

Giuseppe Sisinni CubeSat Platforms for Astronomy Missions

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Our Mission

EnduroSat designs, engineers and integrates remarkable CubeSats, creating a functioning Space infrastructure

https://www.endurosat.com

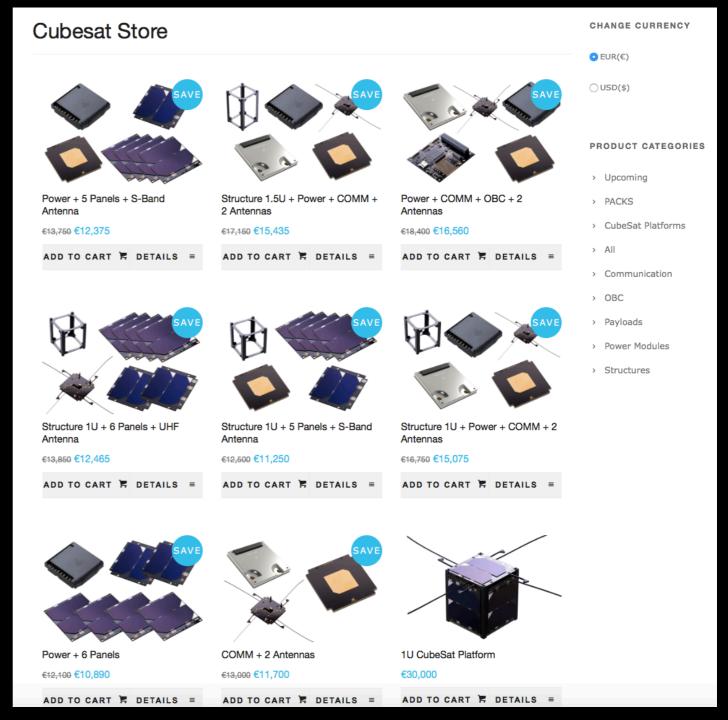


Achievements

Unique online satellite store

Configure and order a satellite in **less the 5 min.**!

5-days delivery time for all satellite subsystems!

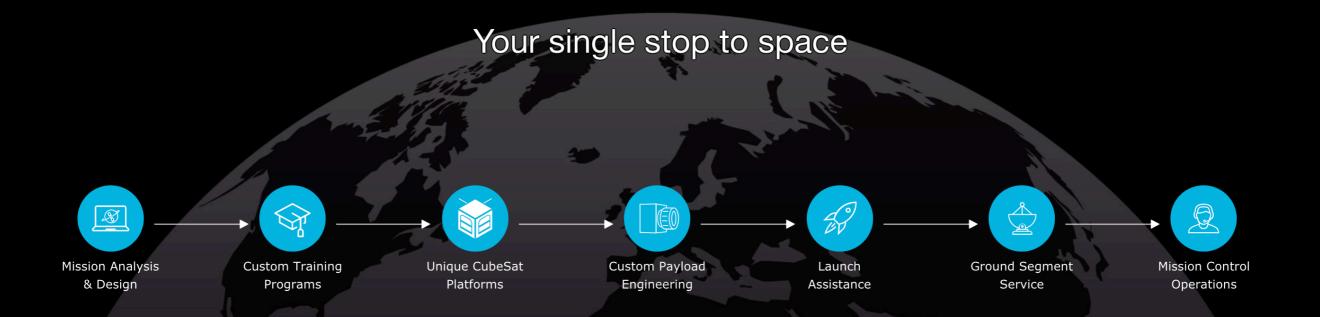


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Satellite as a Service

- Spaceflight-ready satellite
- Mission analysis and launch procurement
- Assistance in satellite registration
- Ground Segment and Operations Services
- Training of customer's engineering team





Small Satellites

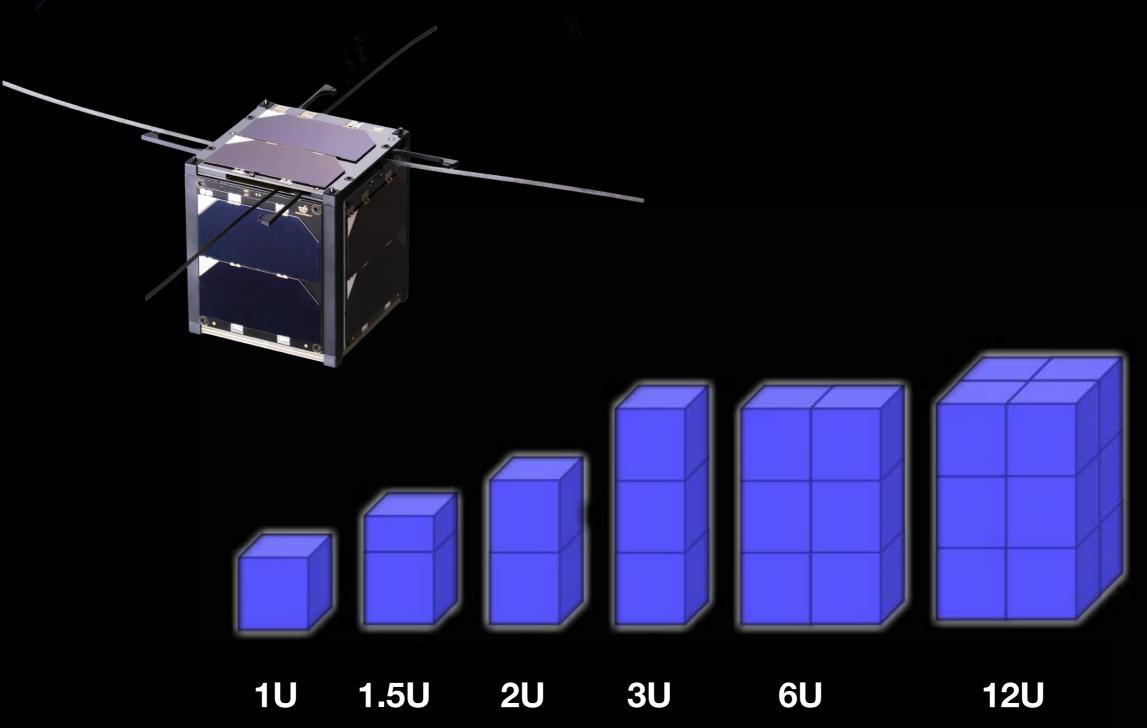
- Small Satellites are satellites of low mass and size usually under 500kg
- Typical classification of Small Satellites:

	Mass Total Cost (M\$)	
Mini	100 -500	10-150
Micro	10-100	1-30
Nano	1-10	0.1 - 1
Pico	0.1-1	0.05-2
Femto	<0.1	< 0.05

CubeSat is a specific class of nanosatellites

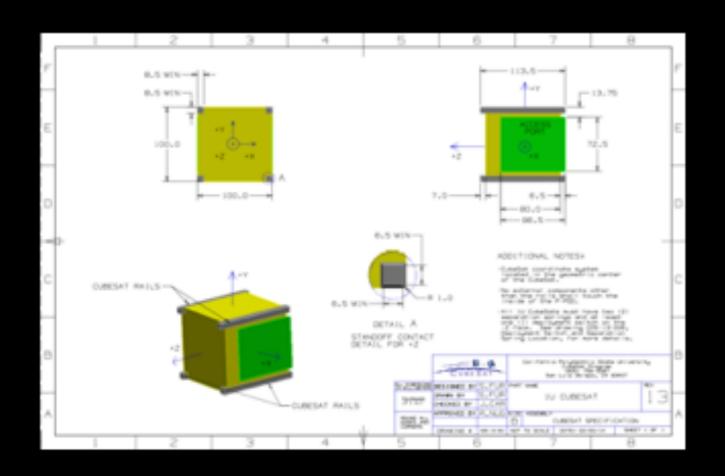


CubeSats





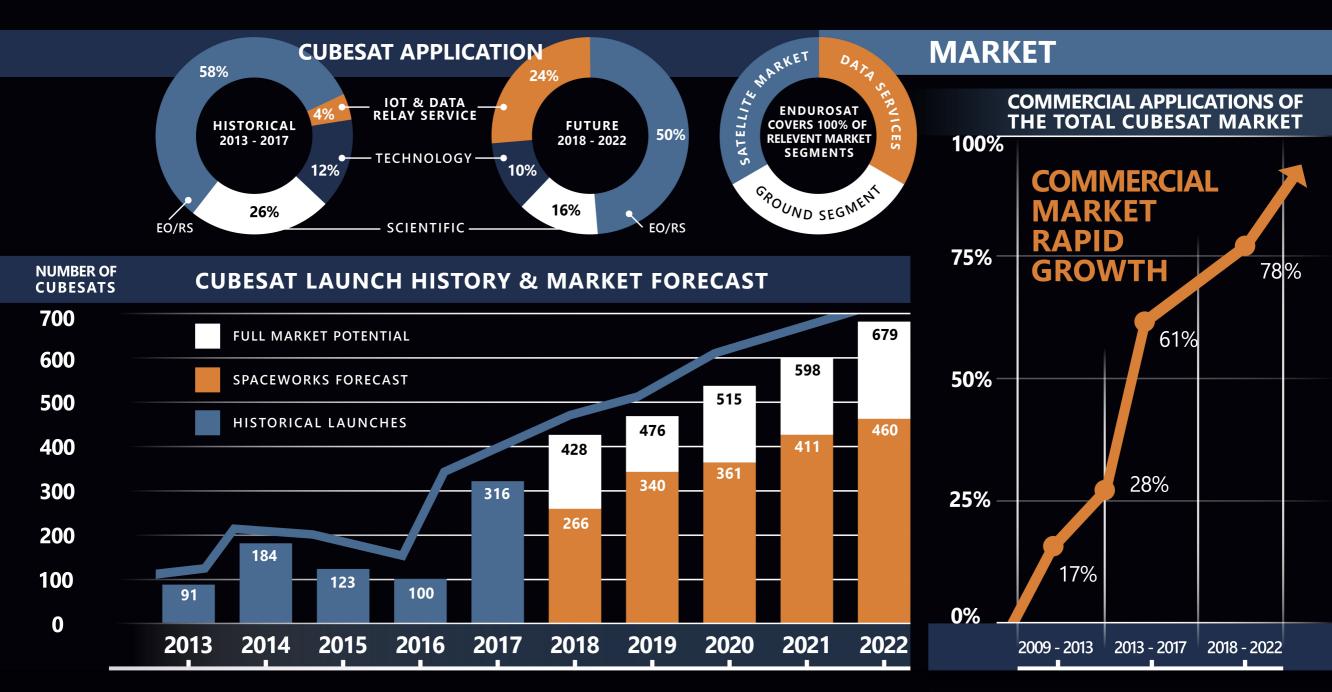
CubeSat Design Specifications



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Why it matters?



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CubeSats

Benefits

- Low(er) cost
- Flexible Launch Strategies
- COTs
- Standardized building blocks
- Short Development time less then 12 months from KO to Launch
- Constellation (revisit time, coverage, scalability, data latency)

Limitations

- Size
- Power
- Data rates
- No Rad-Hard Components



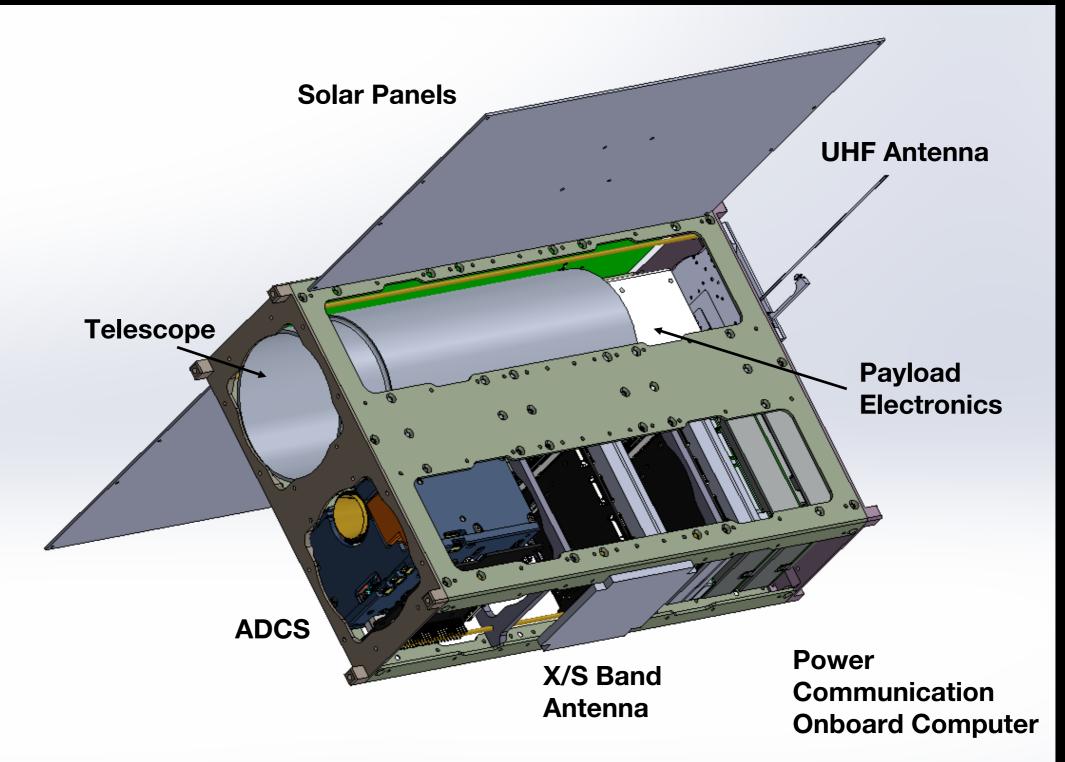


CubeSat Capabilities

	1U	3 U	6U
Payload Volume	up to 0.4U	up to 2U	up to 4U
Power Generation	Up to 8W	Up to 50W	Up to 75W
Payload Power	2W orbit average	12W orbit average	24W orbit average
Energy Storage	10 - 20 Wh	40 Wh (expandable)	40 Wh (expandable ~100Wh)
Pointing accuracy	~3°	<0.5° (typical) <0.01°	<0.5° (typical) <0.01°
Data Storage	expandable via SD cards	expandable via SD cards	expandable via SD cards
Data Downlink	10 - 20 kbps	~120Mbps	~120Mbps
Frequency	V/UHF	V/UHF S/X-Band	V/UHF S/X-Band



Toliboy Mission





How much does it cost?

1U CubeSat

- Platform: \$25k
- Launch: \$70k or Free
- Operations: Free

6U CubeSat

- Platform: > \$200k
- Launch: \$450k
- Ground Station: \$100 per pass

Thank you!

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SpacePort



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