

Energy Storage Module (ESM)

Battery Management Interface for SmallSats

Supports Multiple, Distributed S/C Energy Stores

The ESM is a generic power subsystem module capable of interfacing to batteries of diverse cell/string configurations and chemistries. The unit is compatible with PnP standards as well as traditional communication interfaces. The ESM essentially allows a traditional battery to be converted to a locally managed energy "brick" accepting charge from an arbitrary number of power sources and providing conditioned power to the spacecraft bus. The ESM may be used in conjunction with DNet's Solar Array Controller (SAC) to provide a fully distributed spacecraft power management solution for a broad range of SmallSat missions.

FEATURES

Stackable, extensible design

Board slices can provide support for solar array strings in multiples of 6

Handles up to 18 Amps solar array current (3A per string group)

Compact 5.4" x 5.5" x 4" form factor

Additional board may be added to provide support for load shedding

Local microprocessor logic allows "setpoint" control of array output in either voltage or current modes

Modular interface card can be selected for Spacewire or RS-422 communications

