

Allegato CTL2E

LOTTO 2

TECHNICAL SPECIFICATIONS SUPPLY GPS TAGS (WEIGHT > 7.5 G)

- **n. 71** GPS-GSM/GPRS/3G solar powered trackers to be deployed on Mediterranean gulls, Black-headed gulls, and Eurasian woodcocks: **weight ≤ 9.5 g**, dimensions 37×19×12 mm; Housing: backpack design, aerodynamic, strong and waterproof; One external flexible whip antenna, 10 cm long; GPS receiver: high sensitivity 72 channel module; GSM/GPRS/3G transceiver: UMTS/HSPA: Hexa-band 800/850/900/1900/2100 MHz, GSM/GPRS/EDGE: Quad-band 850/900/1800/1900 MHz; Internal battery: Lithium-Polymer with under- and over-charge protection; Fully charged battery sufficient for logging about 800 positions without additional recharge; Solar charger: high efficiency multi-junction solar panel; GPS logging intervals: from 1 second to 48 hours (user selectable); Data storage: 2 MB flash memory capable of storing at least 30,000 records; Data upload: via GSM/GPRS/3G network; GSM/GPRS/3G network connection interval: from 10 minutes to 192 hours (user selectable); SMS message with 10 GPS positions when GPRS/3G network is not available; Logged data stored in memory if GSM network is unavailable; Geofences: 2 zones with separate sets of parameters. Zones defined by user by multiple rectangles (up to 10 per zone); High frequency (up to 50 Hz) sensor (accelerometer, magnetometer, temperature, light intensity) data collection on a separate schedule; Day & night mode; Operational temperature: from -10 to +60 °C; Control: user remotely controls GPS & GSM schedules, day & night mode settings, sensor data recording settings and geofence settings via online control panel; Main data record should include: UTC date & time, GPS position, GPS altitude, speed, direction, HDOP, battery voltage, battery charging current, instant acceleration (3 axes), temperature, magnetic field strength (3 axes); Transmitter firmware update over the air (OTA); at least six month of data transfer fee included.
- **n. 30** GPS-GSM solar powered trackers to be deployed on Egyptian vultures: **weight ≤ 25 g**; dimensions 61×25×20 mm (excluding attachment points); no external antennas; GSM transceiver: 3G module; lithium-polymer with under- and over-charge protection internal battery; fully charged battery sufficient for logging about 1,000 positions without additional recharge; high efficiency 22% solar recharge; data upload: via GSM/GPRS/3G network; GPS receiver: high sensitivity 99 channel module; GSM transceiver: 3G module hexaband 800/850/900/1800/1900/2100; GPS logging intervals: from 1 second to 48 hours; data storage: 128 MB; GSM/GPRS network connection interval: from 10 minutes to 192 hours; SMS message with GPS positions when GPRS/3G network is not available; geofences: 2 zones with separate sets of parameters. Zones defined by user by multiple rectangles (up to 10 per zone); control: user remotely controls GPS & GSM schedules and geofence settings; transmitter firmware update over the air; high frequency (up to 50 Hz) sensor

(accelerometer, magnetometer, temperature, light intensity) data collection on a separate schedule; day & night sensing; operational temperature: from -20 to +70 °C; main data record including UTC date & time, GPS position, GPS altitude, speed, direction, HDOP, battery voltage, battery charging current, instant acceleration (3 axes), ambient light intensity, temperature and magnetic field strength (3 axes); backpack case: waterproof and aerodynamic in brown color; at least six month of data transfer fee included.

- **n. 12** GPS-GSM solar powered trackers to be deployed on Golden Eagle: **weight ≤ 50 g**, dimensions 76×38×24 mm; Housing: backpack design, aerodynamic, strong and waterproof; No external antennas; GPS receiver: high sensitivity 99 channel module; GSM transceiver: quad-band 850/900/1800/1900 (2G module), or hexaband 800/850/900/1800/1900/2100 (3G module); Internal battery: Lithium-Polymer battery with under- and over-charge protection; Fully charged battery sufficient for logging 5,000 positions without additional recharge; Solar charger: high efficiency 22%; GPS logging intervals: from 1 second to 48 hours; Data storage: 128 MB capable of storing nearly 2,000,000 records; Data upload: via GSM/GPRS/3G network; GSM/GPRS network connection interval: from 10 minutes to 96 hours; SMS message with 10 GPS positions when GPRS/3G network is not available; Logged data stored in memory if GSM network is unavailable; Geofences: 2 zones with separate sets of parameters. Zones defined by user by multiple rectangles (up to 10 per zone); High frequency (up to 50 Hz) sensor (accelerometer, magnetometer, temperature, light intensity) data collection on a separate schedule; Day & night sensing; Operational temperature: from -20 to +70 °C; Control: user remotely controls GPS & GSM schedules and geofence settings; Main data record: UTC date & time, GPS position, GPS altitude, speed, direction, HDOP, battery voltage, battery charging current, instant acceleration (3 axes), ambient light intensity, temperature, magnetic field strength (3 axes); Transmitter firmware update over the air (OTA); at least six month of data transfer fee included.

Time of delivery and place where the service will be accomplished:

Within 60 days from the award of the supply to ISPRA, Ca' Fornacetta 9, I-40064, Ozzano Emilia (Bologna) - Italy

Criteria for energy and environmental sustainability:

CRAM not required.

Invoice and payment:

The payment will be accomplished within 30 days from the receipt of the invoice.



ISPRA

Istituto Superiore per la Protezione
e la Ricerca Ambientale



Sistema Nazionale
per la Protezione
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