



Interorbital Systems

United States · founded 1996 · interorbital.com

8

PRODUCTS

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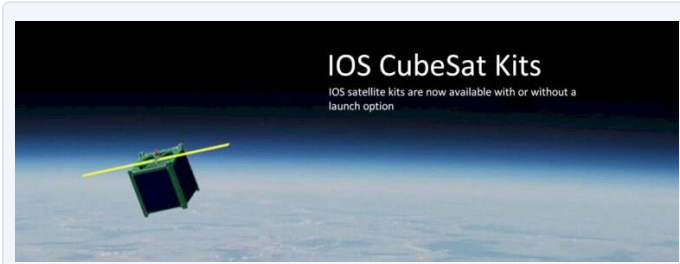


Interorbital Systems

Interorbital Systems (IOS) is an American private aerospace company founded in 1996 by Roderick and Randa Milliron in Mojave, California. Operating from the Mojave Air and Space Port — where IOS was among the earliest tenants — the company develops the world lowest-cost orbital launch vehicles and manufactures affordable satellite kits for researchers, educators, and commercial customers worldwide. IOS has competed in landmark prize competitions including the Ansari X Prize and served as launch provider for Team Synergy Moon in the Google Lunar X Prize. IOS is developing two orbital launch vehicles: the NEPTUNE_100, a small-lift two-stage rocket capable of delivering 100 kg to a 500-km polar orbit at just 99,999 per dedicated launch (,918/kg), and the TRITON_4500, a medium-lift vehicle capable of orbiting up to 4,500 kg for 2 million per dedicated launch (,667/kg). Both vehicles use White Fuming Nitric Acid (WFNA) and turpentine propellants with ablatively-cooled filament-wound composite engines operable for up to 40 minutes, and can launch from land or ocean platforms. IOS also produces the CubeSat 3.0 and TubeSat 3.0 personal satellite kits — the lowest-cost professional-quality small satellite kits on the market. These no-solder, no-drill kits can be assembled in under 15 minutes and are deployed to a 310-km polar orbit aboard IOS NEPTUNE rockets. With over 180 pre-paid launch customers, IOS offers configurations from 1U to 3U for both form factors. Additional offerings include the LunarStation commercial lunar lander (up to 20 kg payload, M per mission) and the Orbital Expeditions manned capsule program for 12-hour low-Earth-orbit tourism at 0 million per seat.

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Product catalogue



IOS CubeSat Kits

IOS satellite kits are now available with or without a launch option

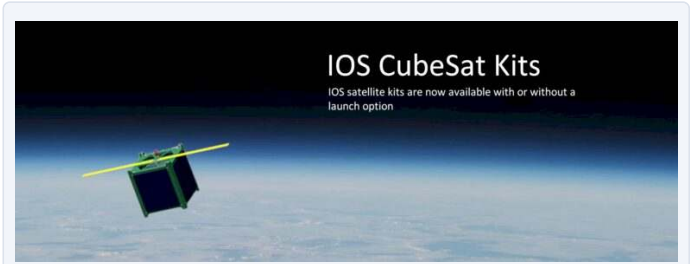
INTERORBITAL SYSTEMS

CubeSat 3.0 Personal Satellite Kit

Lowest-cost professional-quality CubeSat kit (1U-6U), PCB chassis, assembled in under 15 minutes, available with launch to 310-km polar orbit.

Standard	CubeSat (1U-6U)
Mass (1U)	1.33 kg
Available configurations	1U, 2U, 3U, up to 6U
Assembly time	Under 15 minutes
Chassis material	PCB (no aluminum frame)
Deployment orbit	310 km polar
Launch vehicle	IOS NEPTUNE rocket

price on request



IOS CubeSat Kits

IOS satellite kits are now available with or without a launch option

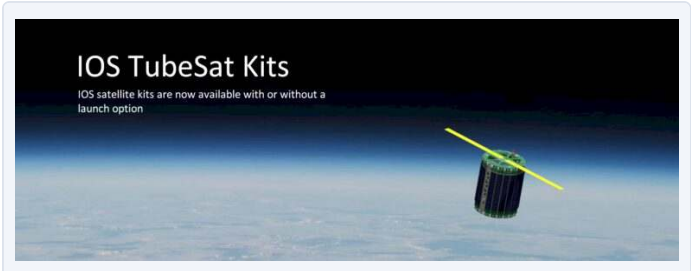
INTERORBITAL SYSTEMS

IOS CubeSat 3.0 Kit

Lowest-cost professional-quality CubeSat kit available — 1U to 6U configurations, no drilling/tapping/soldering required, buildable in under 15 minutes.

Form factor	1U to 6U
Assembly time	Under 15 minutes, no drilling/tapping/soldering
Chassis (2.0 predecessor)	10x10x10 cm laser-cut aluminum bands and PCBs
Microcontroller	Atmega 2560
Memory	2x4 Mbits FRAM
Sensors	9-DOF inertial module with magnetometer, alpha/beta/gamma radiation sensor
Power	4x 1.37W solar cells, 4x Lithium-Ion batteries

price on request



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IOS TubeSat Kit

A low-cost, icosagon cross-section pico-satellite kit (up to 0.75-kg for 1U) from Interorbital Systems, designed for easy assembly and optional launch to a 310-km polar orbit aboard

Cross-section shape	Icosagon
Maximum mass (1U)	0.75 kg
Mass allowance (2U)	Double that of 1U TubeSat
Mass allowance (3U)	Triple that of 1U TubeSat
Construction	Custom-printed circuit boards and precision laser-cut aluminum components; all-circuit-boa
Assembly time (TubeSat 3.0)	Under 15 minutes with just a screwdriver, no drilling, tapping, or soldering
Optional launch orbit	310-km (192-mi) polar orbit

price on request



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LunarStation Commercial Lunar Lander

Low-cost commercial lunar lander delivering up to 20 kg to the lunar surface via airbag-cushioned soft landing at \$6M for a full dedicated mission.

Maximum payload to lunar surface	20.0 kg (44.1 lbs)
Payload slots	Up to 4 shared, or 1 dedicated
Landing system	Solid rocket motor deceleration + airbag cushioning
Power	Solar panels
Communications	Onboard communications system
Payload interface	Shared power and communications ports
Landing zone	Lunar northern hemisphere

\$6 000 000



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NEPTUNE_100 / TRITON_4500 Launch Vehicles

Small-lift and medium-lift two-stage orbital launch vehicles using storable bipropellant — NEPTUNE_100 (100kg payload) and TRITON_4500 (4,500kg payload) to 500km polar orbit.

NEPTUNE_100 payload	100 kg to 500 km polar orbit
TRITON_4500 payload	4,500 kg to 500 km polar orbit
Propellants	White Fuming Nitric Acid (WFNA) + Turpentine
Engine cooling	Ablative (filament-wound composite)
Max engine burn time	40 minutes
Propellant feed	Pressure-booster system (proprietary)
Launch platforms	Land or sea

price on request



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NEPTUNE_100 Launch Vehicle

Low-cost small-lift two-stage orbital rocket delivering 100 kg to 500-km polar orbit at \$599,999 per dedicated launch.

Vehicle class	Small-lift orbital
Stages	2
Payload to 500 km polar orbit	100 kg
Dedicated launch price	\$599,999
Price per kg to orbit	\$4,918/kg
Rideshare price (3U CubeSat)	< \$100,000
Primary orbit	500 km polar circular

\$599 999



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TRITON_4500 Launch Vehicle

Medium-lift two-stage orbital launch vehicle delivering up to 4,500 kg to 500-km polar orbit at \$12M per dedicated launch.

Vehicle class	Medium-lift orbital
Stages	2
Payload to 500 km polar orbit	4,500 kg
Dedicated launch price	\$12,000,000
Price per kg to orbit	\$2,667/kg
Primary orbit	500 km polar circular
Propellant	WFNA + turpentine

\$12 000 000



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TubeSat 3.0 Personal Satellite Kit

Most affordable professional-quality nanosatellite kit: 16-sided prism design, assembled in under 15 minutes, available with launch to 310-km polar orbit.

Form factor	Hexadecagonal (16-sided) prism
Outside diameter (1U)	8.94 cm (3.52 in)
Inside diameter (1U)	8.56 cm (3.37 in)
Length (1U)	12.7 cm (5.0 in)
Maximum mass (1U)	0.75 kg (1.65 lb)
Platform mass with standard electronics	0.5 kg (1.1 lb)
User payload mass allowance (1U)	0.25 kg (0.55 lb)

price on request

Contact Interorbital Systems

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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<https://www.interorbital.com>

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