NanoPower TSP 2030-3P

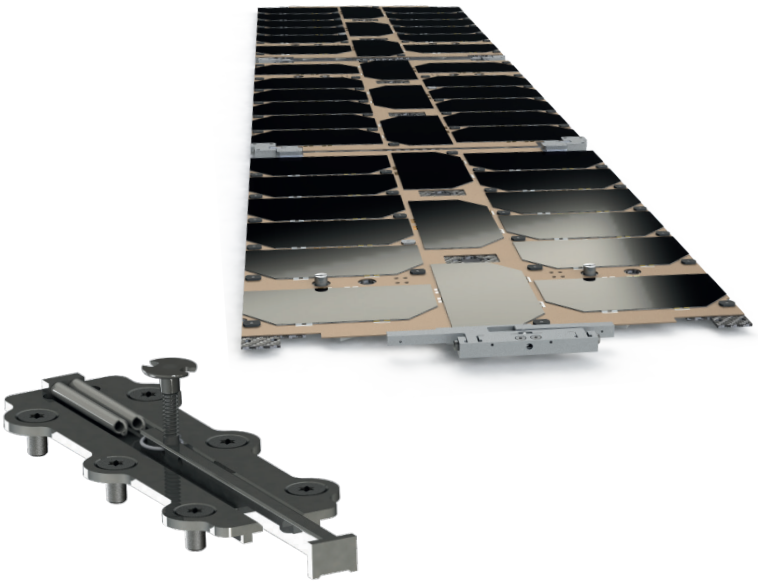
The NanoPower Tracking Solar Panels (TSP) 2030-3P is a deployable solar array which allows for sun tracking about one axis.

The TSP 2030-3P is a solar array consisting of three panels, each having a 2x3U form factor which makes it integrable on the Gomspace 6U structure along with the SADA-50 for suntracking. The stowed solar array volume protrudes less than 10mm from the rails of the structure.

The design consists of a carbon fiber support structure for the slim design and a low mass while maintaining a stiff and strong construction. The wing span of a single deployed wing is 980mm from center of spacecraft when mounted on a GomSpace 6U structure.

A wing stows against the side of the satellite structure during launch, and is deployed in orbit. The wing is latched using the Hold Down Release Mechanisms (HDRM) which secures the wing during launch and releases it when commanded. All parts of the HDRM system is also directly integrable on the 6U Gomspace structure.

While stowed the wing has outwards pointing cells for power production. Each panel holds 15 triple junction solar cells allowing a power production up to 45W per wing.



Technical Information

NANOPOWER TSP 2030-3P - KEY FEATURES:	
Functionality	• 15 cells/panel arranged as: – 5S + 5S + 5S configuration – 7S + 8S configuration • Bypass diode on each cell ~1W/cell power production at solar flux of 1367W/m^2 (BOL) • Total power production ~45W/array • Temperature sensor on each wing
Interfaces	• AXON Microstrip connectors for power and data • I^2C for sensor communication • Pads for release detection available • Interlocking panels in stowed configuration
Mass and dimensions	• Stowed volume: 330mm x 208mm x 9mm • Deployed length: 930mm • Mass: 750gr