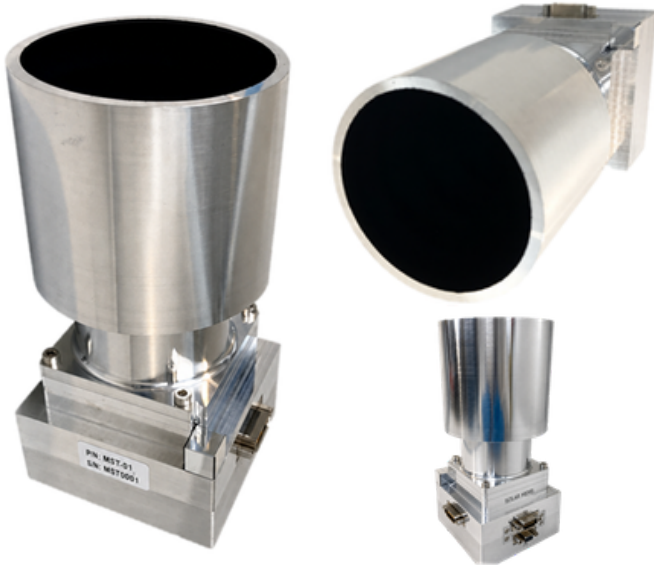


ITAR FREE
CURRENT TRL of MICROST: 8
EXPECTED TRL 9 of MICROST: DECEMBER 2026



Optical Head - microSC

Type	Star Camera for microsattellites
Attitude accuracy	Single-HEAD - XY (3 σ): 6 arcsec Z (3 σ): 48 arcsec Multi-HEAD - XY (3 σ): 6 arcsec Z (3 σ): 6 arcsec
Bias	< 0.01 deg (Alignment cube included)
TID hardness EEE	50 kRad(Si)
Communication	SpaceWire
Power	5 V, < 3 W
Volume (OH)	60 x 60 x 110 mm
Mass (OH only)	< 300 g
Mounting interface	4x M4 Bolts

Controller Unit - microCU

Type	Controller unit for 2-3 optical heads
Refresh rate	5 Hz, 10 Hz
Communication	RS422, CAN bus or Ethernet (upon request)
Power (CU only)	5 V, < 5 W
Volume (CU only)	100 x 100 x 30 mm
Mass (CU only)	< 500 g
Mounting interface	4x M4 Bolts

Description

The microST of SOLAR MEMS is a **high-precision**, cost-effective Star Tracker designed for microsattellites in LEO, with optional MEO/GEO compatibility.

It uses an internal **CMOS sensor** to capture star field images, identifying stars and constellations to determine satellite attitude with high accuracy. **Plug-and-play integration (AOCS-ready interfaces)**. Built using a mix of COTS and space-grade components (radiation-tolerant where required).

Available configurations in **standalone** configuration by default; **star camera version** under request, with separate optical unit. Its modular design supports up to 2-3 camera heads.

Standalone Star Tracker - microST

Type	Star tracker for microsattellites
Attitude accuracy	XY (3 σ): < 6 arcsec Z (3 σ): < 48 arcsec
Bias	< 0.01 deg (Alignment cube included)
Adquisition time	< 2 s from LiS
Angular rate	Nominal: 0.5 deg/s Without LiS: 2.5 deg/s Max.: 3.5 deg/s
Update rate	5 Hz, 10 Hz
Earth exclusion angle	< 25 deg
Sun exclusion angle	< 36 deg
Star magnitude limit	6.5 - 7
Operating temperature	-30 degC to 50 degC
Qualification temperature	-40 degC to 60 degC
TID hardness EEE	30 kRad(Si)
Design lifetime	> 12 years LEO
Sine vibration	20 g @ 20-150 Hz
Random vibration	20 gRMS
SRS	1500 g @ 2000 Hz
Communication	RS422, CAN bus or Ethernet (upon request)
Power	5 V, 3.5 W
Volume	70 x 70 x 150 mm
Mass	600 g
Mounting interface	4x M4 Bolts