

Mission	Organization	Uplink Data Rate (kbps)	Power Efficiency (W/kg)	Payload Type	Key Challenges
MarCO (2018)	NASA		8 1.26 (Mars)	Relay for Mars Lander	Low data rate due to distance from Earth (JPL, 2018)
Lunar Flashlight	NASA		8 3.93	Lunar Mapping	Limited efficiency; small-scale payload (NASA, 2022)
Lunar Trailblazer	NASA	Not disclosed	~4.0	Water Mapping	Propulsion efficiency and thermal challenges (NASA, 2022)
EscaPADE (Planned)	NASA	Not disclosed	~5.0 (expected)	Mars Twin Satellites	Complex maneuvering, low payload weight constraints
HEOMD Mars Mission	ESA/NASA	~10	6.0 (expected)	Mars Imaging	High propulsion and thermal management requirements