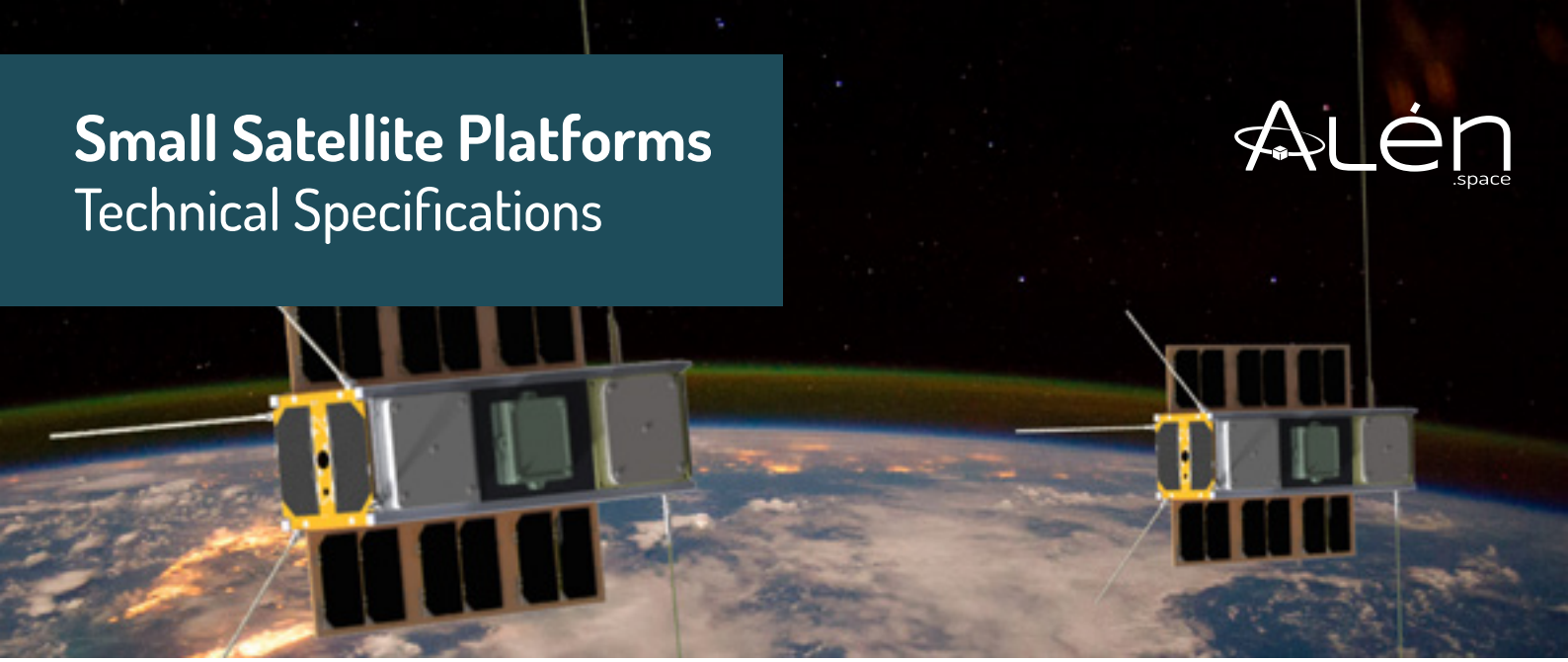
Small Satellite Platforms
Technical Specifications



Our small satellite platforms have been developed with high quality processes. All buses include structure, solar panels, on-board computer, antennas, batteries and communication systems, power and attitude control (ADCS).

Consult the main technical specifications of our 1U, 2U, 3U and 6U platforms:




PLATFORM	SIZE	1U	2U	3U	6U
PAYLOAD CAPACITY	Mass (g)	87 – 330	480 – 1072	570 – 1400	6900 – 7825
	Volumen (U)	0.26 – 0.4	0.7 – 1.4	1.4 – 2.2	3.5 – 4.7
	Avg. Power Consumption for 100% Payload Duty Cycle (W)	0.80 – 0.95	0.8 – 6.2	0.5 – 5.9	7.8 – 38.5
	Peak Power Consumption (W)	30	30	180	180
POWER	Lines	• 3V3 • 5V • VBAT	• 3V3 • 5V • VBAT	• 3V3 • 5V • 12V • 28V • VBAT • User Defined	• 3V3 • 5V • 12V • 28V • VBAT • User Defined
	Worst Power Available for Payload (W)	3	4-14	5-12	14-44
	Battery capacity (Wh)	20 – 38.5	38.5	92	92

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PLATFORM	SIZE	1U	2U	3U	6U
ADCS	**ADCS models**	Detumbling	**Standard ADCS:** • Detumbling • 3-axis stabilization • Nadir pointing • Velocity pointing **Upgraded ADCS:** • Detumbling • Y-spin • 3-axis stabilization • Sun pointing • Nadir pointing • Velocity pointing • Ground pointing (tracking) • User defined	**Standard ADCS:** • Detumbling • 3-axis stabilization • Nadir pointing • Velocity pointing **Upgraded ADCS:** • Detumbling • Y-spin • 3-axis stabilization • Sun pointing • Nadir pointing • Velocity pointing • Ground pointing (tracking) • User defined	**Upgraded ADCS:** • Detumbling • Y-spin • 3-axis stabilization • Sun pointing • Nadir pointing • Velocity pointing • Ground pointing (tracking) • User defined
	ADCS measurement accuracy (deg)	—	**Standard ADCS:** • Low accuracy: 5 • High accuracy: 0.6 **Upgraded ADCS:** • Low accuracy: 5 • High accuracy: 0.1	**Standard ADCS:** • Low accuracy: 5 • High accuracy: 0.6 **Upgraded ADCS:** • Low accuracy: 5 • High accuracy: 0.1	• Low accuracy: 5 • High accuracy: 0.1
	ADCS pointing accuracy (deg)	—	**Standard ADCS:** • Low accuracy: 10 • High accuracy: 3 **Upgraded ADCS:** • Low accuracy: 6 • High accuracy: 0.2	**Standard ADCS:** • Low accuracy: 10 • High accuracy: 3 **Upgraded ADCS:** • Low accuracy: 6 • High accuracy: 0.2	• Low accuracy: 6 • High accuracy: 0.2
OBC	**Interfaces**	• RS422 • UART • CAN • I2C • PPS • GPIO • ADC • PWM • SPI	• RS422 • UART • CAN • I2C • PPS • GPIO • ADC • PWM • SPI	• RS422 • UART • CAN • I2C • PPS • GPIO • ADC • PWM • SPI	• RS422 • UART • CAN • I2C • PPS • GPIO • ADC • PWM • SPI
	OS	Alén Space OBSW	Alén Space OBSW	Alén Space OBSW	Alén Space OBSW
	On-board storage (GB)	up to 64	up to 64	up to 64	up to 64
	Security	AES256	AES256	AES256	AES256
COMMUNICATIONS	**TTC bands**	VHF, UHF	VHF, UHF, S-Band	VHF, UHF, S-Band	VHF, UHF, S-Band
	TTC downlink datarate (kbps)	0.5 – 19.2	0.5 – 512	0.5 – 512	0.5 – 512
	TTC uplink datarate (kbps)	0.5 – 19.2	0.5 – 256	0.5 – 256	0.5 – 256
	Data Bands	—	S-Band Optional	S-Band Optional X-Band Optional	S-Band Optional X-Band Optional
	Data downlink datarate (Mbps)	—	2	2 – 50	2 – 50
	Data uplink datarate (Mbps)	—	2	2	2
PROPULSION	**Info**	No	No	Propulsion Optional	Propulsion Optional
PLATFORM	**Design Lifetime (years)**	3 – 5	3 – 5	3 – 5	3 – 5

*** If your project has specific needs, contact our team. We can adapt the small satellite buses to your requirements, with adjustments and custom developments.**

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