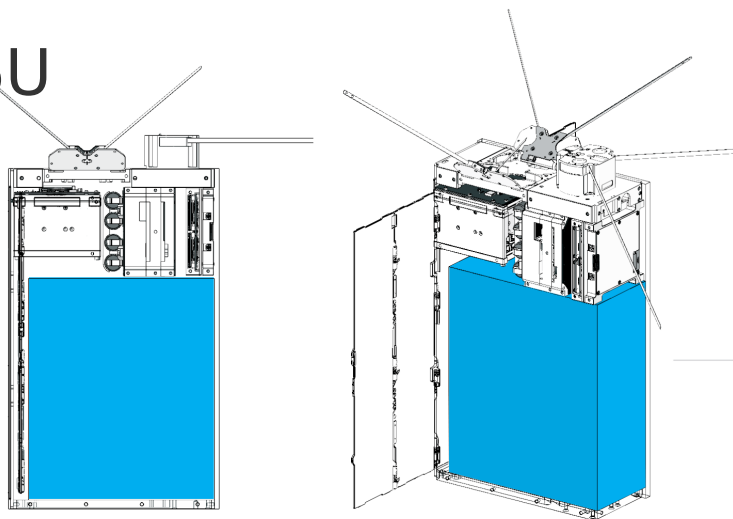


6U



Available PAYLOAD BAY

PAYLOAD VOLUME

4.7 L

Payload Dimensions Extendable, subject to configuration	94 × 216.2 × 256 mm
Payload Mass* Based on our preferred pod	8.2 kg
Spacecraft Mass* Payload excluded	4.3 kg
Spacecraft Dimensions 1 × 2 × 3U form factor	100 × 226.3 × 366 mm

PARAMETERS		VALUES		NOTES	
Payload Power (Sun Tracking)		peak power: 45-175 W		EPS 1000, 1200, 2000	
Platform Power	Average power consumption:	7.9 W			
	Peak power consumption:	25 W			
Battery Capacity		58-233 Wh		Depending on battery pack	
Payload Voltage Channels	EPS 1000-EPS 1200	3V3, 5 V, Vbat (9.9-12.3 V)			
	EPS 2000	Vbat (23.1-28.7 V or 26.4-32.8 V)			
Solar array (SAR)	Voltage range	6-25 V			
	Channel power	12 W			
	Channel number	Up to 20			
Absolute Knowledge Error (AKE)**		Baseline: 0.4 deg High Performance: 0.004 deg		Baseline: Coarse Attitude Determination and Control. High Performance: Includes star tracker over Baseline configuration, offering Fine Attitude Determination and Control. 1-sigma, angular magnitude	
Absolute Performance Error (APE)**		Baseline: 0.6 deg High Performance: 0.017 deg			
Jitter		30 urad			
Slew Rates		up to 2 deg/s/axis		Dependent on payload inertia and pointing constraints.	
Frequency		5 Hz			
Modes		Detumbling, Safe and Normal mode.			
Pointing Constraints (3-axis)		Sun, Moon, Ground Target, (Off-) Nadir, Velocity, Inertial Reference (e.g. Star Coordinates), Satellite Tracking.			
GNSS	Position Accuracy	2 m		CEP	
	Velocity Accuracy	0.1 m/s		CEP	
	Time delay	5 ns			
	Beacon transmitter (ISL) RF parameters	137.1-137.925 MHz (VHF)			
Mechanical		Card Guide, Box-in-a-Box			
Payload Data Interfaces (fixed)		1 × SPI (LVCMOS3V3) 1 × SPI (LVDS I/O) 2 × (LVCMOS3V3 I/O) 2 × SpaceWire	1 × CAN 2.0B 1 × USB 2.0 1 × USB 3.0 1 × Gigabit Ethernet	Limitations on simultaneous use of multiple interfaces may apply	
Payload Data Interfaces (Up to 10, customer selectable)		Dual RS-232 Dual RS-422 RS-485	M-LVDS Dual I2C LVDS	LVDS options: 2 × TX/RX or 4 × TX or 4 × RX	
Data Rates and Frequencies (professional band)		UHF: Frequency: 399-403 MHz uplink/ downlink: up to 150 kbps maximum transmit power: 30 dBm	S-Band: Frequency: 2200-2290 MHz Downlink Data Rate: up to 15 Mbps Uplink* Data Rate: up to 15 Mbps Maximum transmit power: 30 dBm	X-Band: Frequency: 8000-8400 MHz Downlink Data Rate: up to 225 Mbps Maximum transmit power: 30 dBm	
Modulation		OOK/FSK/GFSK			
On-Board Computer	CPU core	ARM Cortex-M7	Payload Controller	CPU core	4 x ARM Cortex-A35
	Clock frequency	Up to 300 MHz		Clock frequency	Up to 1.2 GHz
				Operating System	Linux
Data storage	OBC	16 GByte eMMC, 16 MByte MRAM		Radiation resistant	
	IPC	256 GByte SD card, 8GByte eMMC			
Subsystem interconnection		Rigid backplane with nano-D and micro-D connectors		Micro-D: MIL-DTL-83513, Nano-D: MIL-DTL-32139	
Redundancy		Subsystem level cold redundancy			
Designed Lifetime		Up to 5 years			
Technological Readiness Level		TRL 9			
Operating temperature range		-40-+80°C			

** Expressed at 1-sigma confidence level, magnitude (RSS of angular components).