

EyePod-4

All-in-One Data and Tracking

From NearSpace Launch, Inc.

The EyePod-4* is a small, research/commercial grade unit that gives balloon launches highly reliable, state of the art, internet based tracking and real time data capture along with high speed data logging from many sensors.

Track and recover your balloon using your smartphone, laptop, etc.

- Uses Globalstar's commercial satellites to track globally at all altitudes (remote areas & oceans)
- High Altitude and FCC Commercial Licenses
- Highly accurate and reliable unlocked GPS data using Globalstar's satellites streaming data every few minutes (or faster) to the internet (Data needed)
- Hassle free compared to tracking with Ham Radio or 900 MHz ISM Band (still options)
- No Ground Station or Vehicle/Mobile Receiver needed (Data displayed on console)
- No Chase team with line of site needed
- No protruding antennas that can break off (patch antennas)
- Just launch and track your balloon anywhere you have internet (data collected simultaneously)

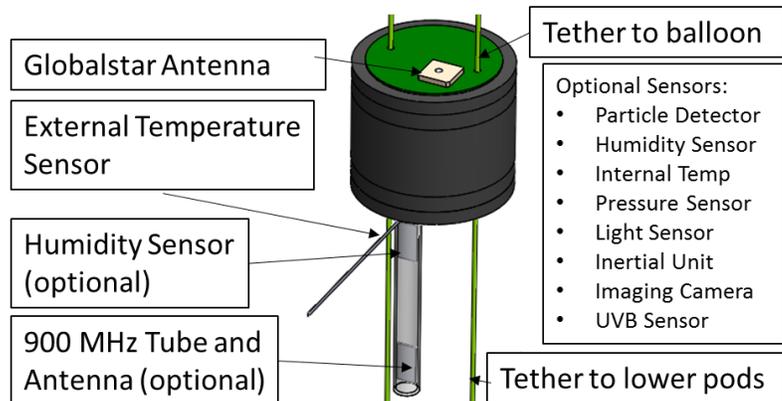
Collect data at fast rates from multiple sensors

- <1 sec intervals through 900 MHz (optional), and ¼ sec with 2 GB SD card
- Stream data in real time to the internet using Globalstar's satellites (Data needed.)
(Common Database allows easy sharing and comparison of data from various balloon flights)
- 10 analog sensor plug-ins plus wireless communication from additional sensors and pods
- Temperature and 3 axis motion sensors, along with optional sensor suite
- Console/Dashboard common database and EyePod ideal for balloon constellations
- Connect to tethered AstroPods with 900 MHz modem

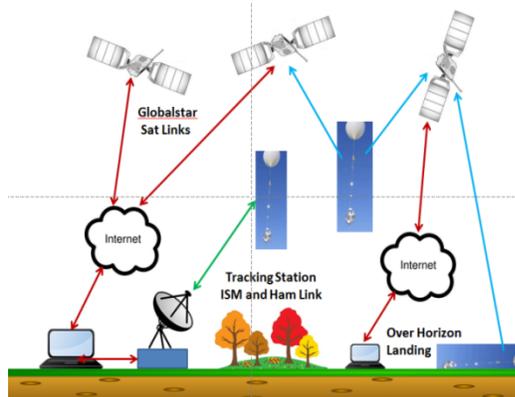
Small size – a cylinder or “hockey puck” structure, 10 cm diameter, 7 cm long. It can be mounted on an experiment pod, tether, etc.



EyePod-4 Lite



EyePod-4 Pro. Shown are included features available.

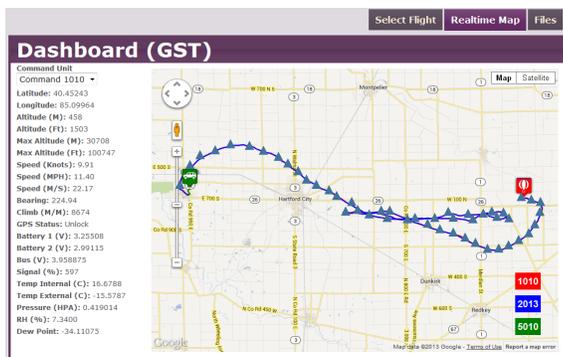


The communication link to the Globalstar satellites is revolutionary compared to the ground station based Ham Radio and ISM link that are challenged by line of site issues and considerably more complicated hardware and software.

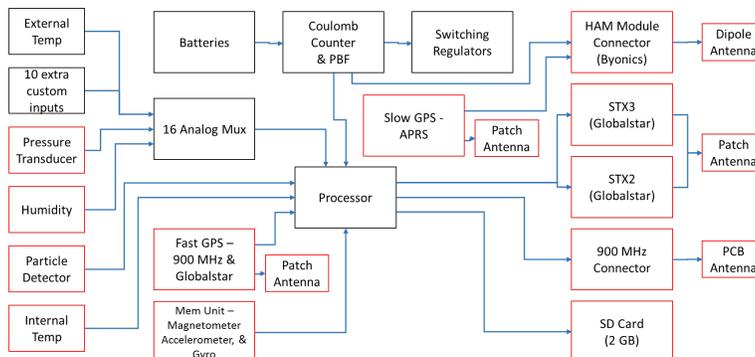
Globalstar is a company that provides global data and voice services for ~300,000 customers. The Globalstar technology was demonstrated on the TSAT nanosatellite that continuously transmitted data while orbiting the earth for 40 days.

EyePod-4 includes the following:

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- Globalstar simplex link to constellation of satellites (approved by the FCC and Globalstar)
- Globalstar Patch antenna
- Flight processor interface
- Data logger (10 analog and 4 digital inputs, 2 count rates, I²C/SPI/Serial interface)
- GPS (high precision) with Patch antenna
- 2 GB memory stick
- Two Lithium Ion Polymer Batteries (one for back-up) and Power Distribution System
- Temperature and Accelerometer (3 axis)
- Pressure, humidity, particle detector, light sensor, and camera (optional)
- 900 MHz and Ham Radio connectivity options
- Tree cut down mechanism (optional)



Access to the Console/Dashboard (with a real time map of the balloon location and key flight info) provided on the internet when the EyePod-4 is used to capture streaming data with Globalstar.



Block diagram showing base (black) and optional (red) features of EyePod-4

Specifications (Data Papers Available)

Battery: 7.1V/2200 mA-hr	Frequency: 161.25 MHz	Power (ERP): 23 dBm (200mW)
Modulation: BPSK	Temperature: -60 to 50°C	Pressure: 2 to 1070 hPa

Products (contact NSL for pricing)

Product	Description
EyePod-4 Pro	Full feature set – All-in-one with data logger & Globalstar
EyePod-4 Pro HS	“High Speed” features, with 900 MHz modem for more pods
EyePod-4 Eclipse	For Eclipse observation, with imaging & sensors (see website)
EyePod-4 Lite	Data logger only with SD Card, No Globalstar
EyePod-4 Tether	Made for use with tethered balloon
EyePod-4 Disposable	One time use/disposable, with Globalstar tracking
EyePod-4 Mini	Narrow profile pod fits in neck of balloon
AstroPod	Pod transmits data to EyePod-4, requires 900 MHz modem
Rent-a-Pod	Lease an EyePod-4 at a reduced rate
Launch-For-Hire	NSL specialists perform launch – 1kg max, max data rate
Tree Cut Down Option	Releases EyePod when in tree

Real-time Globalstar Flight Data Cost

Plan	Time for 36 bytes	Price/flight	Price/10 flights
Medium	1 min.	\$24.00	\$216.00
High	5 sec.	\$244.80	\$2,203.20

(Data rate for 4 hrs, then transmits once/hr for several days)

Contact for orders and information

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*NSL Inc. is a certified Value Added Reseller (VAR) of Globalstar Satellite radios with its approved FCC, EMI, & Globalstar EyeStar products (<http://www.globalstar.com/en/index.php?cid=2560>).