adds value to conventional Command & Control applications as well as for Morale, Welfare, Recreation and Diplomatic services, effectively supporting Embassy networks and critical data back-up systems. It will always remain the primary choice for military communications, as it provides superior, accurate and real-time information at affordable costs wherever it is required.

To assure secure operations and provide secure and resilient satcom capabilities, we have developed highly secure measures and processes in key fields: secure hosting, premises and personal. We are also ISO 27001 certified and have access to secure teleports around the world, in partnership with SES and other third-party teleports.



Our secure hosting is provided in Luxembourg, a politically stable country, with the ability to protectively host other nations' equipment. Within the fully protected compound, we manage operations from a dedicated secure building and Mission Operations Centre running 24/7. The security cleared staff has also extensive operational satcom deployment experience in government and defence environments.

05 Aim secure Services

ANCHORING TELEPORT SERVICES

GovSat's high resilience anchoring service is provided to our users as prime or back-up uplink with secure equipment colocation space within highly secured locations.

END-TO-END SOLUTIONS

We provide end-to-end secure satcom solutions tailored to users' specific requirements. We offer a one-stop-shop, from the design to the implementation phases, including maintenance and support. We integrate both legacy and latest technology to provide highly performing and reliable satcom solutions.

STRONG PARTNERSHIPS

We fully lever all the capabilities available within SES to support integrated, networked and cloud-enabled solutions as needed by our customers.

We partner and collaborate with channel partners and integrators. We are vendor agnostic and work with suppliers recommended by host nations, or choose suppliers based on their merit for each application.

GOV SAT

LUXEMBOURG / CHÂTEAU DE BETZDORF / RUE PIERRE WERNER / L-6815 BETZDORF / INFO@GOVSAT.LU

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