

Hybrid-Powered Asset Tracker

ASTRI's Hybrid-Powered Asset Tracker enables full-coverage, real-time monitoring of airport assets including luggage trolleys. It automatically switches between Bluetooth and GPS for indoor and outdoor use, achieving seamless periodic positioning. The tracker integrates a long-life battery and a high-efficiency solar panel capable of charging under low light, extending its service life from several months to five years.

Industry Challenges

- Traditional tracking devices suffer from limited battery life and positioning gaps
- Conventional rechargeable batteries experience rapid capacity degradation and voltage drops during high-rate discharge
- Radio frequency system generates peak pulse currents exceeding 2A, accelerating battery deterioration
- Seamless indoor-outdoor positioning requires sophisticated multi-radio coordination between GPS, bluetooth beacons, and Wi-Fi or mobile networks

Major Benefits

- Real-time tracking across indoor and outdoor environments, locatable in low-power mode or network-disconnected state
- Self-powered via integrated solar panel and battery replacement-free
- Embedded optical ranging module for real-time asset utilisation monitoring

Application Areas

Real-time asset tracking throughout airport facilities, including:

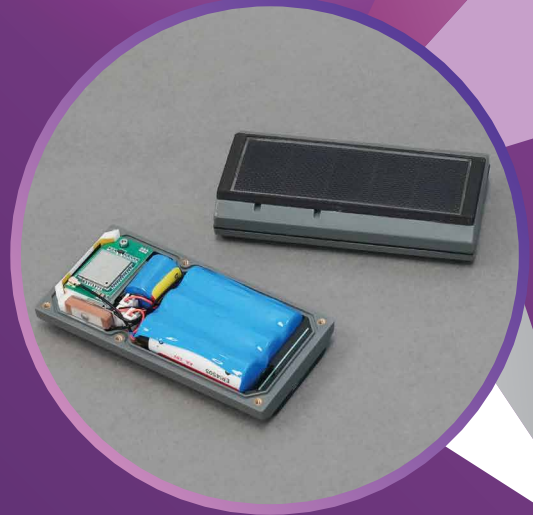
- Baggage trolley and cargo dollies
- Wheelchair and accessibility aids
- Tensile barriers and crowd control equipment

Collaborator(s)

Manufacturers of battery and components

Award(s)

CES Innovation Awards,
International Exhibition of Inventions Geneva,
Silicon Valley International Invention Festival (SVIIF)



Hybrid-Powered Asset Tracker integrates ASTRI's power-saving technology with patented battery innovation

