



SPECTRE Systems: Additional modules



Datalogger

This standalone module accepts data in various forms and logs it to a Micro SD card that is easily readable either via USB or by transferring it into a host computer.

A control bus enables a host system to start, stop or monitor the datalogger status.

Inputs: 4x serial; 8x digital; 4x analogue.

Optional: on-board stabilized magenetic compass.

Power Management Module

This standalone module offers power control for six 12V channels at up to 2.4A each, subject to a maximum overall capacity of 10A.

The control bus is RS422, allowing up to 8 modules to be daisy-chained and controlled by a single host, providing up to 48 channels and 80A.

Data formats: CSV (NMEA source data), raw binary/text (with timestamps inserted after CR/LF or data intervals).

Data may be synchronized to a defined log trigger, e.g. GGA sentence received.

On-board Real Time Clock, may be automatically updated on receipt of RMC sentence.

Each channel may be switched on or off independently. Each has a preset trip current level which may be changed at runtime, by means of a command from the host. Peak and average currents may be monitored.

Options are available for higher currents. and/or higher bus voltages.



Satcomms Data Harvester

This standalone module offers a simple solution for gathering data from remote sensors using satellite communications.

Up to 4 serial devices, 8 digital lines and 4 analogue channels may be monitored, as well as internal gyrostabilized magnetic heading data. Sensor data may be sent back in raw form, or in some cases compressed for minimum bandwidth usage. Up to 20kB of data may be stored on board, then sent back over Iridium RUDICS to a remote server. Transfers may be triggered manually, by timeout, or when a sensor bugger "high water mark" is reached.

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Datalogger

Physical	90 x 96mm PC104 footprint
Power Requirements	12V (nominal); 40mA
Optional operation from LiPo	Charge management circuitry on board
	May be powered by USB
Serial I/O	4 ports RS232
Digital I/O	8 ports
Analogue I/O	4 ports 0-10V
Capacity	23GB Micro-SD using FAT32 file formatting
Speed	20kB per second
Datalink	USB, Bluetooth (optional)
	May be driven by SPECTRE

Power Management Module

Physical	90 x 96mm PC104 footprint
Power Supply	12V (nominal)
Typical current draw	25mA for on-board processor
Channels	6x 12V, up to 2400mA each, subject to a board total 10A
Control and Monitoring	Simple command bus protocol
	Windows Front end supplied
	May be driven via SPECTRE
Control	Switch on/off; trip levels
	Output V. current (peak / average)

Satcomms Data Harvester

Physical	46 x 71mm
Power Requirements	8 to 28V; 45mA
Serial I/O	4 ports RS232
Digital I/O	8 ports
Analogue I/O	4 ports 0-10V
Datalink	Iridium RUDICS, 2400 bps when transmitting
	Automatic modem handshaking
	Data compression (on selected sensor interfaces
	Server: Windows PC connected via Static IP to internet
	Data access: via remote login
	Front end Windows utility supplied

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