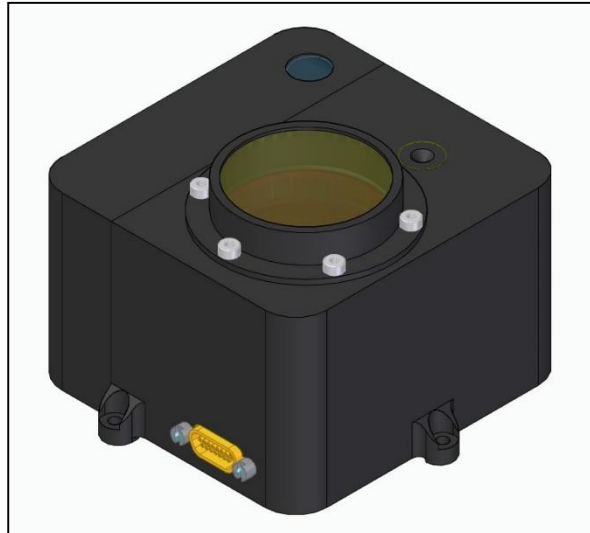


# Symmetric Laser Crosslink



<b>Data Rate</b>	100 Mbits / sec @ 250 km range 6.25 Mbits / sec @ 1000 km range	Bidirectional, Full Duplex
<b>Acquisition and Tracking Envelope</b>	Autonomous acquisition and tracking of remote terminal 1000 km max range, $\pm 2^\circ$ initial pointing error	
<b>Transmitter</b>	1 W @ 785 nm, semiconductor laser and amplifier Thermoelectric temperature control	
<b>Receiver</b>	36 mm $\varnothing$ aperture, Silicon APD	
<b>Tracking</b>	CMOS active pixel sensor detection of remote terminal Local closed-loop control of steering mirror via metrology laser	
<b>Ranging</b>	Loopback for range and range rate measurement	
<b>Interfaces</b>	LVDS In, Out and Clock for mission data RS485 for control and telemetry of device Can share serial buses with other Sinclair Interplanetary equipment	
<b>Power</b>	+28 V nominal (+8 to +34 V), <10 W in operation	
<b>Size and Mass</b>	92 mm x 83 mm x 60 mm, 400 g	
<b>Environment</b>	-20 $^\circ\text{C}$ to +40 $^\circ\text{C}$ (operational), -40 $^\circ\text{C}$ to +50 $^\circ\text{C}$ (survival) 30 $g_{\text{rms}}$ random vibration, 2000 G shock (TBC)	
<b>Status</b>	Under development	