T1 Star Tracker Options

The T1 Star Tracker is our newest generation of arc-second class star tracker and offers fully autonomous attitude determination and world-renowned accuracy.

The T1 Star Tracker can be fitted for your exact mission by several customization options.

T1 Optical Head	
Sensor:	FaintStar (1024x1024, 10 µm pitch)
Interface:	Single SpW (80 MHz)
Supply voltage:	+5 V
Power consumption:	0.75 W
Acquisition:	< 10 s at worst case transient radiation
Temperature:	-40°C to +60°C full performance up to +30°C
Lifetime:	15 years GEO, 12 years high LEO

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Star Tracker OH Optics Options

T1, Ø26 mm aperture	
Accuracy:	1.5 arcsec (1σ, EOL, +30°C)
Update Rate:	Up to 10 Hz
Baffle:	Custom baffle separated from Optical Head
Dimensions:	Ø125x165 mm
Mass:	0.56 Kg

Dimensions and mass for shown version

30 deg SEA (Sun Exclusion Angle)

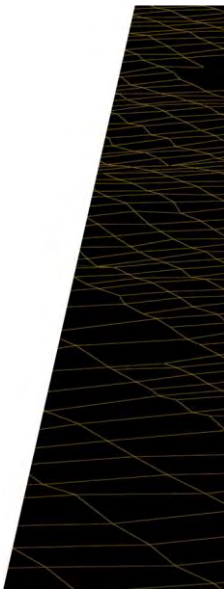
T1, Ø18 mm aperture	
Accuracy:	2 arcsec (1σ, EOL, +30°C)
Update Rate:	Up to 5 Hz
Baffle:	Custom baffle attached to Optical Head
Dimensions:	Ø60x104 mm (excl. mounting legs)
Mass:	0.31 Kg

Dimensions and mass for shown version

35 deg SEA (Sun Exclusion Angle)

Optical Head Interface Option

T1	
Interface:	Redundant SpW interface



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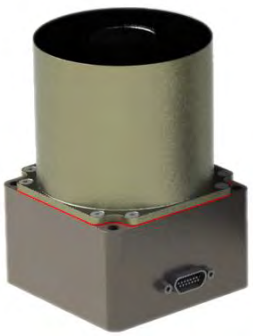
Star Tracker Optical Head Data Processing Options

Software hosted on central OBC:	
STRlib (generic Terma STR library).	Algorithms in-orbit heritage from e.g CryoSat-2
Supervisor:	Custom build
Resource requirements:	8 MB, 4 DMIPS/attitude

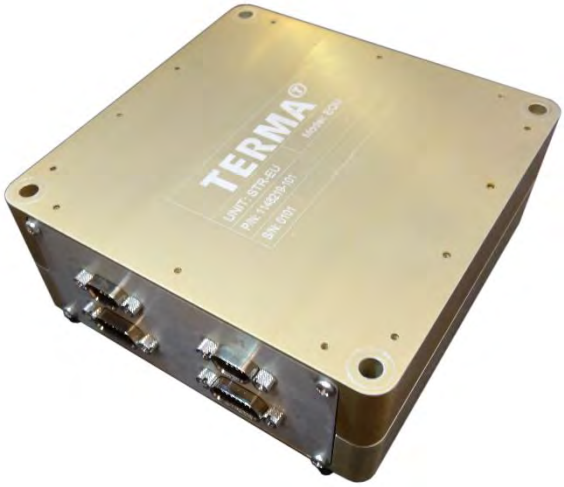
T1 OH with integrated COTS computer:	
Interface:	RS422, SpW or CAN bus
Supply voltage:	5-12 V
Dimensions:	60x60x96 mm (Ø18 mm optics)
Mass:	0.35 kg (TBC)
Power consumption:	1.25 W (TBC)

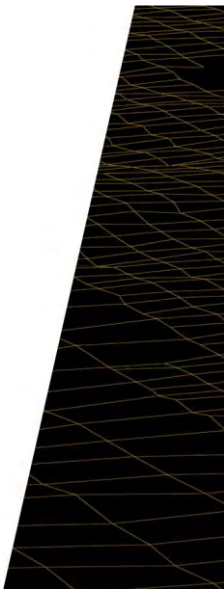
Dimensions and mass for shown version



42 deg SEA (Sun Exclusion Angle)

T1 LEON3FT Electronics Unit (separate unit):	
Interface:	Interfaces for two Optical Heads
S/C interface:	Redundant +28 V and SpW or RS422
Performance:	> 80 MIPS
Memory:	32 KB PROM, 8 MB flash, up to 16 MB SRAM or optional 256 MB SDRAM
EEE screening:	QML-V, QML-Q or 883B
Dimensions:	100x100x40 mm
Mass:	0.45 kg
Power consumption:	2.5 W
Life time:	15 years GEO, 12 years high LEO
Temperature:	-40°C to +70°C





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Star Tracker OH Checkout Equipment (baffle mounted)

Dynamic OGSE:	
Controller:	Raspberry pi
Display:	micro-OLED, HDMI I/F, USB power
Setup interface:	Bluetooth
Closed-loop interface:	RS232

High fidelity, low mass, simple to use and handle

Star Tracker OH Checkout Equipment (baffle mounted)

Static OGSE:	
Interface:	+5 V

High fidelity, low mass, simple to use and handle