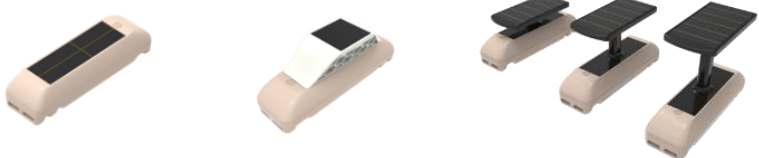# LEGO

The LEGO series GNSS-ACC-Solar trackers are designed for deployment on the back. These trackers are equipped to utilize various cellular networks, adapting to different regions. Moreover, they feature adjustable heights to optimize solar charging efficiency, particularly effective against the obstacle of thick feathers.

BASIC SPECIFICATIONS

Model	LEGO	LEGO ECL 26	LEGO EL 26/40/50
Appearance			
Solar Efficiency	Medium/High	High	High/Super-High
Height	16.2mm	26.5mm	26.2/40.5/50.5mm
Dimensions	68mm × 21mm × 16mm (LWH, solar panel elevation not included)		
Housing	The main housing part uses ASA injection molding with excellent toughness and environment tolerance, multiple harness threading holes		
Color	Light brown		
Antenna	Internal		
Battery	210 mAh lithium polymer rechargeable battery, with under-and-over-charging protection		
Battery Life	Over 2000 GNSS positions under optimal GNSS satellite view at 5-minute interval		
GNSS Module	Precision: CEP （50%） 5m Maximum update rate: 10 Hz		
Working Temperature	-20°C~60°C (enough for very cold winter if close to warm-blood animal body)		
Waterproof	IP 68 (7 ATM for the main part)		
Data Types	- GNSS: longitude, latitude, altitude, altitude (ellipsoid), course, satellite quantity - ENV: voltage, light intensity, temperature - ODBA (overall dynamic body acceleration) - ACC: x/y/z acceleration data (upon request) - Beacon: with Debut series gateway devices		
Data Storage	Collected data will be stored in memory before transmission. - Flash memory: 16 MB - Regular data storage: 460 days at default setting (1h GNSS+1h ENV+10 min ODBA) - BOOST data storage: 280,000 pieces - ACC data storage: 28,700 pieces		
Working Schedule	Programmable from 1 min, changeable via 2G/3G/4G/5G network, or instantly via INTELINK (Bluetooth)		
Firmware Upgrade	Remotely via 2G/3G/4G/5G network, or instantly via INTELINK (Bluetooth)		

LEGO 2G/4G

SUB-MODELS

Name	Weight	Total Height	Housing
LEGO 2G	20.3±0.3g	16.2 mm	ASA injection molding
LEGO 2G EL26	25±0.3g	26.2 mm	ASA injection molding
LEGO 2G EL40	26.3±0.3g	40.5 mm	ASA injection molding
LEGO 2G EL50	28.8 g±0.3g	50.5 mm	ASA injection molding
LEGO 2G ECL26	21.5±0.3g	26.5 mm	ASA injection molding
LEGO 4G	20.3g±0.3g	16.2 mm	ASA injection molding
LEGO 4G ECL 26	21.5g±0.3g	26.5 mm	ASA injection molding
LEGO 4G EL 26	25g±0.3g	26.2 mm	ASA injection molding
LEGO 4G EL 40	26.5g±0.3g	40.5 mm	ASA injection molding
LEGO 4G EL 50	27g±0.3g	50.5 mm	ASA injection molding
LEGO 4G C2 [2]	29.8±0.3g	20 mm	Nylon 3D-printed (white)

[2] LEGO 4G C2* integrates a 1000mAh battery along with a high-efficiency Gallium Arsenide (GaAs) solar unit. This solar unit is adept at charging even under weak daylight conditions. Specifically tailored for pheasants dwelling in forests or undergrowth, this model addresses the challenge of limited direct sunlight exposure.

Note: LEGO's 4G models come in two variants: E and A. The E variant is specifically designed for Eurasian regions, featuring antennas optimized for the transmission bands prevalent in those areas. Conversely, the A variant caters to American regions, employing antennas tailored to suit the transmission bands common in those territories. Notably, Oceania and Africa predominantly utilize the 4G-E variant, reflecting a strategic alignment with Eurasian transmission standards.

TRANSMISSION MODULE

2G Band	Uplink（MHz）	Downlink（MHz）	Output Power（dBm）
GSM850	824.2 ~ 848.8	869.2 ~ 893.8	33
EGSM900	880.2 ~ 914.8	925.2 ~ 959.8	33
DCS1800	1710.2 ~ 1784.8	1805.2 ~ 1879.8	30
PCS1900	1850.2 ~ 1909.8	1930.2 ~ 1989.8	30

Maximum uplink/downlink data rate: 85.6 Kbps/85.6 Kbps

4G Bands	Frequency (MHz）
LTE-FDD B1	2100

LTE-FDD B3	1800
LTE-FDD B5	850
LTE-FDD B8	900
LTE-TDD B34	2010
LTE-TDD B38	2600
LTE-TDD B39	1900
LTE-TDD B40	2300
LTE-TDD B41	2600

Maximum output power: 23 dBm

Maximum uplink/downlink data rate: 5 Mbps/10 Mbps

PRICING

Sub Model-Name	Device (Feed Subscription)		Ecotopia Data Services [1] (per unit per year)	Debut Renewal Plan [2]
	Retail Price	Promotion Price		
LEGO 4G	999	N/A	131.88	249
LEGO 4G EL 26/40/50	999	N/A	131.88	249
LEGO 4G ECL 26	999	N/A	131.88	249
LEGO 4G C2	1099	N/A	131.88	249

Note: The prices are in US dollar.

[1] To know more about Ecotopia Data Service, please click:

https://www.ecotopiago.com/help/en/#/essential/data_service/overview

[2] To know more about Debut Renewal Plan, please click:

https://www.youtube.com/watch?v=IM75JLGhsHU&t=6s

[3] The promotion period for the LEGO series is 2023 Sep 1 ~2024 Dec 31.

ACCESSORIES

LEGO series is designed with flexible holes for back-mount using harness.

Each device will be provided along with 2 meters of 5mm or 3.5mm wide UHMWPE tape (for harness use) and 6 aluminum rings (for binding the harness), for free. You can specify the tape wideness when you place the order.