Over-Sat

Based on Luneburg Lens antenna with Electronic Steerable Beam

Python

Ultra Compact, Multi-Purpose Tactical SatCom System

Python-5 and **Python-7** are **ultra-compact**, multi-purpose Ka-band mobile SATCOM systems based on advanced **Luneburg Lens technology**, delivering **exceptional performance** with **minimal SWaP** (size, weight, and power consumption) and low **RCS** while supporting **GEO**, **MEO** and **LEO** satellite constellations.

Tactical BLOS Communications
Robust Composite design, beyond-line-of-sight connectivity

Compact Luneburg Lens Antennas
13 cm (5") and 18 cm (7") designs with EL electronically steerable beam

High-Performance RF System
Superior gain, G/T, and EIRP in compact form

Broadband Mission Support
Handles high-speed data and video

Consistent, Uninterrupted Links
Linear performance across all elevation angles with no scan losses

Cybersecurity, GNSS-denied
Integrated cybersecurity, supports operation even in GNSS-denied environments

Optimized SWaP
Ultra-light, low-power design ideal for space- and weight-constrained platforms

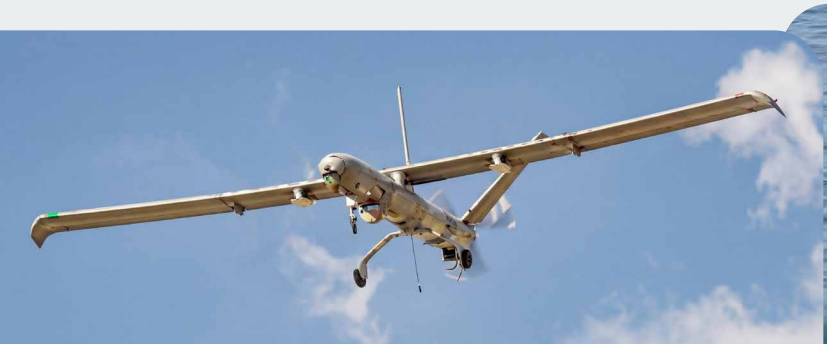
Rugged Non-metal Construction
Reduces weight and radar-cross-section for enhanced survivability

Rapid Deployment
Auto-acquire and track for fast setup and hands-free operation

Fully Integrated Package
ACU, Tracking Receiver, IMU, IMF & LNB combined in one compact unit

Satellites repointing time
Achieves 130° beam shifts in less than one second for agile operations

Compatible with
UAVs, drones, ground vehicles, first responders, manned and unmanned surface and underwater vessels.



Specifications	Python-5	Python-7
Antenna Type	Luneburg Lens antenna	
Antenna Size	13 cm (5")	18 cm (7")
Stabilizer/Tracking Positioner	Elevation (Electronics beam) over Azimuth	
Elevation Angle **Azimuth Range**	5° to +100° Unlimited	
Frequency Range	TX: 29.00 - 31.00 GHz RX:19.20 - 21.20 GHz	
G/T Typical (19.7GHz , 30° EL. Clear sky w/o Radome)	4.0 dB/K	7.0 dB/K
EIRP Typical @ 30GHz, w/o Radome, Incl. 16W BUC @ P-Rated-PSAT	37.0 dBW	39.0 dBW
Polarization	Circular (L/R)	
Satellites repointing time (assume 130 deg. scan)	Less than 1 Sec	
Tx Sidelobe	~ -25 dB	
Inst Bandwidth (does not depend on the scan angle)	The full frequency range	
System Power Consumption (Incl. 16W BUC) @ P-Rated-PSAT	~145W	
Terminal Size	H: 221mm (8.7") D: 165mm (6.5")	H: 277mm (10.9") D: 212mm (8.3")
Antenna system Weight (w/o BUC)	~ 2.5 Kg (6 Lb.)	~ 4.5 Kg (10 Lb.)
Operation Temperature	- 40°C to 60°C	
Composite Materials (low RCS)	YES	
Link with Satellite at Zenith	YES	
Supporting GEO/MEO/LEO (using Luneburg lens, single beams one system)	YES	

Notes: Larger BUCs are available
Specifications subject to change without notice