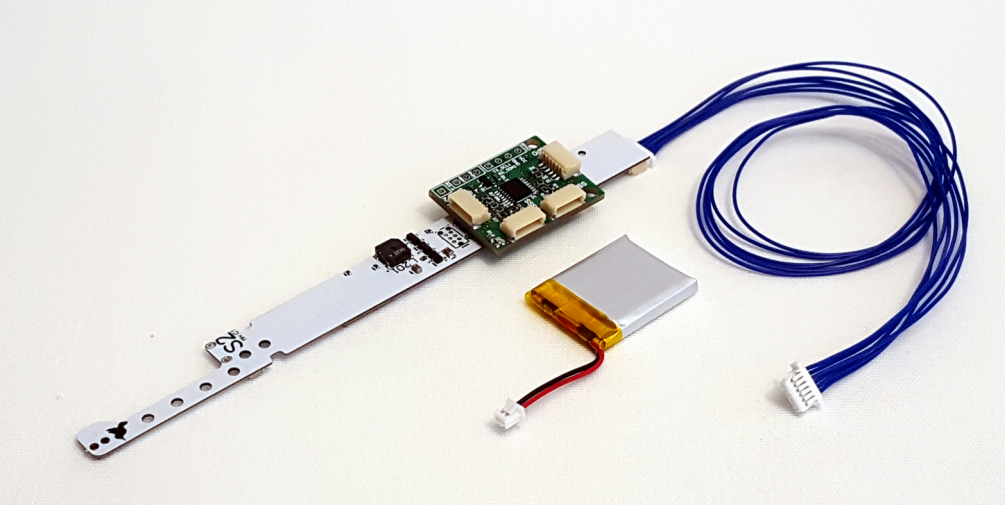
SKH1 Datasheet

Sensor Hub for Sparvio measurements



SKH1 is a hub for connecting sensors onboard UAVs. It synchronizes and provides power to all connected sensors. It also measures a basic set of parameters and provides logging and radio telemetry to a Sparv ground station.

Included

- SKH1 circuit board
- Battery
- GPS
- Telemetry antenna

Parameters	**Specifications**
Connectors	4 SSP connectors for sensors 1 SSP connector for SA1 (or sensors) Solder pads for PWM input from RC receiver Solder pads for external GPS (UART) Battery connector JST SH
Storage	64 MB nonvolatile storage for logging
Telemetry	Radio transceiver 400-460 Mhz, 100 mW. For optional real-time settings and telemetry with radio receiver RR1 or RR2.
Battery	Includes a 150 mAh 3.7 V battery. Power requirements vary greatly with connected sensors and measurement time. External power sources are supported in range 3.3 – 15 V.

Power requirements	3.3 – 15 V_{DC}. *Also consider voltage requirements of connected sensors.*
Power consumption	Average: ~20 mA Peak: ~110 mA with radio. *Also consider consumption of connected sensors.*
Size	22 x 12 x 130 mm
Weight	6 grams without cables and battery. A 150 mAh battery adds 3 grams. GPS and telemetry module add extra weight.

Built-in sensors

Parameters	**Notes**
On-board temperature	Measured close to the UAV; not the best reading of ambient conditions.
On-board humidity	Measured close to the UAV; not the best reading of ambient conditions.
GPS	External GPS module included
Barometer	0.02 hPa resolution 0.12 hPa relative accuracy 1 hPa absolute accuracy
Accelerometer	Disabled by default. Contact us for details.
Battery voltage	0.01 V resolution

Sparvio background

The Sparvio system provides a modular, plug-and-play solution for measuring various quantities for UAVs, other environmental studies, lab experiments and education. The system is designed to start immediate measurements without any further integration.
SKH1 is required to use the Sparvio system.

SKH1 is designed and manufactured in Sweden by Sparv Embedded AB.