

## Power Products

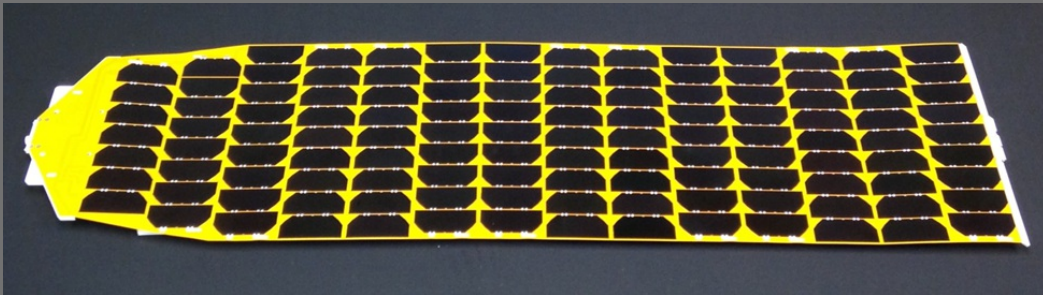
*ExoTerra offers high-performance CubeSat solar arrays and power processing components for generating and delivering unprecedented amounts of electrical power in a CubeSat form factor.*

### Deployable Solar Array

Designed to meet the power needs of our [Halo Hall-effect thruster](#), ExoTerra's fold-out flexible solar arrays are the largest and highest specific power solar arrays available for CubeSats.

The power level of the array can be tailored by increasing or decreasing the quantity of blanket panels, allowing them to be scaled between 100-150 W of power at beginning of life while using less than 0.85U total stowed volume. The full-scale array has a measured specific power of 145 W/kg, providing a lightweight, highly compact power source capable of driving not only Hall-effect thrusters but high-power payloads and communications components. With more power on-board, your CubeSat can do more.

The design is currently undergoing qualification testing and is scheduled for a test flight in 2019.



ExoTerra's deployable array packages 150 W into 0.85U at 145 W/kg

### Power Processing Unit

ExoTerra's Power Processing Unit (PPU) converts and conditions incoming power from the host spacecraft to run our Halo thruster. The card weighs under 200 g, has up to 98% efficiency, and is CubeSat compatible.

### Power Distribution Card / Electrical Power System

ExoTerra's Power Distribution Card/Electrical Power System 1 (PDC/EPS-1) transforms power from a variety of inputs into user-specified outputs.



ExoTerra's Power Distribution Card can process 1 kw on a PC 104 board

EPS-1 accepts up to 1 kW of input power from solar panels, batteries, and other external sources, which it converts to output power at various standard and user-selectable voltage levels using versatile and efficient buck/boost switching blocks. A radiation-resistant or rad-hard FPGA controls each GaN FET-based buck/boost

block at MHz switching frequencies. Each block uses a common design with a native 60V and 8A maximum rating, and has a minimum efficiency of 96.5% over a wide range of operating currents, a programmable current limit, and protection against overcurrent and overtemperature faults. The card conforms to the established CubeSat module form factor and 104-pin connector.

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*Please contact [ExoTerra](#) for details on these items and how we might tailor them to your specific mission needs.*