

NEWSPACE MARKET · COMPANY PROFILE



Thorium Space Technology

Poland · founded 2018 · thorium.space

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as of 20 August 2026



Thorium Space Technology

Thorium Space Technology (Thorium Space S.A.) is a Polish designer and manufacturer of active electronically steered array (AESA) antenna systems for satellite communications, headquartered in Wrocław with a business office and laboratory in Warsaw. Founded in 2018 by Paweł Rymaszewski, the company builds flat-panel phased array antennas with fully electronic beam steering and no moving parts, targeting Ku- and Ka-band satcom terminals, spacecraft communication payloads, and small GEO/MEO/LEO high-throughput satellite platforms. The company's flagship product is the Aurora family of Ka-band satcom terminals, based on flat-panel AESA technology capable of forming two independent, simultaneous transmit/receive beams to two satellites in any orbit. Thorium also develops Ka-band beamforming integrated circuits in partnership with SiVern Semiconductors, communication payloads for small GEO/MEO/LEO satellites with fully digital, software-defined beamforming, and telemetry/communication systems for suborbital rockets (the SUBCOM project). Thorium Space has grown into one of the largest RF and mmWave engineering teams in Europe, with roughly 45-50 engineers and specialists and its own RF/mmWave measurement laboratory. The company has raised seed funding led by Smartlink Partners, collaborates with ESA-linked programmes, and in April 2025 signed a strategic agreement with Creotech Instruments to jointly develop Poland's first national telecommunications satellite. Thorium unveiled its Aurora satcom terminal at the MSPO defence exhibition in Kielce in 2023, followed by the ruggedized Aurora-Pro variant for military and government users at MSPO 2024.

This profile is generated from the live NewSpace Market catalogue. Specifications are as published by the manufacturer; every product links to a page where a request for quotation reaches the company directly.

Product catalogue



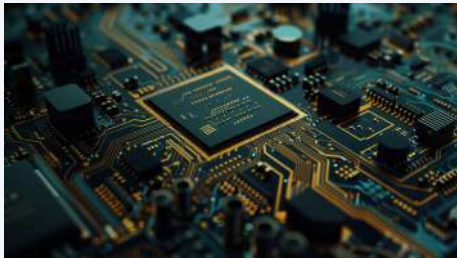
THORIUM SPACE TECHNOLOGY

Aurora Ka-Band Satcom Terminal

Flat-panel AESA Ka-band satcom terminal forming two simultaneous transmit/receive beams to satellites in any orbit (LEO/MEO/GEO), with a ruggedized Aurora-Pro variant for defence u

Operating frequency (TX)	27–31.5 GHz
Operating frequency (RX)	17.7–21.2 GHz
Connection interface	Ethernet
Operating temperature range	-40°C to 55°C
Maximum beam steering angle (electronic)	Azimuth ±65°, elevation ±65°
Maximum antenna positioning angle (manual, initial)	Azimuth ±180°, elevation ±90°
Supported operation schemes	TDMA, FDMA (SCPC), HTS

price on request [datasheet](#)



THORIUM SPACE TECHNOLOGY

Communication Payload for Satellites

Modular Ka/X-band communication payload for GEO/MEO satellites with an FPGA-based digital processor and active multi-beam phased array antennas.

Digital processor type	FPGA-based, modular
Digital processor TRL	IV
Ka TX antenna array	16×16 radiators
Ka TX frequency	17.7–21.2 GHz
Ka RX antenna array	16×16 radiators
Ka RX frequency	27.5–31 GHz
Ka module independent beams	2 TX + 2 RX

price on request



THORIUM SPACE TECHNOLOGY

Ka-Band Beam-Forming Integrated Circuits

A family of four Ka-band beam-forming ICs (Wildside2731, Mystic1721, Farside1721, Meadow2731) for satellite terminal and space payload applications, developed with Silvers Semicondu

Wildside2731 function	TX (terrestrial)
Wildside2731 frequency	27.5–31 GHz
Wildside2731 TRL	V
Mystic1721 function	RX (terrestrial)
Mystic1721 frequency	17.7–21.2 GHz
Mystic1721 TRL	V
Farside1721 function	TX (space)

price on request



THORIUM SPACE TECHNOLOGY

Satellite Terminals (Aurora / Ares)

Flat phased array satellite terminals with electronically steered beam in Ku and Ka bands, designed 100% in Poland.

Aurora Pro band	Ka
Ares band	Ku
TX Ka frequency range	27.5–31 GHz
RX Ka frequency range	17.7–21.2 GHz
Ka AESA Pro radiator array	16×16
Ku AESA radiator array	16×16
Ka AESA (legacy) radiator array	8×8

price on request



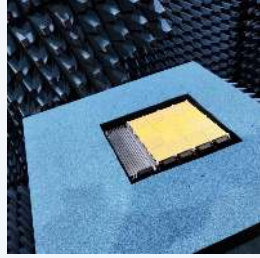
THORIUM SPACE TECHNOLOGY

Suborbital Rocket Telemetry & Communication System

Complete bidirectional S/UHF/L-band telemetry and communication system for suborbital rockets, including conformal wraparound antennas, SDR transceivers, mobile tracking ground sta

Telemetry downlink band	S-band
Telecommand uplink band	UHF
GPS receive band	L-band
Wraparound Antenna S-Band TRL	V
Wraparound Antenna L-Band TRL	V
Wraparound Antenna UHF TRL	V
SDR Transceiver (rocket) TRL	V

price on request



THORIUM SPACE TECHNOLOGY

T-XPDR Tactical Adaptive Satellite Transponder

Ka-band tactical adaptive satellite transponder using SDR and cognitive radio technologies with multi-beam electronically steered flat panel antennas for tactical satellite communi

Operating frequency band	Ka
Signal generation	Digital radio (SDR)
Radio technology	SDR + Cognitive Radio (CR)
Antenna type	Multi-beam flat panel, active phased array
Beam steering	Electronic (no moving parts)
Application	Tactical satellite communications (PTSC)
Project timeline	2022–2025

price on request

Contact Thorium Space Technology

Open the company profile on NewSpace Market to see full specifications and datasheets, and to send a request for quotation that reaches the manufacturer directly.

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