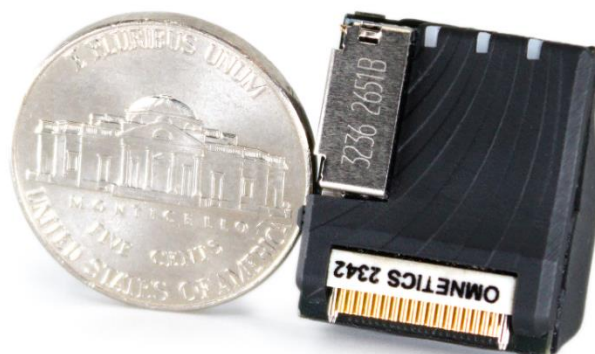


## Sprite32

Ultralight 32-channel untethered data logger

### Features

- 32 channels of neural data
- 3.8 grams (battery included)
- 75-minute record time
- Gyroscope and accelerometer
- Battery and status monitoring over radio
- Record 6 Sprite32s simultaneously
- USB charging



### Overview

Sprite32 is an ultralightweight, fully featured data logging headstage perfect for experiments with anything from mice to macaques. Sprite32 logs 32 channels of full-data rate broadband neural data while also weighing in at a tidy 3.8 grams (including the integrated battery). Sprite32 offers 75 minutes of continuous record time with standby-mode and features battery and headstage status monitoring over radio in Trosdes via the SpriteDock control unit. 6 Sprite32 headstages can be paired with one SpriteDock control unit, enabling independent recording, monitoring and control for all 6 units. Sprite32 also has on-board gyroscope and accelerometer sensors and is chargeable via USB.

### Specifications

Channel Count	32 Channel
Dimensions	21 x 18 x 10 mm
Weight	3.8 grams (battery included)
Record Time	75 minutes
Sampling Rate	20 kHz
Bit Depth	16-bit
Sampling Voltage Resolution	0.76uV
Sensors	3-axis gyroscope; 3-axis accelerometer; Battery monitor
Input Range	±5 mV
Battery	45 mAh
Data Logging	Full data-rate broadband data
Charging Connector	4-pin Omnetics PZN
Probe Interface Connector	36-pin Omnetics connector
Simultaneous Recording	6 headstages/SpriteDock

## SpriteDock

The SpriteDock can be paired with up to 6 Sprite32 headstages at once via Trodes 2-way radio communication. This allows for simultaneous untethered recording with all 6 Sprite32s while maintaining independent control for each headstage via Trodes.

Once connected to the SpriteDock, Trodes displays headstage status information for all paired and connected Sprite32 units. This includes real-time information about remaining battery life, hardware status/settings, recording state, and wireless connection strength. This data is all logged by Trodes for easy post-experiment access.

Sprite32 headstage settings are updated via USB connection to the SpriteDock using the Omnetics PZN to USB adaptor provided with the unit. This connection also charges the Sprite32 and is used for deploying firmware updates. Sprite32 can be charged using any 5V USB port.



## Standby Mode

Sprite32 includes a standby mode for longer recordings with less rush. This low-power mode allows the headstage and SpriteDock to remain connected and ready to record for moderate periods of time while minimizing impact on battery charge. (standby mode uses ~10% battery charge per hour).

## LED indications

Sprite32 simplifies headstage status signaling and streamlines setup by displaying recording readiness independently for each headstage system.

**Hardware Status** - Indicates the overall status of the headstage hardware. This includes the hardware systems responsible for digitization and amplification, data processing, and system control.

**Wireless Status** - Indicates RF connection status with the Sprite Dock.

**SD Card Status** - Indicates the SD card readiness to record. Before each session the SD card must be enabled for recording. If the SD card is not enabled, the SD Status LED will indicate this.

