

C3S EPS2000 DATASHEET

Description

The EPS2000 from C3S is an all-in-one high performance CubeSat and NanoSat power supply solution offering uncompromised customizability without sacrificing size, cost and reliability. The EPS can be configured to have up to 20 independent MPPT channels, a customer configurable battery pack and LCL output channels.

Thanks to the wide 6 - 60 V solar input voltage range the EPS2000 is a perfect choice for missions with larger, but fragmented solar arrays.

The EPS2000 utilizes state-of-the art Gallium Nitride transistor technology in combination with flight-proven Si-based power semiconductors for the MPPT converters, which ensure high efficiency and thus minimal heat dissipation throughout the entire operating range.

The single point failure tolerant control, power electronics and protection segments ensure reliable operation, all while being capable of handling a peak solar input power of up to 1 kW.

EPS2000 is currently in TR4 and will reach TRL7 by Q3 2025 in one of our ongoing contracted projects.

COMPLEX SYSTEMS & SMALL SATELLITES

Solar cell type Triple junction solar cells, px30% Total number of MPPT channels 20 Input voltage range 6 - 60V Low-power MPPT peak input power 12 W Low-power MPPT peak input power 50 W High-power MPPT series solar cells 16-19S Peak solar input power 1 KW* Converter stability According to ECSS-E-ST-20C Peak efficiency 97% Converter stability According to ECSS-E-ST-20C Peak efficiency 97% Battery pack series configuration 7-8 series 18650 celts Battery pack series configuration 3 or more parallel strings Battery pack stored energy 200+ Wh Integrated battery heat Yes Output voltage 23 - 33 V (28 V unregulated) Number of LCL channels Configurable based on the mission requirements, min. 5A Peak output power 950 W* Communication Secondary interface Redundant CAN Secondary interface Peak output power 950 W* Communication Upt o 1 Material		Solar cell inputs
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