

SMALL SATELLITE SUBSYSTEMS



- In-house developed subsystems
- All achieved TRL 9
- Affordable thanks to standardized serial manufacturing

<p>OBC (modular) On-Board Computer</p>	<p>Fully redundant Interoperability: magnetorquers drivers, heaters lines and temperature sensors Interfaces: RS-485, CAN, SpW, dI2C, GigE, GPIO</p>	<p>19x9x12 cm³ 1.4kg [22;34] V [-30; 60] °C</p>	
<p>PCDU (modular) Power Conditioning and Distribution Unit</p>	<p>Power generation: up to 2x480W Battery: up to 4xBM (see below) Power Distribution: up to 3x16 LCL Power Bus: 5V, 12V, 28V MPPT efficiency: > 97 %</p>	<p>20x12x8 cm³ 1.7kg [22;34] V [-30; 60] °C</p>	
<p>BM Battery Module</p>	<p>Storage: 380Wh Cell balancing: yes Heaters: yes Lifetime: 5 years @15% DoD</p>	<p>21x16x11 cm³ 3.6kg [22;34] V [-30; 60] °C</p>	
<p>S-SDR S-Band Software Defined Radio</p>	<p>Data Rate: adaptable 100kbps-5Mbps CCSDS compliant Channels: 2x Tx and 2x Rx Modulation: BPSK / QPSK Output RF Power: up to +31 dBm</p>	<p>13x12x6 cm³ 600g [22;34] V [-30; 60] °C</p>	<p>+2 antennas available</p> 
<p>X-SDR X-Band Software Defined Radio</p>	<p>Data Rate: up to 200Mbps Modulation: DVB-S2 Output RF Power: up to +33 dBm</p>	<p>13x12x6 cm³ 600g [22;34] V [-30; 60] °C</p>	<p>+1 antenna available</p> 
<p>MTM Magnetometer</p>	<p>3-axis Magnetometer Measurement Range: up to 800 μT Resolution: 3.3 nT Noise (1σ): 15nT</p>	<p>9x6x2 cm³ 90g [4.5; 5.5] V [-30; 60] °C</p>	
<p>GNSS Global Navigation Satellite System</p>	<p>Signal Tracking: GPS L1, Galileo E1 Accuracy: 1.5m (RMS) Interfaces: RS-485 and CAN</p>	<p>13x12x4 cm³ 90g [22;34] V [-30; 60] °C</p>	

SEE: all EE parts tested accordingly to ECSS standards (up to 62.5MeV/(mg/cm²))