

NEWSPACE MARKET · COMPANY PROFILE



Opterus Research and Development

United States · founded 2015 · opterusrd.com

4

PRODUCTS

5

SERVICES

4

WITH DATASHEETS

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as of 20 August 2026



Opterus Research and Development

Opterus Research and Development, based in Loveland, Colorado, designs and manufactures innovative deployable structures and subsystems for spacecraft, engineered for simplicity, efficiency and performance. The company's core technology combines proprietary high-strain composite materials with origami-inspired folding principles to create advanced deployable structures that reduce cost and lead time compared with traditional mechanisms. Opterus's product line spans several categories of deployable spacecraft hardware. Its hinge, boom and deployer products include the Slit Tube Boom, the Living Hinge Boom (LHB), the Collapsible Tubular Mast (CTM) and its trussed variant (T-CTM), the Recirculating Belt Deployer (RBD), and the Lenticular Offset Composite (LOC) Hinge. In solar power generation, the company offers the Modular Self-Stiffening Array (MOSSA) along with the Closed Cross-Section arrays CCX-1 and CCX-2 and the Retractable Rollable Mast Array (R-ROMA), addressing missions from small satellites up to multi-kilowatt-class power needs. For RF systems, Opterus builds the Spiral Wrapped Antenna Technology (SWATH), tension membrane antennas, continuous panel antennas and fully custom antenna structures. The company is also developing in-space assembly and manufacturing (ISAM) technologies, including Tubular Truss Additive Manufacturing (TTAM) and Tensioned Precision Structures (TPS). Opterus operates a 25,000 sq ft vertically integrated facility offering design, prototyping, analysis and testing services and supports customers through the full product lifecycle. The company maintains an AS9100D-compliant quality management system, is FAR/DFAR compliant, and reports a 100% flight heritage success rate across its deployable products, reflecting its focus on reliability f

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SERVICES

Services

analysis and simulation Industry-leading analysis and simulation, including deployment, finite element, structural, and thermal analysis.	architectural consultations One-time consultations on architectural concepts for space systems.
engineering design capabilities Unrivalled engineering design for spacecraft, lunar, and naval environments.	rapid prototyping Rapid prototyping services for a wide range of challenges, utilizing state-of-the-art technology.
Structures and Deployment Testing Comprehensive testing services, including structures and deployment testing through flight qualification.	

Product catalogue



OPTERUS RESEARCH AND DEVELOPMENT

Collapsible Tubular Mast (CTM)

The Collapsible Tubular Mast (CTM) is a precise, patent-pending boom architecture featuring a fully enclosed lenticular cross-section for greater compaction, strength, and stiffness

[price on request](#)

[datasheet](#)



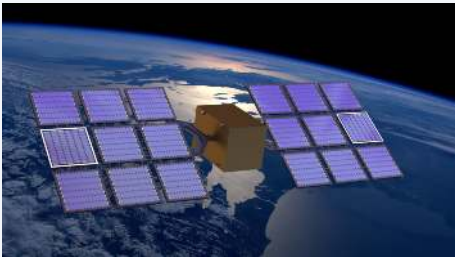
OPTERUS RESEARCH AND DEVELOPMENT

Living Hinge Boom

The Living Hinge Boom (LHB) is a deployable boom featuring a fully closed circular cross-section, designed for compact packaging and improved strength and stiffness.

[price on request](#)

[datasheet](#)



OPTERUS RESEARCH AND DEVELOPMENT

Modular Self Stiffening Array (MOSSA)

The MOSSA is a modular, panel-based solar array for SmallSats, designed for missions requiring high precision pointing or rapid slewing, offering configurations from 1 to 9 panels.

[price on request](#)

[datasheet](#)



OPTERUS RESEARCH AND DEVELOPMENT

SWATH – Spiral Wrap Antenna Technology

SWATH is a patent-pending deployable solid surface parabolic dish antenna designed for high-frequency space communications, offering a stress-free deployed configuration and compact

Operating Frequencies	Over 100 GHz
Stowed Volume (for <1m diameter)	1x1x1.5U
Area Weight	Less than 300 gsm

[price on request](#)

[datasheet](#)

Contact Opterus Research and Development

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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