THORIUM
S P A C E   T E C H N O L O G Y

SYSTEM FEATURES

A small size GEO satellite (Small GEO HTS) with communications payload based solely on Digital Beam Forming technology (up to Ka Band) and throughput capabilities between 50 and 100 Gbps.

Thorium Space Small Geo flexible satellite boosts global commercial operation capabilities and plays a significant role in cost efficient telecommunication market and flexible capacity management.

- Digital Flexible Payload with full Ka Band spectrum (3,5GHz)
- HTS Payload architecture for re-use of spectrum (Multibeam)
- Spot and Wide Beams with software defined contours
- Beam hopping and beam tracking
- Full Electric Propulsion with Payload Power up to 5 kW
- Launch Mass: 450 kg to 1250 kg
- Multi Launch Compatibility
- Up to 100 Gbps of archivable throughput using standard 70 cm to 120 cm customers dish
- X, Ku and Ka band support with full Digital Beam Forming
- Optional E Band Forward link support (Gateways)

SMALL
GEO HTS SATELLITE

HTS ARCHITECTURE

High Throughput System that is capable of delivering higher throughput and flexible capacity management

KA & E BAND FLEXIBLE PAYLOAD

Flexible payload solutions for in-orbit frequency re-configuration, adaptive, software defined coverage and power allocation needs of the users

5X SMALLER THAN LEGACY SATELLITES

At mass of ~ **1250 kg** simpler and cheaper to launch

FULLY ELECTRICAL & SOFTWARE DEFINED SATELLITE

A Highly Efficient Electrical Propulsion System to perform Orbit Rising and Station Keeping of the Small GEO HTS Satellite with mission in-orbit software updates and re-configurations

DIGITAL BEAM FORMING ARCHITECTURE

Digital Beam Forming technology eliminating legacy antenna payloads, allowing for full software defined multibeam operations – a real **GAME CHANGER** on the market (with partnership of **Teledyne E2V**)

MODULAR AND SCALABLE DESIGN

Thorium Space modular and scalable solution provides more generic approach to telecommunication satellite design to be cost efficient and flexible during a 15+ years in-orbit operations

MULTI-LAUNCH AND RIDESHARE COMPATIBILITY

Optimized integration, rideshare and multi-launch solution allowing for flexibity and cost efficiency to end users