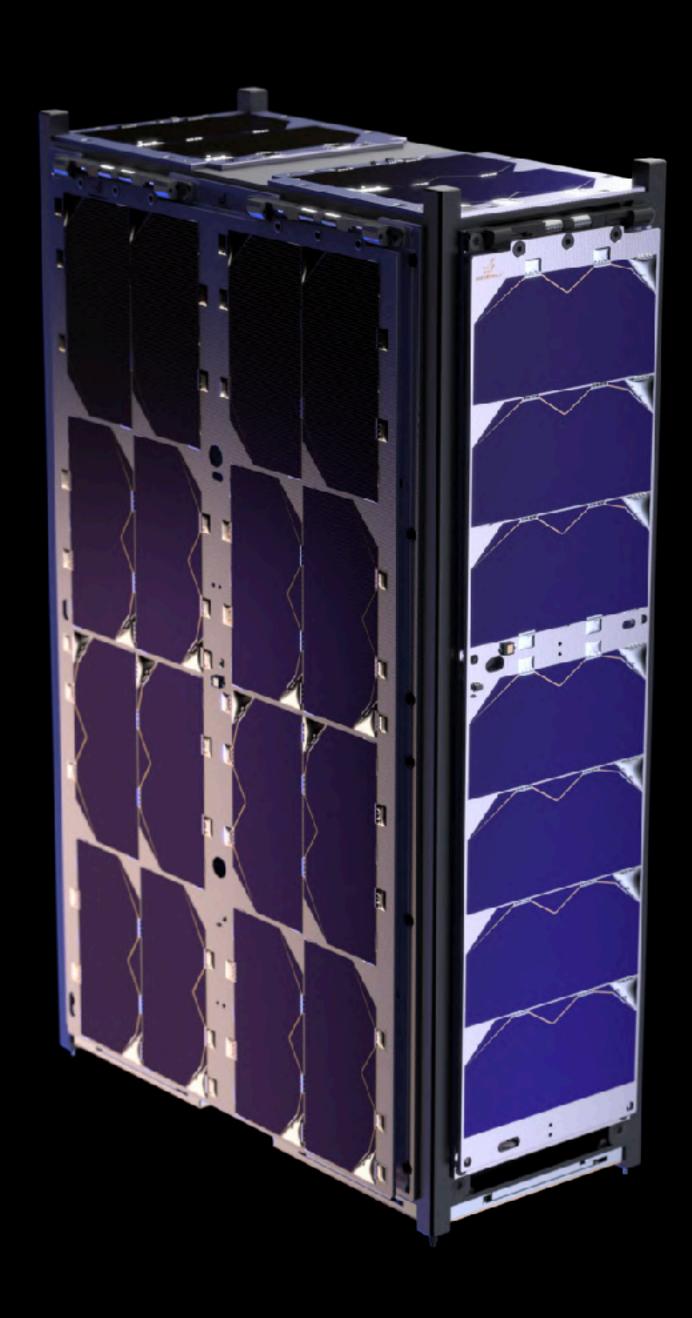
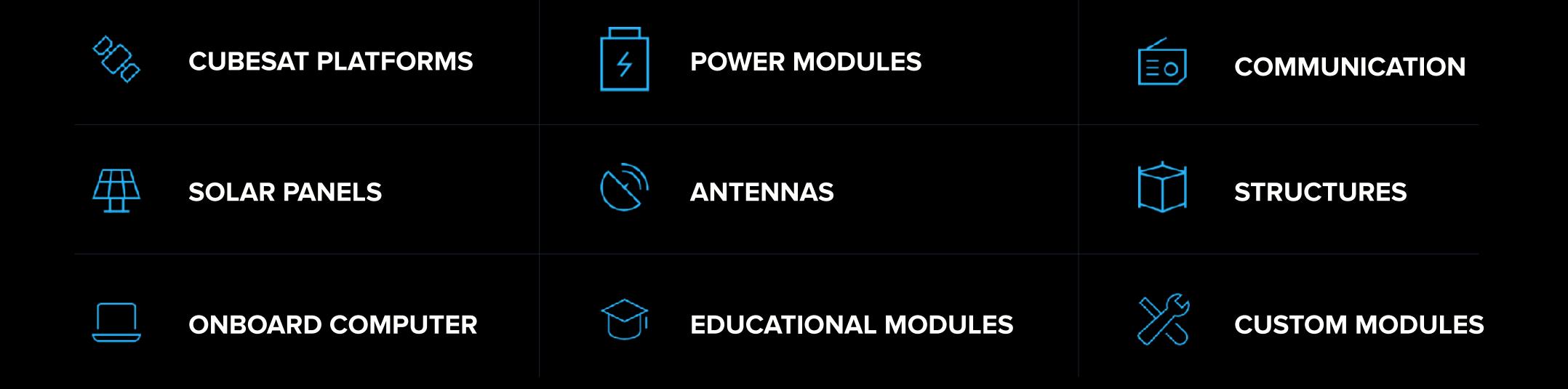


CATALOGUE

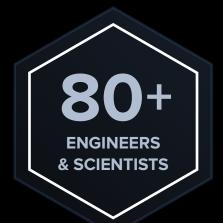
Flight proven CubeSat subsystems





CLICK ON YOUR DESIRED CATEGORY

R&D powerhouse



In-house mechanical, radio, hardware and software know-how

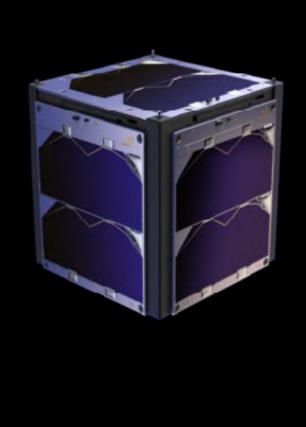
Mass production capability

Fully closed ISO9001-certified production capabilities capable of producing and qualifying hundreds of subsystems per month

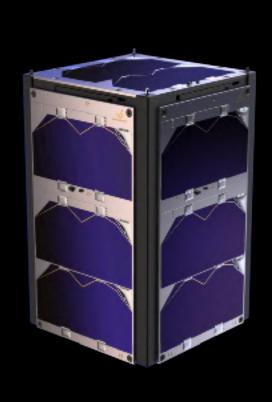




Software-defined buses

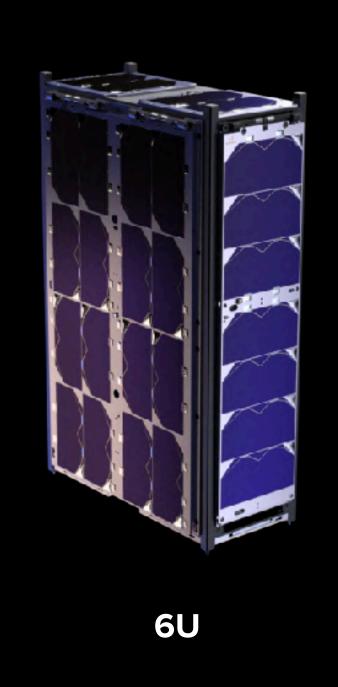


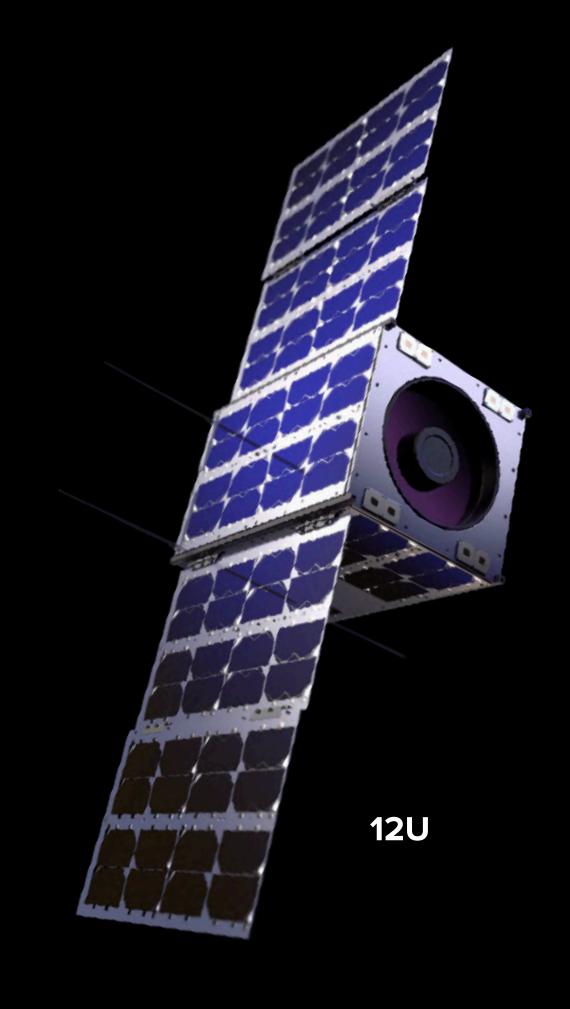
1U



1.5U







Engineering support included: (b) 10 hours

Lead time: 2 months

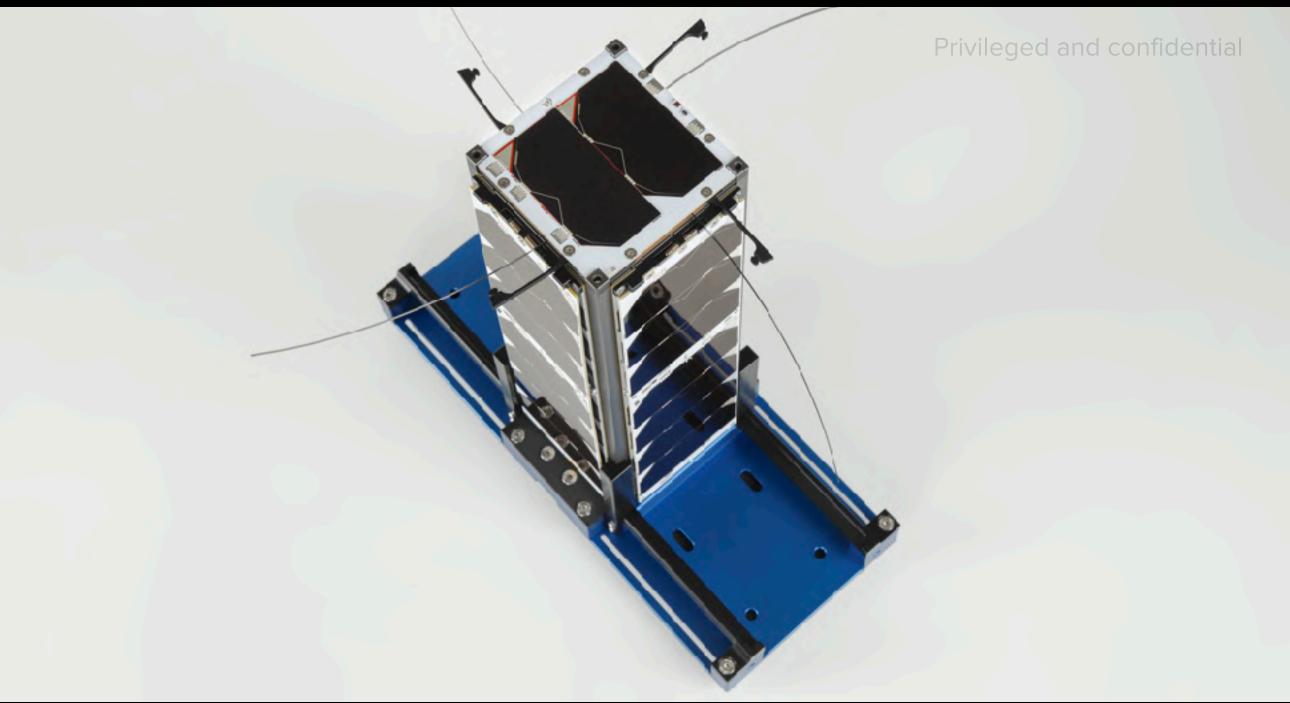
Platform Features	1U	1.5U	3U	6U	12U
Bus Mass	850 g	1050 g	2.4–2.9 kg	4.2–4.8 kg	6-8 kg
Available Payload Mass	500 g	950 g	0.5–1.6 kg	7.2–7.8 kg	14-16 kg
Available Payload Volume - X - Y - Z	97 mm 97 mm 53 mm	97 mm 97 mm 104 mm	97 mm 97 mm 173 mm	97 mm 197 mm 223 mm	197 mm 197 mm 225 mm
Available	0.7 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	up to 19.6 kbps	up to 19.6 kbps	up to 19.6 kbps	up to 2 Mbps	up to 2 Mbps
Payload Data Rate	up to 19.6 kbps	up to 19.6 kbps	up to 125 Mbps	up to 125 Mbps	up to 1 Gbps

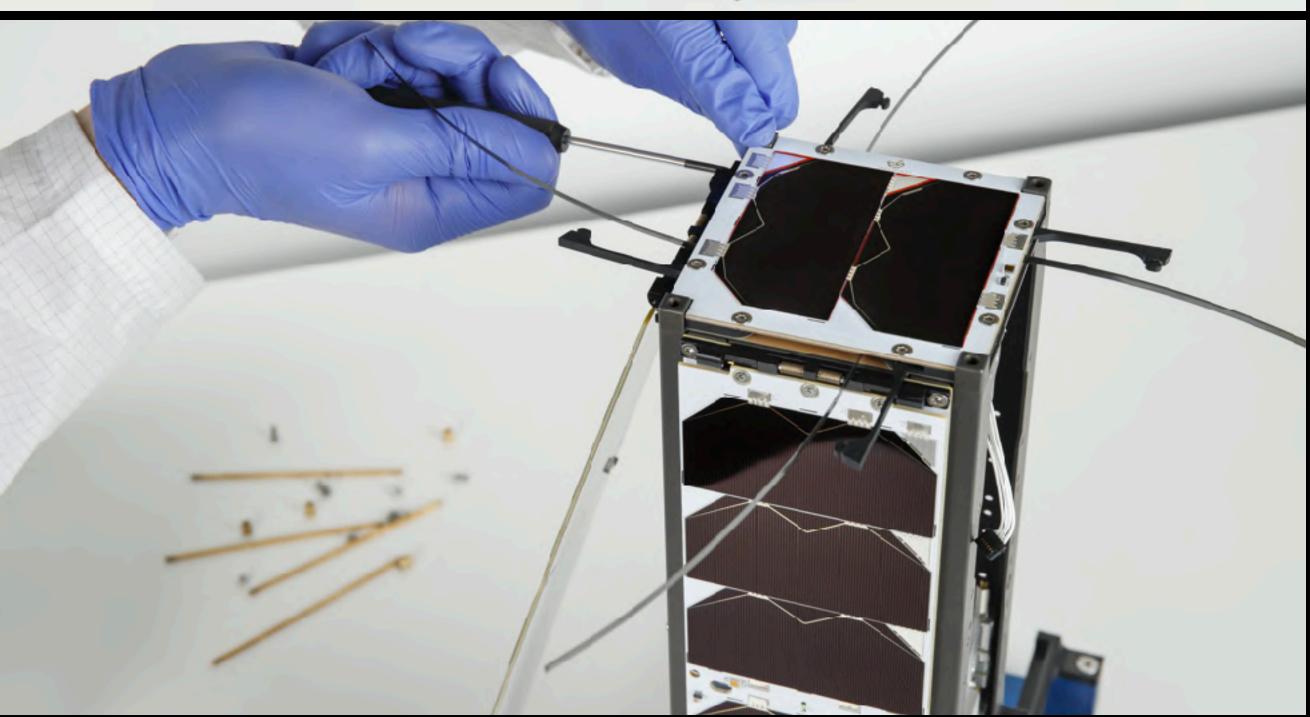


Flight proven CubeSat platforms

Remarkable satellites









Communication



X-Band Transmitter



S-Band Transmitter



S-Band Receiver



UHF Transmitter

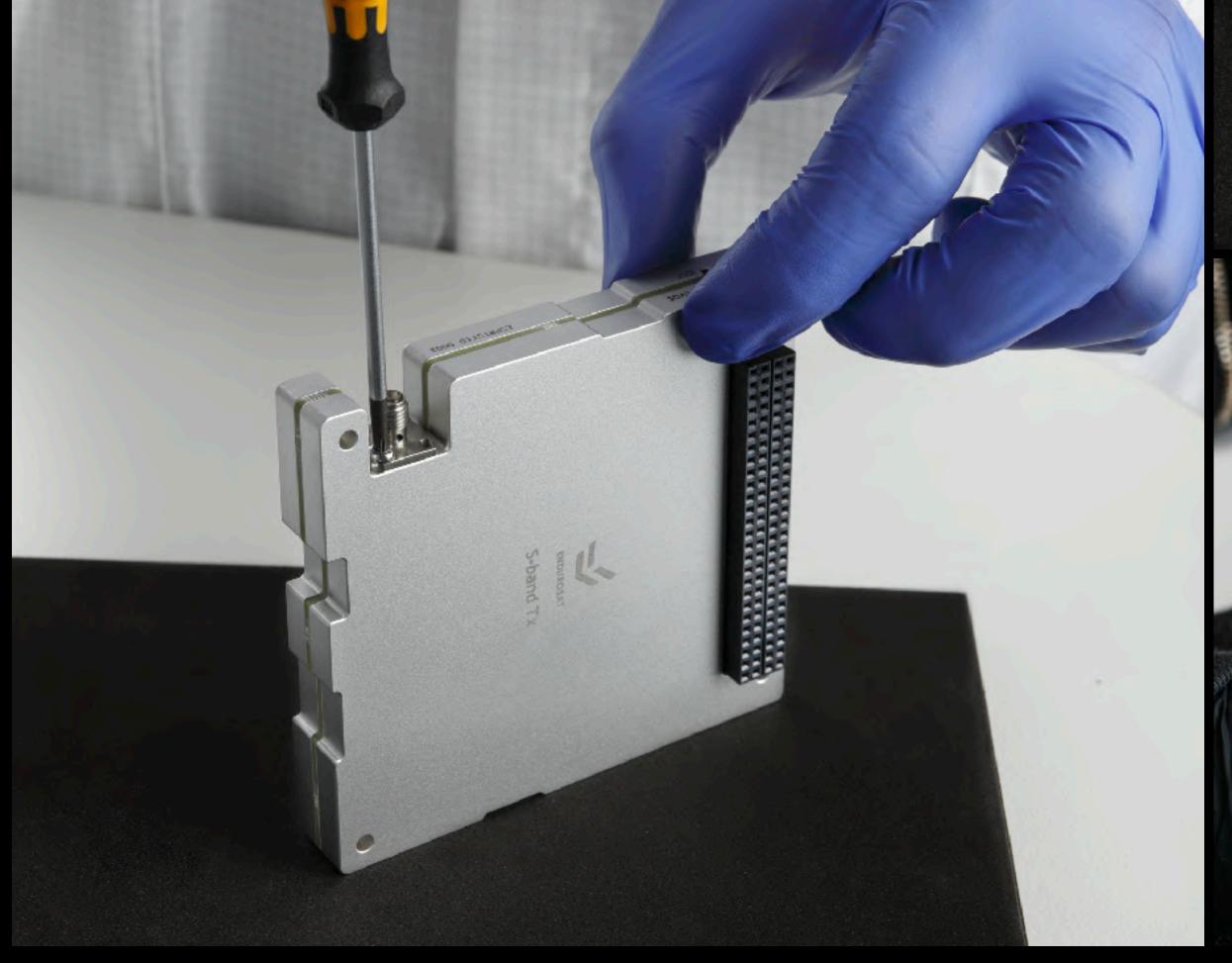
Engineering support included: (b) 5 hours

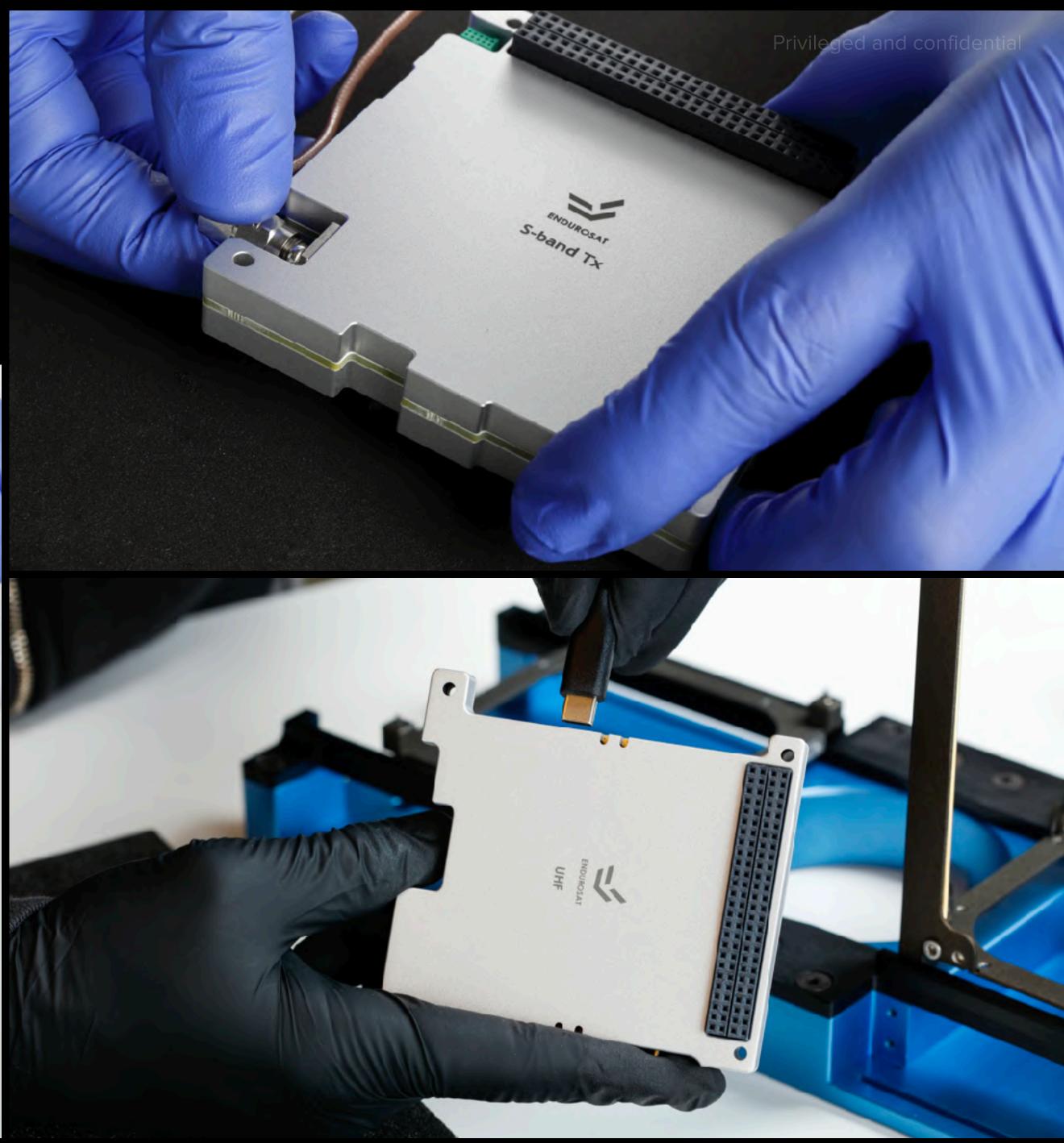
Communication Module Features	UHF Transceiver II	S-Band Transmitter	S-band Receiver	X-Band Privileged and cor Transmitter
Frequency Range (Tx)	400–403 MHz or 430–440 MHz	2200–2290 MHz or 2400–2450 MHz	-	7900-8400
Frequency Range (Rx)	400–403 MHz or 430–440 MHz	-	2025-2110 MHz	-
Modulation	2GFSK OOK, GMSK, 2FSK, 2GFSK, (optional)	QPSK, 8-PSK, 16-APSK	BPSK, QPSK	QPSK, 8-PSK, 16-APSK, 32-APSK
Mass	94 g	250 g	180 g	270 g
Maximum Gross Datarate	19.2 kbps	20 Mbps	4 Mbps	150 Mbps
Tx Power	1 W (2W optional)	0.5-2 W (In-flight configurable)	_	0.5-2 W (In-flight configurable)
Sensitivity	up to -121 dBm	-	-95 dBm	-
Frequency Stability	±2.5 ppm	±1.0 ppm	-	±1.0 ppm
Local and Remote Firmware Update	X	X	X	X
Power Supply	-	5 V or 10–24.5 V	5 V or 9–15 V	12–24 V
Internal Memory	-	up to 32 GB	up to 32 GB	up to 32 GB



Flight proven communication

High speed data from space







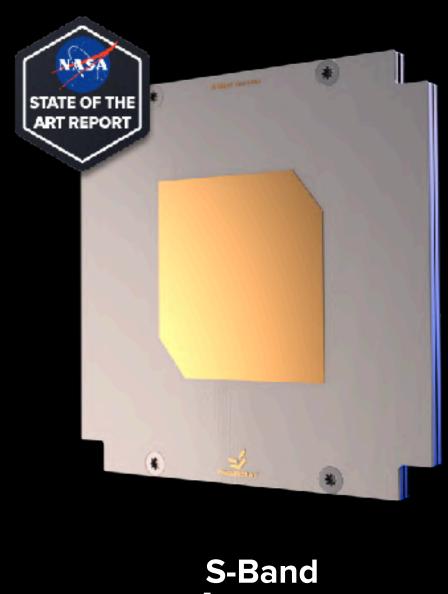
Antennas



4x4 X-Band Array



2x2 X-Band Array



Antenna



UHF **A**ntenna

Engineering support included: (b) 5 hours

Antennae Features	UHF	S-Band Antennas (ISM and Commercial)	S-Band Wideband	X-Band 2x2 Patch Arrey	X-Band 4x4 Patch Arrey
Frequency Range	435–438 MHz	2400 - 2450 MHz 2025–2110 MHz	2025-2110 MHz and 2200-2290 MHz	8025–8400 MHz	8025–8400 MHz
Half Power Beam Width	omnidirectional	70 °	70 °	40 °	18°
Gain	>0 dBi	>7 dBi	5+ dBi	>12 dBi	>16 dBi
Polarization	Circular	Selectable Circular	Right Hand Circular	Right Hand Circular	Right Hand Circular
Mass	85 g	64 g	115 g	23.2 g	53 g
RF Output Power	up to 2 W	up to 4 W	up to 4 W	up to 4 W	up to 4 W

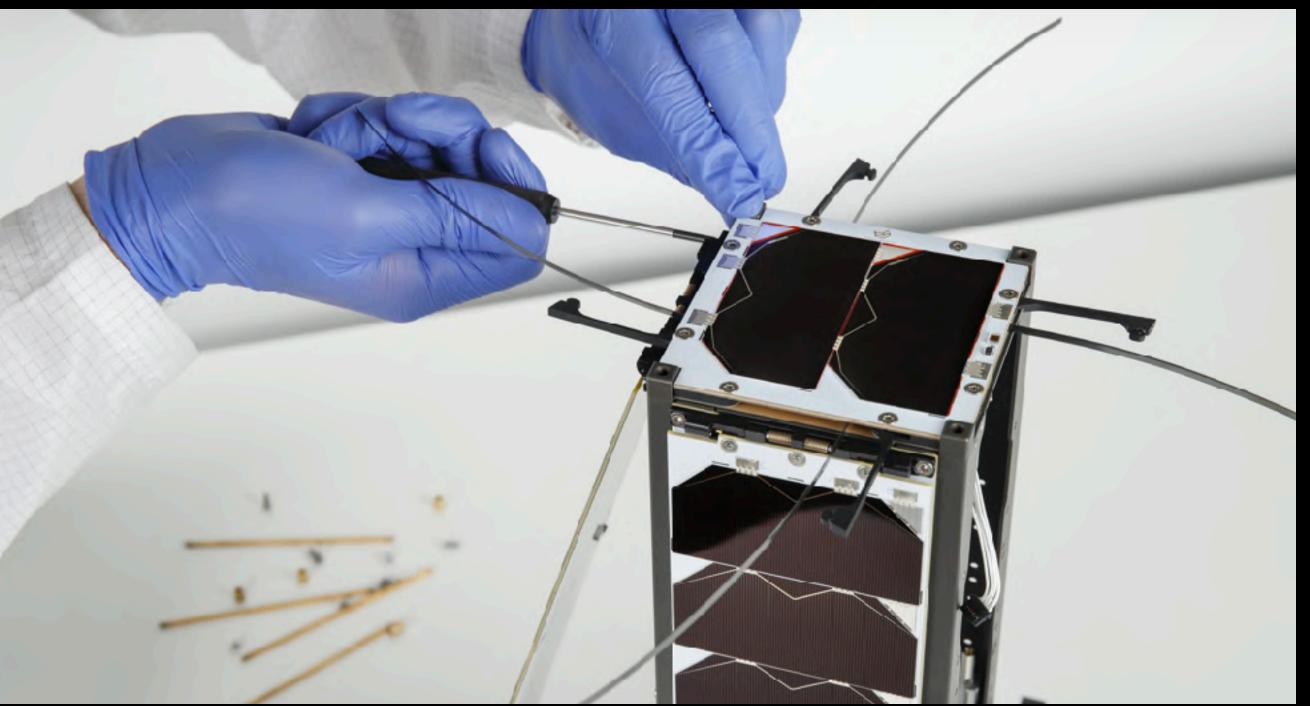


Flight proven antennas

Stable communication









Power Modules







Plus Power Module

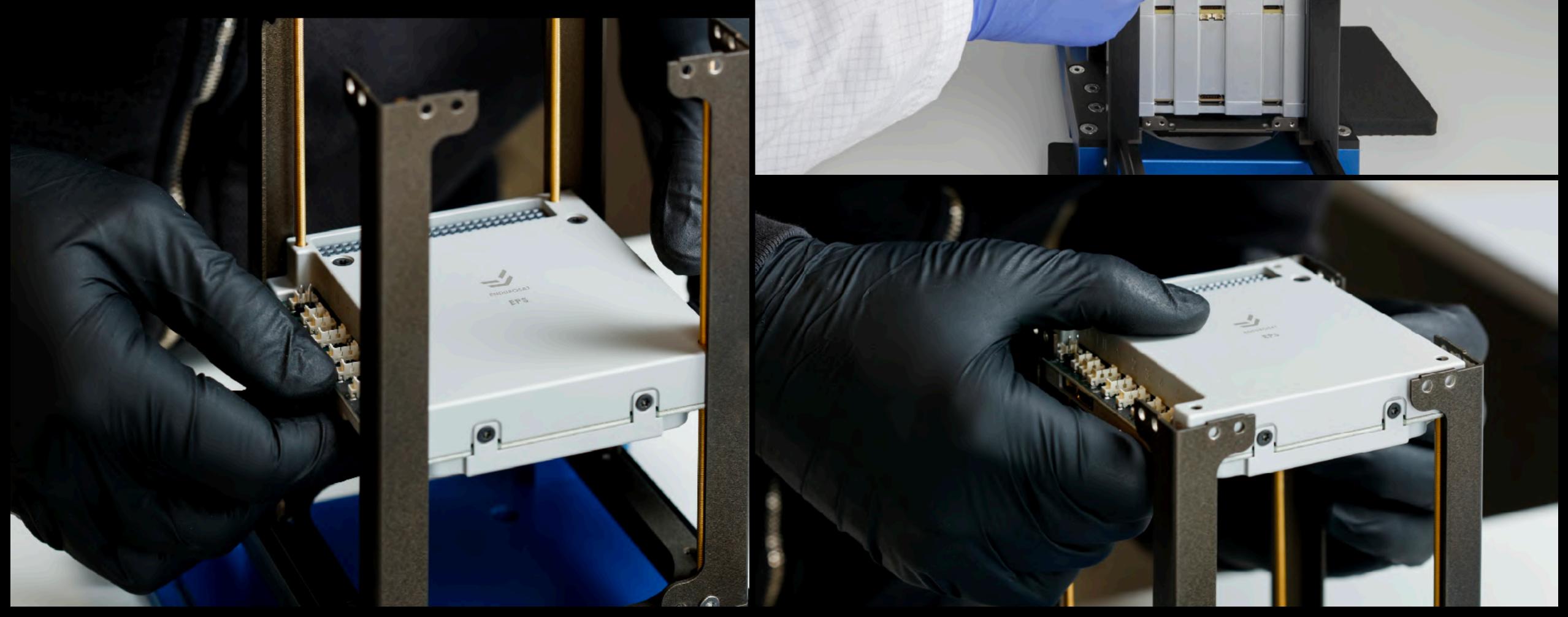
Engineering support included: (b) 5 hours

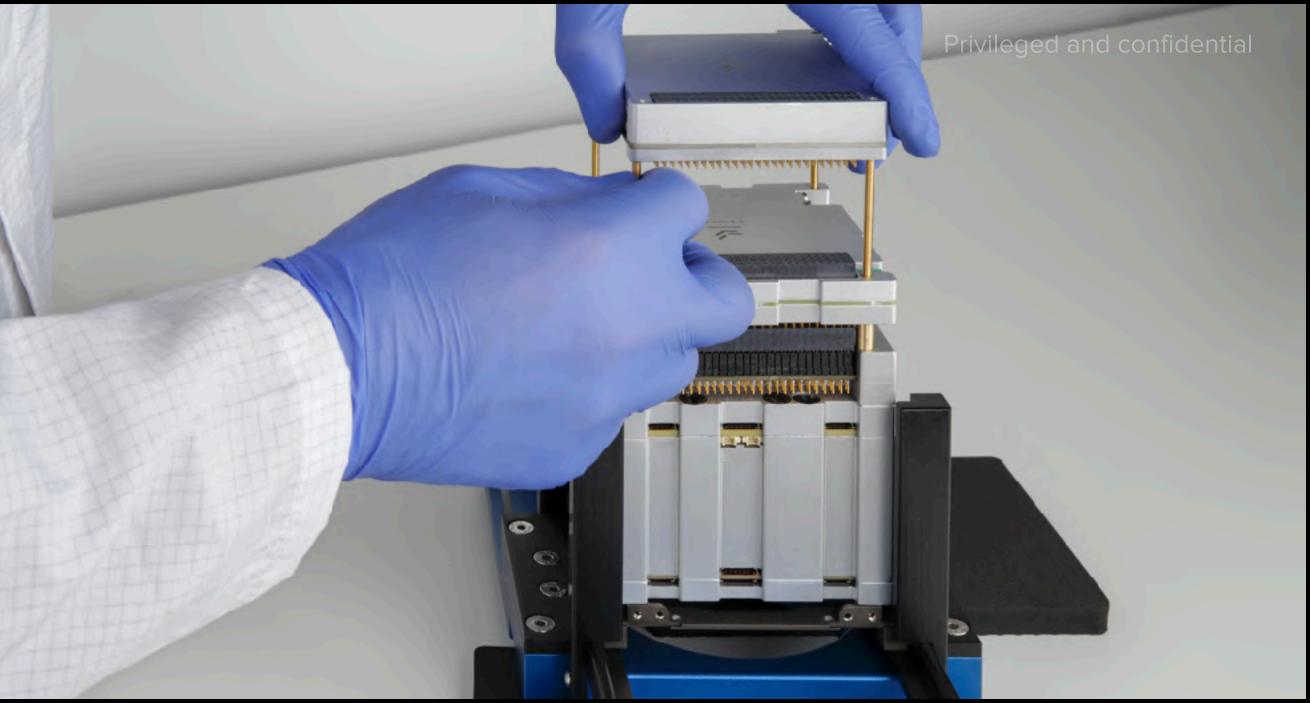
Power Supply Features	EPS I	EPS I+	EPS II Privileged and confi
# of Input Channels from Solar Panels	3	3	3
Redundant Solar Panel Connectors	-	-	X
Current Limitation (for Input and Output Channels)	up to 5.5 V	up to 5.5 V	10-36 V
Input Current (per Solar Panel Channel)	up to 1.8 A	up to 1.8 A	up to 4 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	<u>-</u>	1 (up to 5 V)	6-12V
Interfaces	UART, I ² C, USB-C	UART, I ² C, USB-C	RS-485, USB



Flight proven power modules

Power and efficiency in orbit

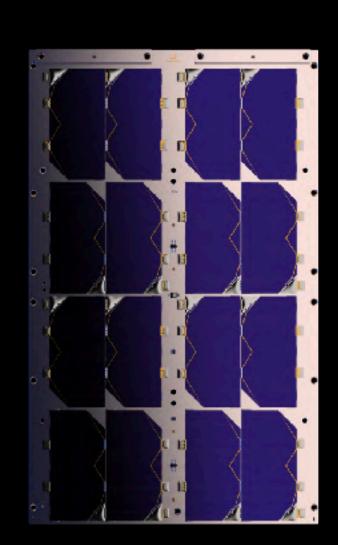




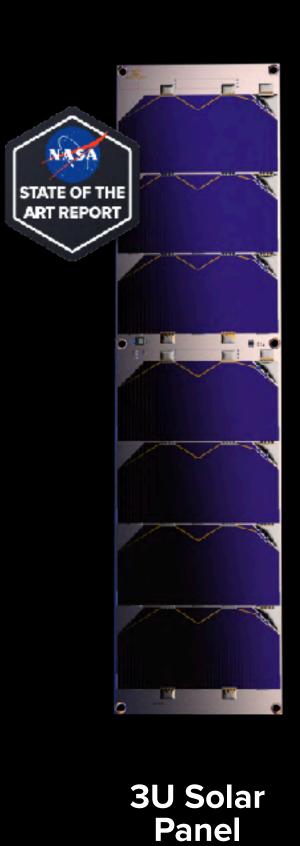




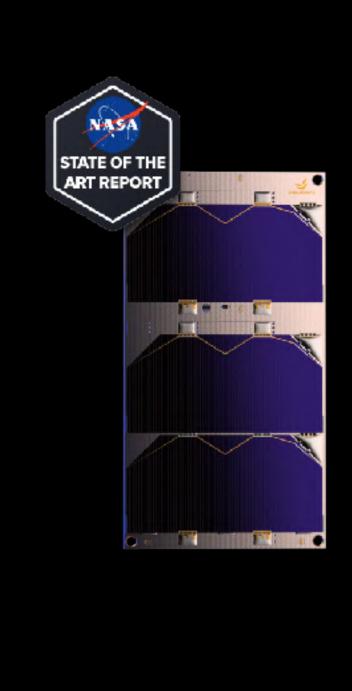
Solar panels

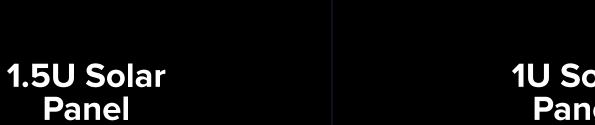


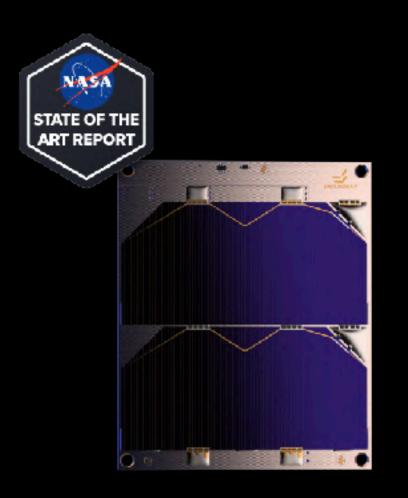
6U Deployable Solar Array



NASA STATE OF THE ART REPORT 3U Deployable Solar Array







1U Solar Panel

Engineering support included: 5 hours

Solar Panel Features	1U	1.5 U	3 U	3U Deployable	6U	6U Deployable
Azur Space Solar Cells 3G30A	X	X	X	X	X	X
Maximum Power Efficiency	Up to 30%	Up to 30%	Up to 30%	Up to 30%	Up to 30%	Up to 30%
Maximum Power Generation in LEO	2.4 W	3.6 W	8.4 W	8.4 W	19.4 W	19.4 W
Number of Cells - on the Main Panel	2	3	7	7	16	16
- on the Upper Panel	_	-	-	7	_	16
Possible Cell Configurations	2S1P	3S1P	7S1P	7S1P	4S4P 82AP	4S4P 82AP
Low Power MCU with FRAM	-	-	X	X	X	X
External FRAM	-	_	X	X	X	X
Sun and Temperature Sensors	X	X	X	X	X	X
- Gyroscope (optional)	X	X	X	X	X	X
Actuators - Magnetorquer (optional)	X	X	-	-	-	-
Interfaces - UART	-	_	X	X	X	X
- SPI	X	X	X	X	X	X
- 2 C	-	_	X	X	X	X
- RS-485	-	-	X	X	X	X

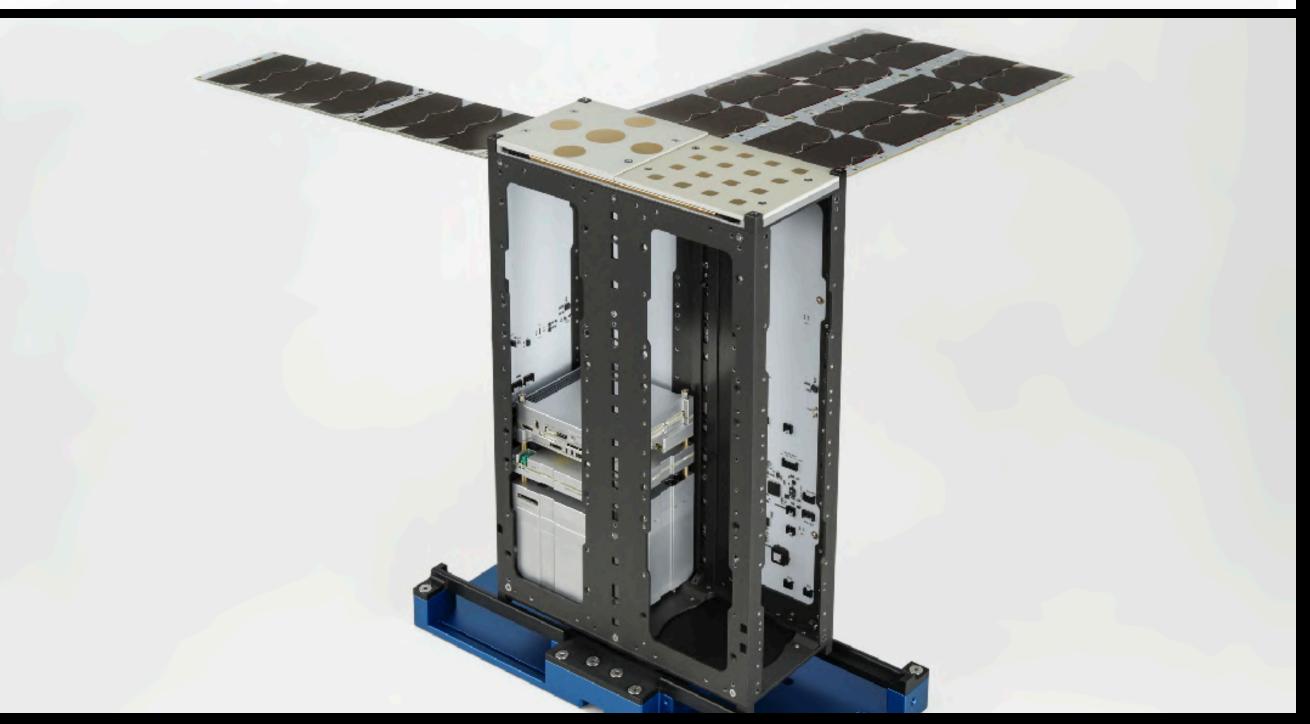


Flight proven solar panels

Power and efficiency in orbit









Structures



Engineering support included: (b) 5 hours

Structure Features	1U	1.5U	3U	6U
Dimensions - X - Y - Z	100 mm 100 mm 113.5 mm	100 mm 100 mm 170.2 mm	100 mm 100 mm 340.5 mm	100 mm 100 mm 366 mm
Material	Aluminum 6082	Aluminum 6082	Aluminum 6082	Aluminum 6082
Overall Mass	120 g	152 g	290 g	850 g
Roller Switch Options	X	X	X	X



Flight proven structures

Extreme precision and durability







Onboard Computer (OBC)







Engineering support included: (b) 5 hours

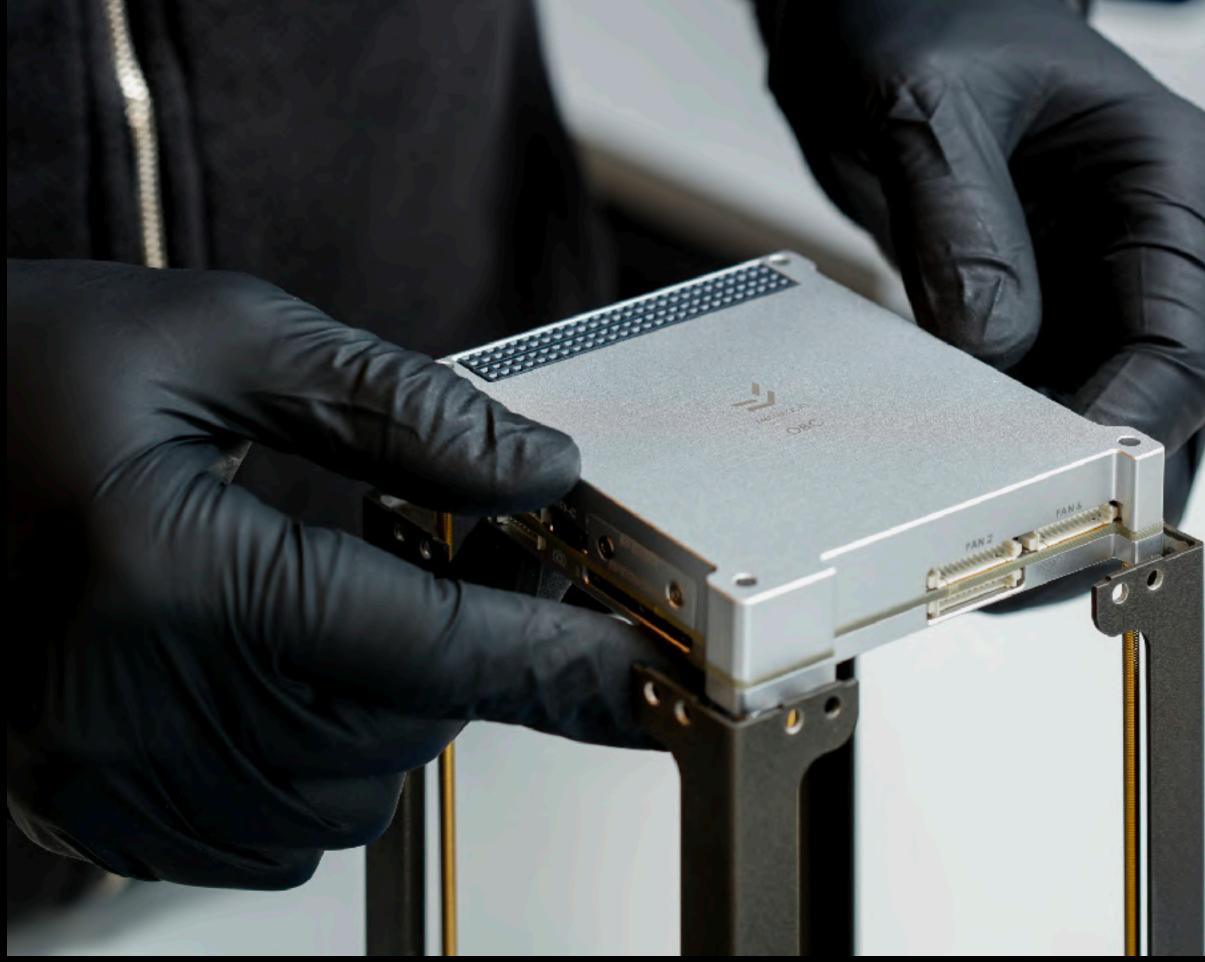
OBC

Processor	ARM Cortex M7
Program Memory Size	2MB
RAM	256kB
Card Slots	2x MicroSD
Compatibility	Full set of drivers for EnduroSat modules
Double-Redundancy	magnetometer
Clock Type	Real Time Clock
Power Saving	Flexible frequency
Mass	130 g
Interfaces	4x RS-485 or RS-422, 3x UART, 2x I2C, SPI, USB



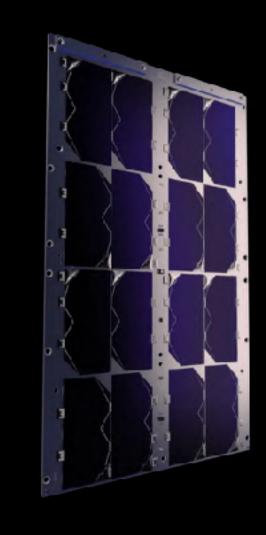
Flight proven onboard computers

Advanced avionics and data processing



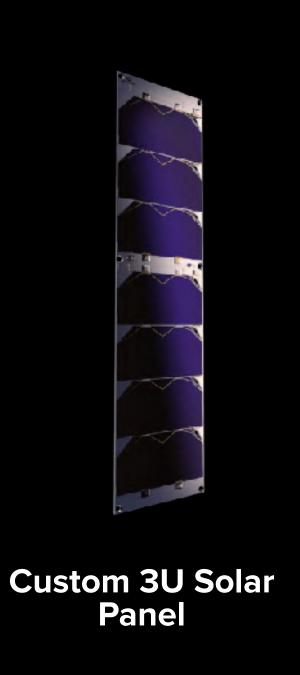


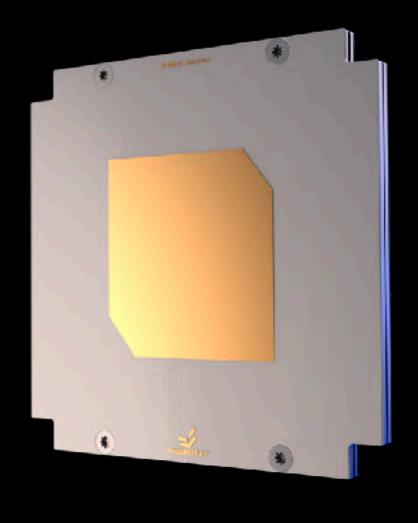
Custom Modules



Custom 6U Solar

Panel

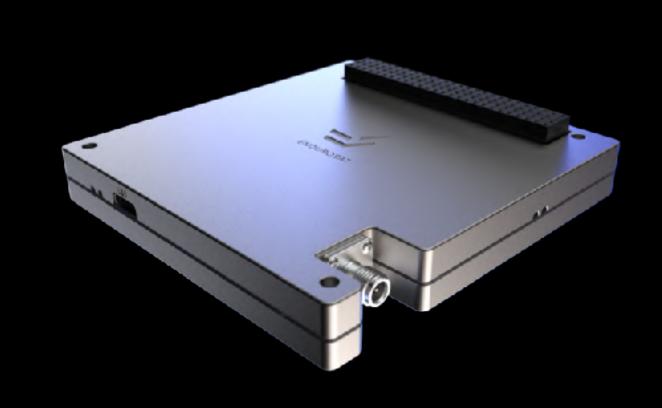




Custom Patch Antenna

REQUEST A QUOTE

Space Comm System For Education







Engineering support included: (b) 5 hours

SPACE IS CLOSER THAN YOU THINK

ENDUROSAT.COM

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