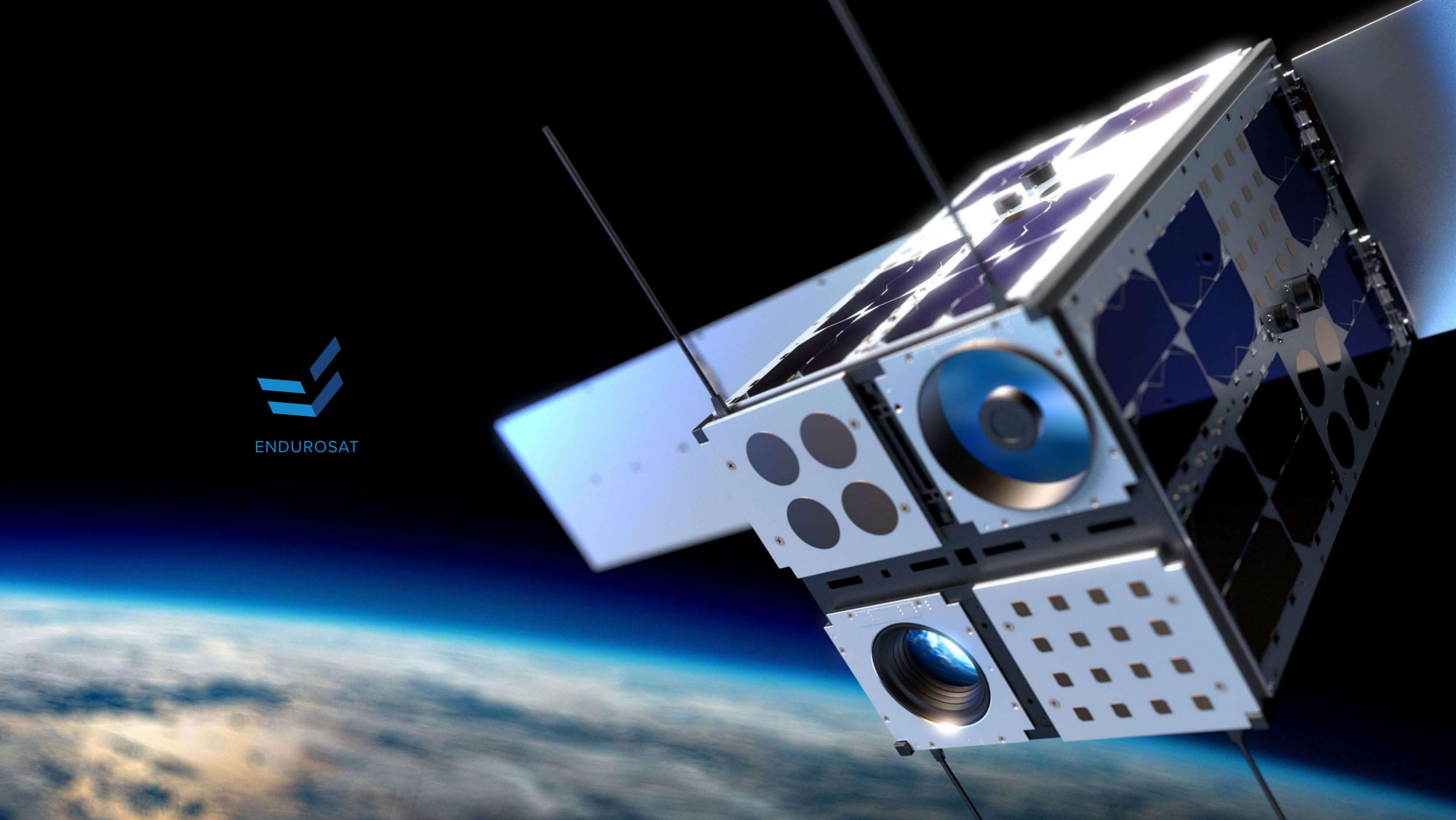


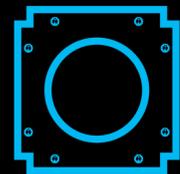


ENDUROSAT

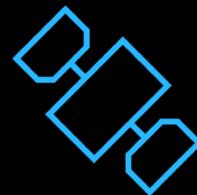


**WE EMPOWER HUMANS TO
CONNECT AND PROGRESS
THROUGH SPACE TECHNOLOGY**

WHAT WE DO



**Class-leading
NanoSat Modules**



**Exceptional Software-
defined Satellites**



**Space Data
Service**

OUR STORY

EnduroSat
Founded
2015

First NanoSat
Systems Developed
2016

CubeSat Online
Store Launched
2017

First NanoSat
In Space
2018

Digital Ground Station
Service Launched
2019

Software-defined
NanoSat Developed
2020

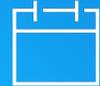
Space Data
Service Launched
2021

Constellation
Service Launched
2022

 **2020**

2 x

Year to year growth
40 + team

 **2021**

2.5 x

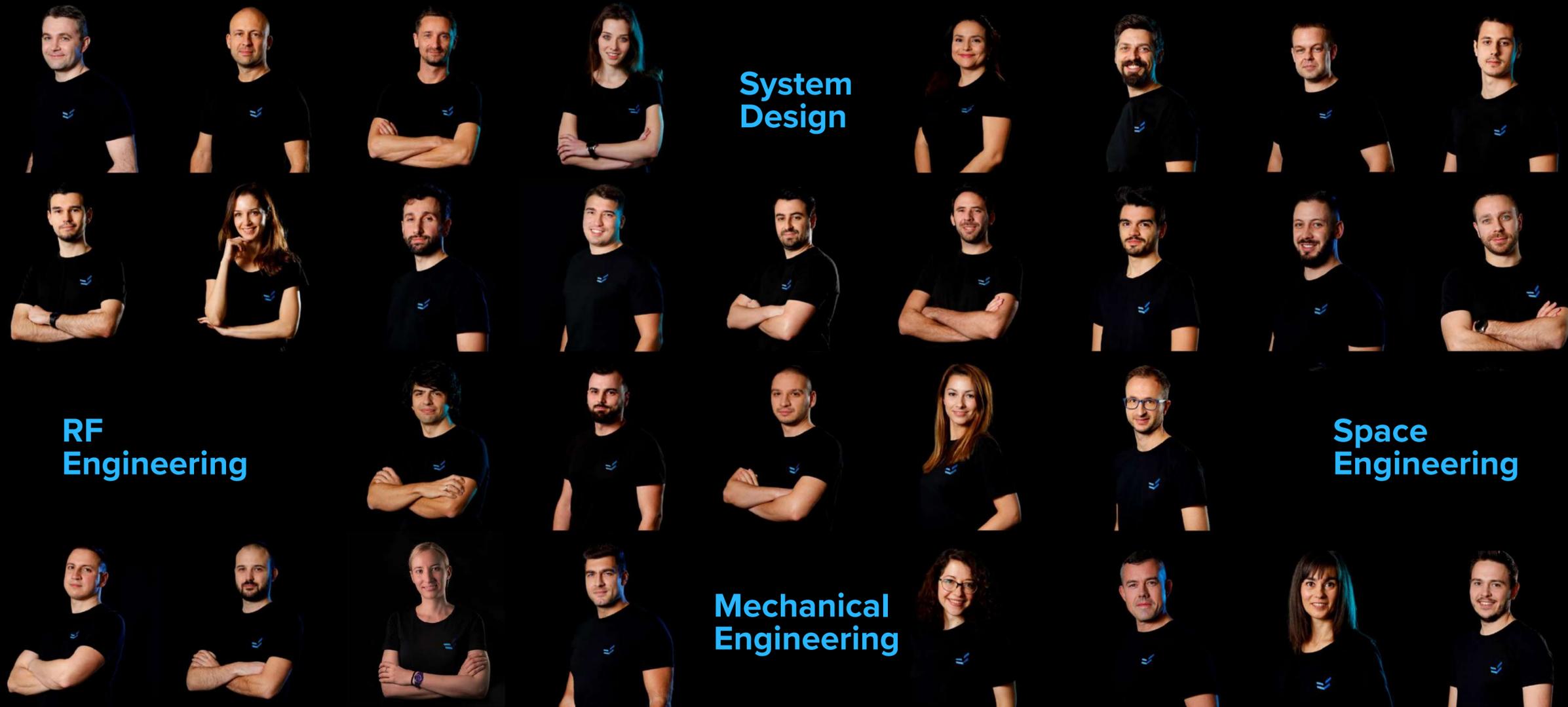
Year to year growth
90 + team

 **2022**

3 x

Year to year growth
110+ team

WE'VE GOT YOU COVERED



110+ TEAM
Top-tier
Professionals

450+ YEARS
Combined Engineering
Experience

130+ CLIENTS
and Growing Fast

Space scientists, engineers,
and technologists proud to
support your Space journey

LEADERSHIP



Raycho Raychev

Founder & CEO

International Space University

Master of Space Science

Space Challenges and Spaceport Platform

Founder

Stanford Graduate School of Business

Innovation and Growth Program

Harvard Business School

Entrepreneur Ventures

Victor Danchev

CTO

5+ Years

Head of Space Engineering Teams

5+ Years

Satellite System Engineering

10+ Years

Head of Space Engineering Teams

Vanya Buchova

CPO

5+ Years

EU Projects Management – Space R&D

7+ Years

Project and Risk Management

10+ Years

Investment and Corporate Banking

Giuseppe Sisinni

Head of Sales

10+ Years

Space Systems

5+ Years

Spacecraft System Engineering

5+ Years

Satellite Sales

Emmanuel Sauzay

Chief Growth Officer

25+ Years

Airbus Executive at Satellite Division

10+ Years

Strategy, Sales & Business Development

5+ Years

Investments & Innovation

Anja Nakarada Pecujlic

Business Developer

6+ Years

Fellow Researcher in Space Law and Policy and PhD in Space law

3+ Years

Project Management – ESA Convention Commentary project

5+ Years

Leading Serbian Space NGO

ADVISORY BOARD



Prof. Dr.-Ing. Johann-Dietrich Wörner

Advisory Board Member EnduroSat

Dr. Wörner's space career spans over several decades. He has served as chairman of the executive board of the DLR (German Aerospace Center) from 2007 until 2015. In 2015, he succeeded Jean-Jacques Dordain as Director General of the European Space Agency, where he served until 2021



Kevin O'Connell

Advisory Board Member EnduroSat

Kevin O'Connell has an impressive career spanning over 35 years. He has been working with and advising the U.S. government, research organizations and private space businesses. Kevin is also a successful entrepreneur, business leader and an inspiring space visionary



James Mason

SVP of Space Systems at Planet

For the last decade he has been innovating new mission concepts, building and leading teams, and creating the largest remote sensing constellation in history. He joined Planet, a leading satellite imagery and geospatial company, in 2011 as a systems engineer. Since then he led Planet's mission operations, building the teams, processes and infrastructure needed to launch and operate over 500 satellites deployed to date.

PROUD MEMBER



-endeavor



130+ SUCCESS STORIES

“ From the designs of satellite buses, to ensuring perfection in manufacturing standards, they provide the excellence their customers deserve.

Philipp Biller

Product Manager, Tesat-Spacecom



“ EnduroSat assisted us in building our capabilities and gaining the know-how to plan, build, and operate CubeSat missions. Thanks to our partnership with EnduroSat, we have managed to secure a launch window earlier than expected.

Bassam Alfeeli

CEO and founder of Orbital Space



130+ SUCCESS STORIES

“ All of the panels have been working well on-orbit. We are very pleased with them. I asked the integration team for feedback and they were generally very happy with them.

Bob Noteboom

Lynk



“ The Satellite Research Centre is extremely pleased to work with EnduroSat. The company delivers high-quality products and exemplary customer support. SaRC has used EnduroSat CubeSat components in our satellite missions and for student training purposes. We highly value the collaborative nature in which EnduroSat engineers have worked with us to resolve any issues we have faced.

Amal Chandran

NTU, Nanyang Technological University, Singapore





CUBESAT PLATFORMS



POWER MODULES



COMMUNICATION



SOLAR PANELS



ANTENNAS



STRUCTURES



ONBOARD COMPUTER



EDUCATIONAL MODULES



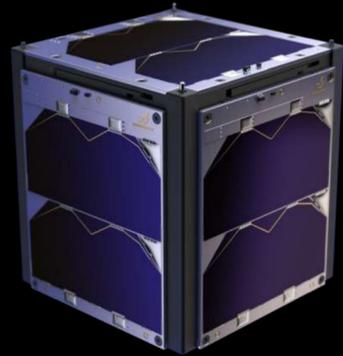
CUSTOM MODULES

CLICK ON YOUR DESIRED CATEGORY



SOFTWARE-DEFINED BUSES

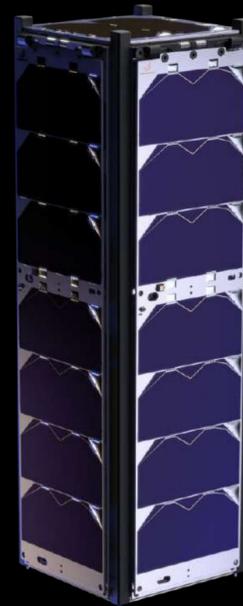
Remarkable technology



1U



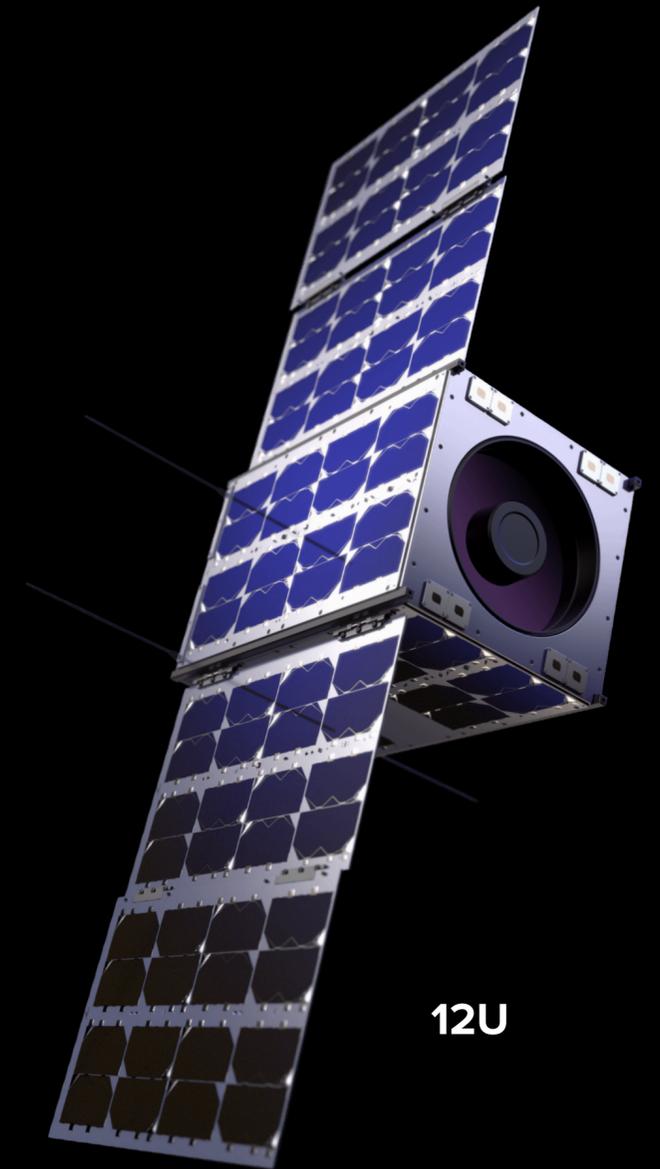
1.5U



3U



6U



12U

Engineering support included: ⌚ 10 hours

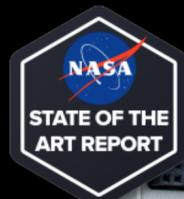
Platform Features	1U	1.5U	3U	6U	12U
Bus Mass	850 g	1050 g	2.4–2.9 kg	4.2–4.8 kg	6-8 kg
Available Payload Mass	1150 g	1950 g	2.5-3.6 kg	7.2–7.8 kg	14-16 kg
Available Payload Volume					
- X	97 mm	97 mm	97 mm	97 mm	197 mm
- Y	97 mm	97 mm	97 mm	197 mm	197 mm
- Z	53 mm	104 mm	173 mm	223 mm	225 mm
Average Payload Power Available	0.7 W	0.9 W	10 W	10–30 W	20-45 W
Available Power Buses	3.3 V, 5 V, battery raw	3.3 V, 5 V, battery raw	3.3 V, 5 V, 6–12 V (configurable), battery raw	3.3 V, 5 V, 6–12 V (configurable), battery raw	3.3 V, 5 V, customizable 6-12 V and Battery raw
Telemetry and Telecommand Data Rate	19.2 kbps	19.2 kbps	19.2 kbps	19.2 kbps	up to 128 kbps
Payload Data Rate	19.2 kbps	19.2 kbps	up to 125 Mbps	up to 125 Mbps	up to 1 Gbps





COMMUNICATION

High-speed data from space



**UHF
Transceiver II**



**S-Band
Transmitter**



**X-Band
Transmitter**



**S-Band
Transceiver I**



**Versateile
Wideband SDR**

Engineering support included: ⌚ 5 hours

Communication Module Features	UHF Transceiver II	S-Band Transmitter	X-band Transmitter	S-Band Transceiver I	Versateile Wideband SDR
Frequency Range (Tx)	400–403 MHz or 430–440 MHz	2200–2290 MHz or 2400–2450 MHz	7900-8400 MHz	2200-2290 MHz or 2400-2450 MHz	70 MHz to 6 GHz
Frequency Range (Rx)	400–403 MHz or 430–440 MHz	-	-	2025–2110 MHz or 2400–2450 MHz	70 MHz to 6 GHz
Modulation	2GFSK OOK, GMSK, 2FSK, 4FSK, 4GFSK	QPSK, 8-PSK, 16-APSK	QPSK, 8-PSK 16-APSK, 32-APSK	FSK, MSK, GFSK, GMSK	QPSK, 8-PSK, 16-APSK, 32-APSK, 64-APSK
Mass	94 g	250 g	270 g	200 g	< 2 kg
Maximum Gross Datarate	19.2 kbps	20 Mbps	150 Mbps	125 kbps	1.225 Gbps
Tx Power	1 W (2W optional)	0.5-2 W (In-flight configurable)	0.5-2 W (In-flight configurable)	20-30 dBm (configurable)	< 60W
Sensitivity	up to -121 dBm	-	-	-	-
Frequency Stability	±2.5 ppm	±1.0 ppm	±1.0 ppm	±1.0 ppm	-
Local and Remote Firmware Update	✓	X	X	X	-
Power Supply	-	5 V or 10–24.5 V	12-24 V	5–12 V	2V - 28V (input voltage range)
Internal Memory	-	up to 32 GB	up to 32 GB	-	-



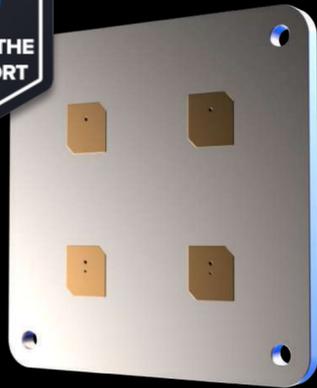


ANTENNAS

Stable communication



4x4 X-Band Array



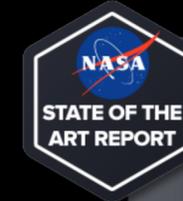
2x2 X-Band Array



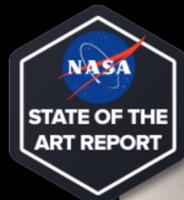
X-Band Patch Antenna



UHF Antenna 2U



UHF Antenna III



S-Band Antenna Wideband



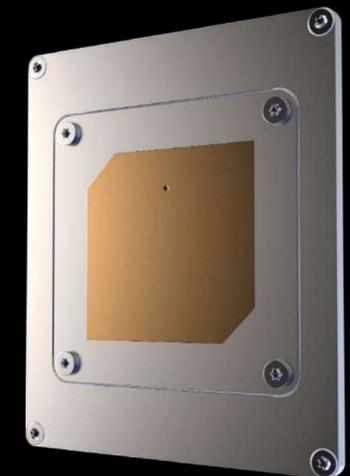
S-Band Antenna Commercial



S-Band Antenna ISM



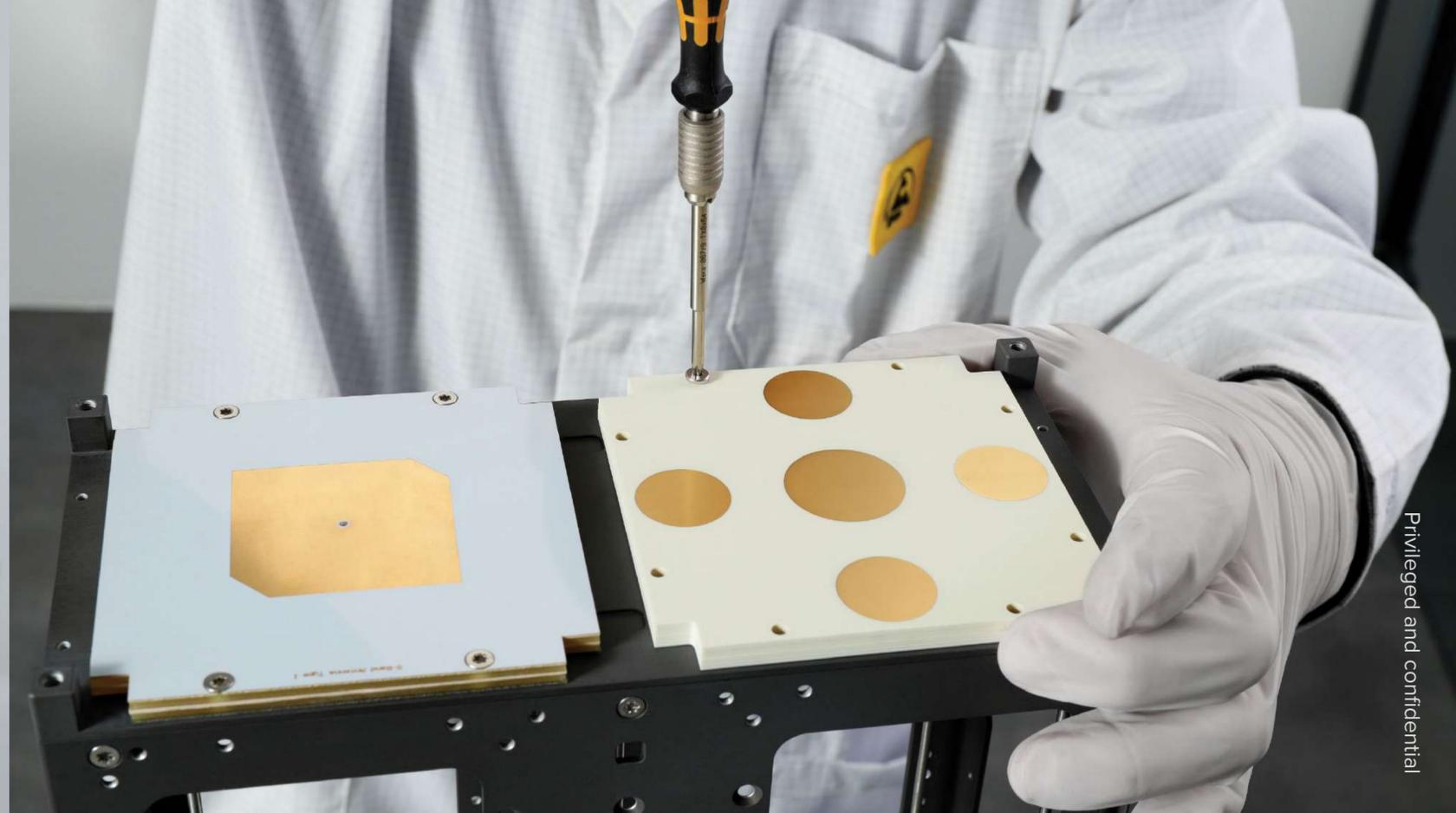
K-Band Patch Antenna



GNSS Antenna

Engineering support included: ⌚ 5 hours

Antennae Features	X-Band 4x4 Patch Array	X-Band 2x2 Patch Array	X-Band Wideband	UHF 2U	UHF III	S-Band Wideband	S-Band Commercial	S-Band ISM	K-Band Patch	GNSS
Frequency Range	8025–8400 MHz	8025–8400 MHz	8025–8400 MHz	435–438 MHz	435–438 MHz	2025-2110 MHz and 2200-2290 MHz	2025–2110 MHz	2400 - 2450 MHz	17.7–20.2 GHz	-
Half Power Beam Width	18 °	40 °	74 °	omnidirectional	omnidirectional	70 °	70 °	71 °	-	88 °
Gain	>16 dBi	>12 dBi	6+ dBi	>0 dBi	>0 dBi	5+ dBi	>7 dBi	8.3 dBi	20 dBi	34 dBi
Polarization	Right Hand Circular	Right Hand Circular	Right Hand Circular	Linear	Circular	Right Hand Circular	Selectable Circular	Left Hand Circular	Right Hand Circular	Right Hand Circular
Mass	53 g	23.2 g	2.2 g	210 g	85 g	115 g	81 g	64 g	-	80 g
RF Output Power	up to 4 W	up to 4 W	up to 4 W	up to 2 W	up to 2 W	up to 4 W	up to 4 W	up to 4 W	-	-





POWER MODULES

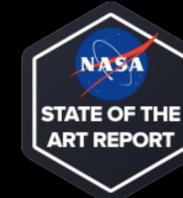
Power and efficiency in orbit



**EPS 2
Power Module**



**EPS 1
Power Module**



**EPS 1
Plus Power Module**

Engineering support included: ⌚ 5 hours

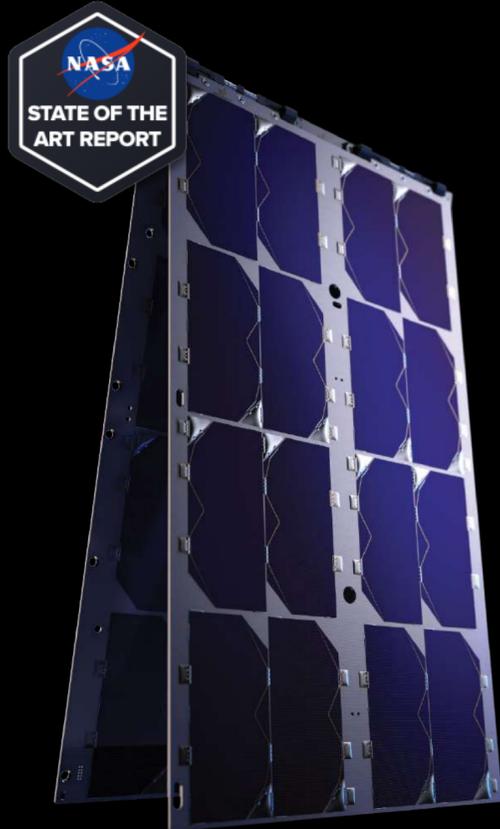
Power Supply Features	EPS I	EPS I+	EPS II
# of Input Channels from Solar Panels	3	3	3
Redundant Solar Panel Connectors	-	-	X
Current Limitation (for Input and Output Channels)	up to 5.5 V	up to 5.5 V	10–36 V
Input Current (per Solar Panel Channel)	up to 1.8 A	up to 1.8 A	up to 4 A
Integrated Blocking Diode (for each Solar Panel Channel)	X	X	X
Standard Battery Pack Capacity	10.2 Wh	20.4 Wh	84 Wh
Standard Battery Pack Voltage	3.7 V	3.7 V	17.8 V
Mass (EPS + Batteries)	208 g	298 g	1280 g
Output Power Buses - 3.3 V	1	1	2
- 5 V	1	1	2 (fully redundant)
- Battery Raw	1	1	1 (fully redundant)
- Programmable	-	1 (up to 5 V)	6-12V
Interfaces	UART, I ² C, USB-C	UART, I ² C, USB-C	RS-485, USB



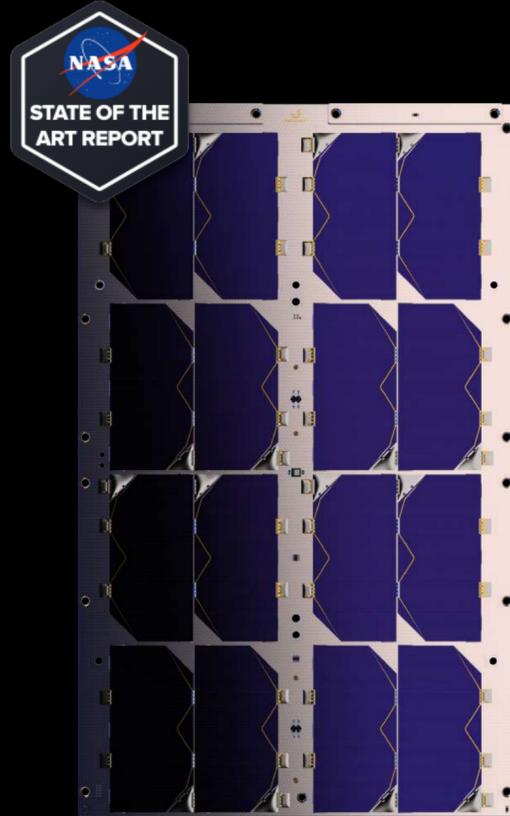


SOLAR PANELS

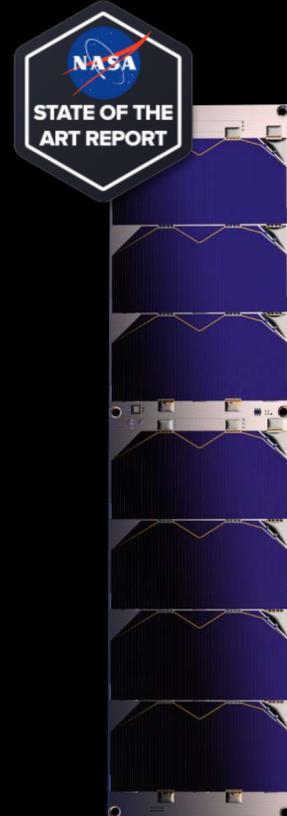
Power generation ensured



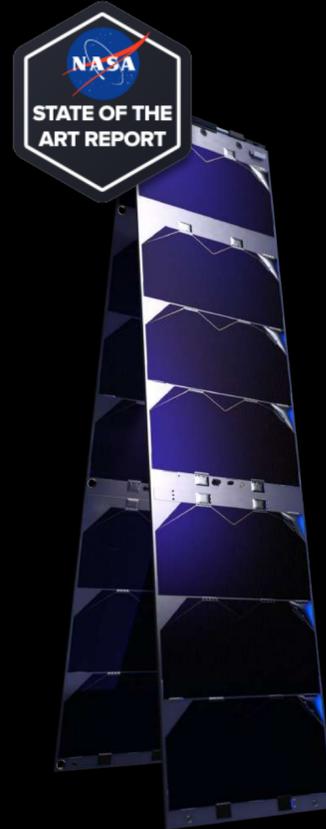
6U Deployable Solar Array



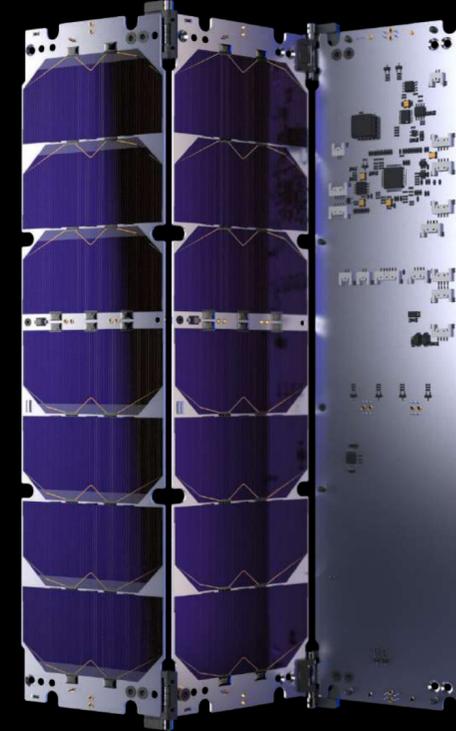
6U Solar Panel



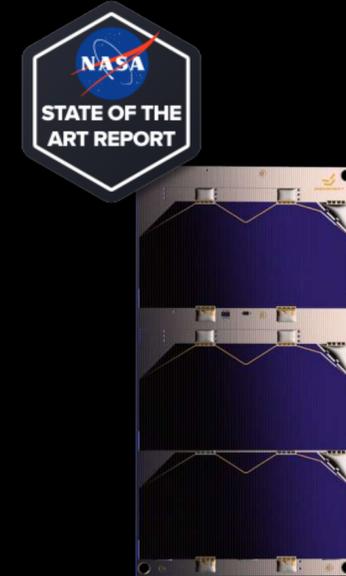
3U Solar Panel



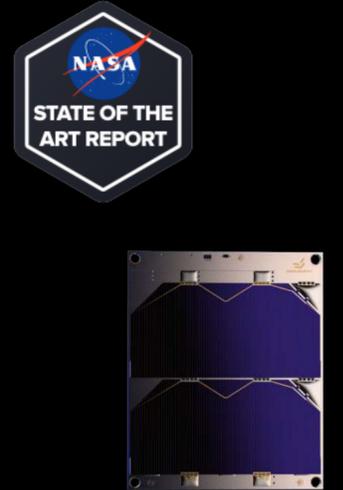
3U Deployable Solar Array



3U Double Deployable Solar Array



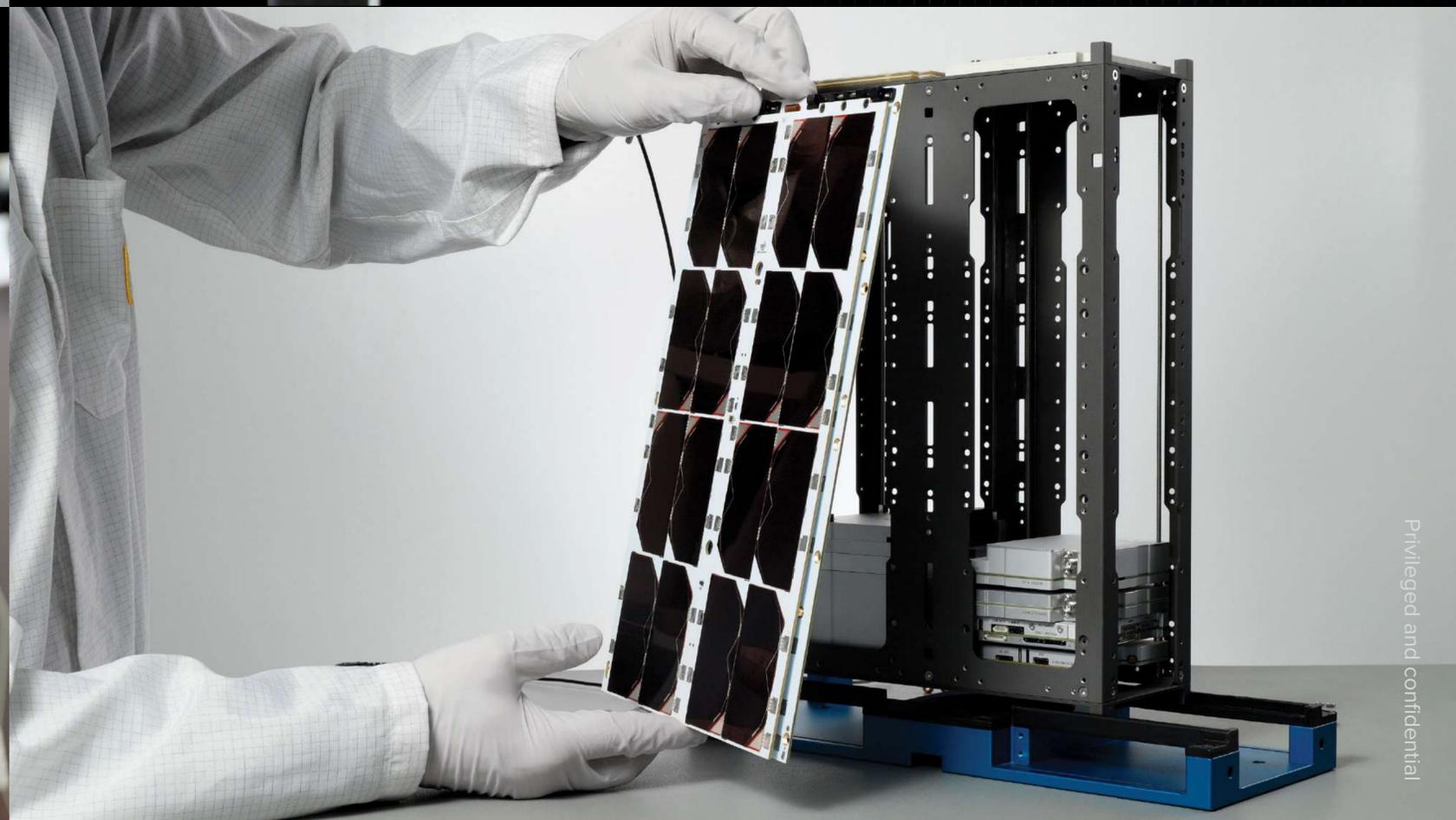
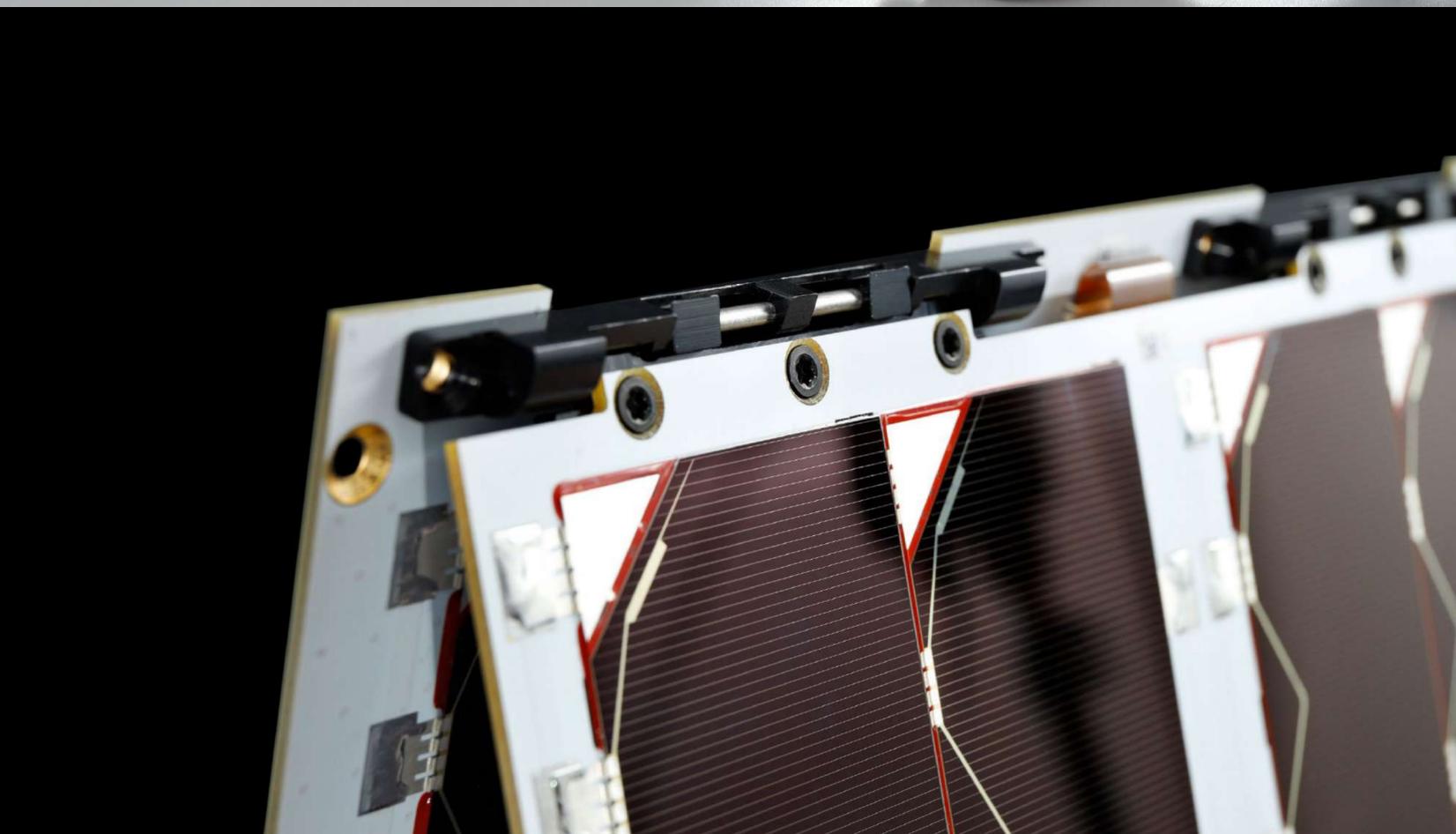
1.5U Solar Panel



1U Solar Panel

Engineering support included: ⌚ 5 hours

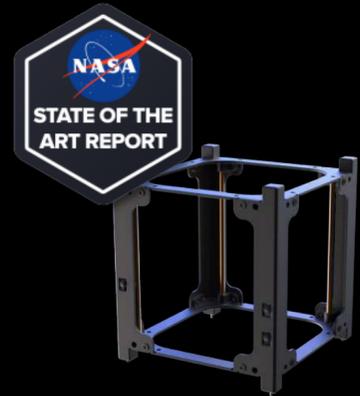
Solar Panel Features	1U	1.5 U	3 U	3U Deployable	3U Double Deployable	6U	6U Deployable
Azur Space Solar Cells 3G30A	X	X	X	X	X	X	X
Maximum Power Efficiency	29+%	29+%	29+%	29+%	29+%	29+%	29+%
Maximum Power Generation in LEO	2.4 W	3.6 W	8.4 W	8.4 W	25 W per panel	19.2 W	19.2 W
Number of Cells - on the Main Panel	2	3	7	7	7	16	16
- on the Upper Panel	-	-	-	7	7	-	16
Possible Cell Configurations	2S1P	3S1P	7S1P	7S1P	7S1P	4S4P 82AP	4S4P 82AP
Low Power MCU with FRAM	-	-	X	X	X	X	X
External FRAM	-	-	X	X	X	X	X
Sun and Temperature Sensors	X	X	X	X	X	X	X
- Gyroscope (optional)	X	X	X	X	X	X	X
Actuators - Magnetorquer (optional)	X	X	-	-	-	-	-
Interfaces - UART	-	-	X	X	X	X	X
- SPI	X	X	X	X	X	X	X
- I ² C	-	-	X	X	X	X	X
- RS-485	-	-	X	X	X	X	X





STRUCTURES

Extreme precision and durability



1U



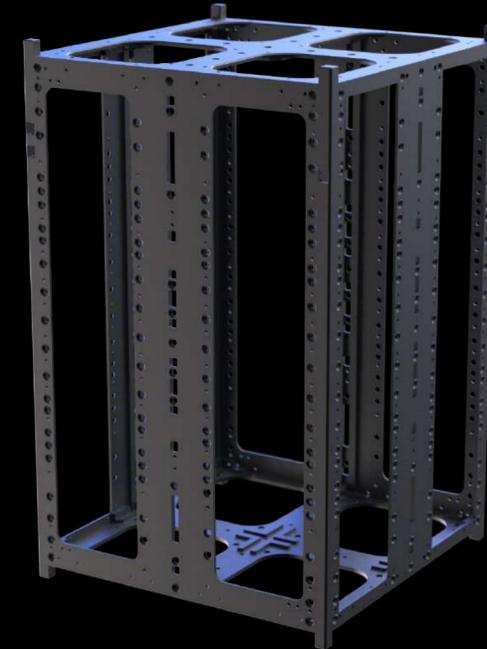
1.5U



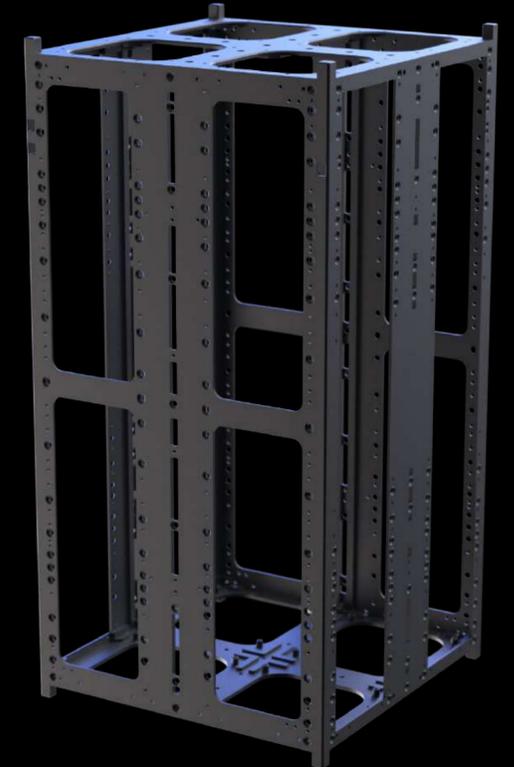
3U



6U



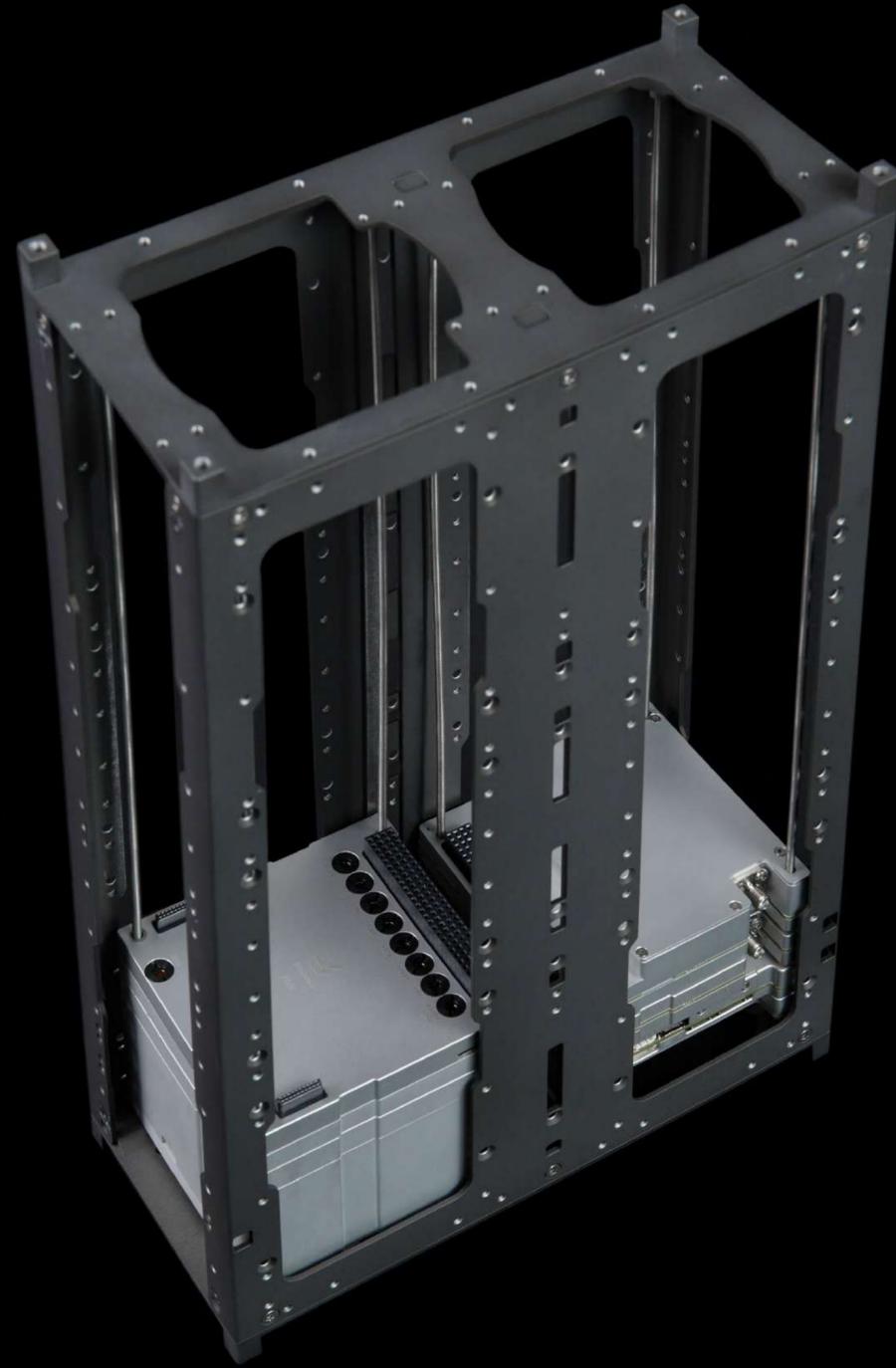
12U

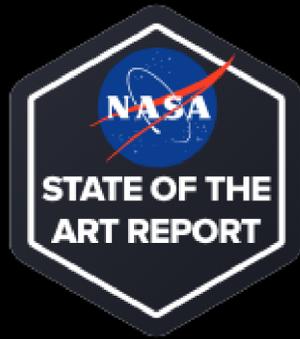


16U

Engineering support included: ⌚ 5 hours

Structure Features	1U	1.5U	3U	6U	12U	16U
Dimensions						
- X	100 mm	100 mm	100 mm	100 mm	226.3 mm	226.3 mm
- Y	100 mm	100 mm	100 mm	226.3 mm	226.3 mm	226.3 mm
- Z	113.5 mm	170.2 mm	340.5 mm	340.5 mm	366 mm	454 mm
Material	Aluminum 6082					
Overall Mass	120 g	152 g	340 g	1 kg	<2 kg	<3 kg
Roller Switch Options	X	X	X	X	X	X





OBC

Advanced avionics and data processing



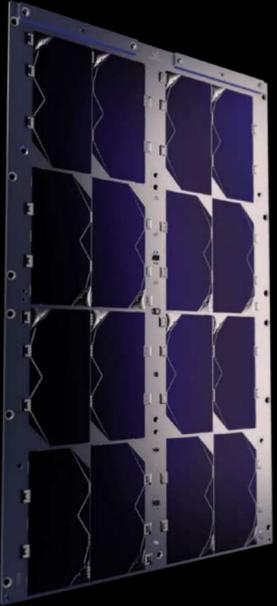
Engineering support included: ⌚ 5 hours

Processor	ARM Cortex M7
Program Memory Size	2 MB
SRAM	1 MB
Card Slots	MicroSD
External FRAM Memory	8 Mbit
Compatibility	Full set of drivers for EnduroSat modules
Double-Redundancy	3-axis magnetometer
Clock Type	Real Time Clock
Power Saving	Flexible frequency
Mass	130 g
Interfaces	4x RS-485, 2x RS-422, 3x UART, 2x I2C, SPI, USB, CAN



CUSTOM MODULES

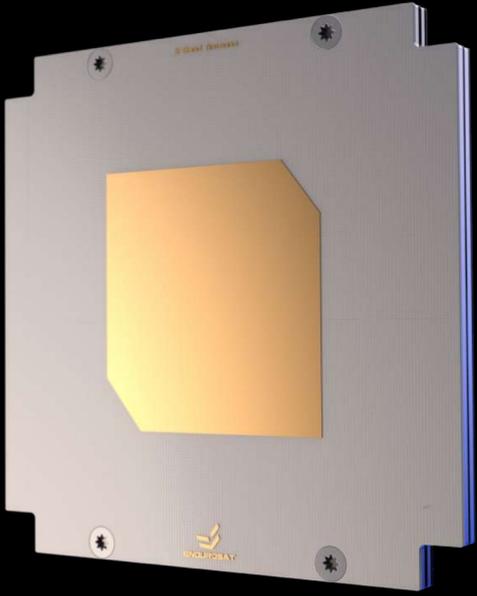
Solve your challenges



Custom 6U Solar Panel



Custom 3U Solar Panel



Custom Patch Antenna

REQUEST A QUOTE

SPACE
IS
CLOSER
THAN
YOU
THINK

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