

GPT12-X Ultra

ENGINEERING REFERENCE DOCUMENT

GPT12-X Ultra is designed for low-frequency, long-life monitoring of unpowered industrial assets where maintenance reduction and deployment flexibility are critical.



	Model	GPT12-X Ultra
	Cellular	LTE-M / NB-IoT
	Chipset	Nordic nRF9161 SiP
	GNSS	GPS / GLONASS / BeiDou / Galileo / QZSS
	Positioning	GNSS + LBS fallback
	Battery	Fixed internal 5000mAh Li-MnO ₂ primary battery
	Battery Type	Non-rechargeable sealed configuration
	Sensors	3-axis accelerometer and light sensor
	Protection	IP67 sealed enclosure

Low-Power Architecture

GPT12-X Ultra achieves multi-year deployment capability through a low-power operating model that minimizes active time and prioritizes sleep efficiency.



Key Power Drivers

Factor	Impact
 Reporting interval	Lower report frequency generally extends battery life.
 GNSS acquisition time	Longer time-to-fix increases energy consumption.
 Cellular conditions	Poor signal can increase transmission effort.
 Temperature	Extreme environments can affect battery performance.
 Event frequency	Frequent motion or tamper events increase wake-ups.



Battery performance depends on reporting interval, network quality, GNSS acquisition time, temperature and event frequency.



Operating Modes & Deployment

Select the operating profile according to reporting frequency, movement patterns and battery-life goals.

Mode	Typical Use	Battery Impact
 Long Standby	Periodic check-in for assets that are often idle.	Longest-life profile
 Trip Mode	Movement-based reporting during asset transit.	Balanced
 Activity Mode	More active monitoring during movement.	Medium
 Emergency Mode	Short-term high-frequency tracking for recovery use.	Highest consumption



GPT12-X Ultra (Actual size)

Deployment Considerations

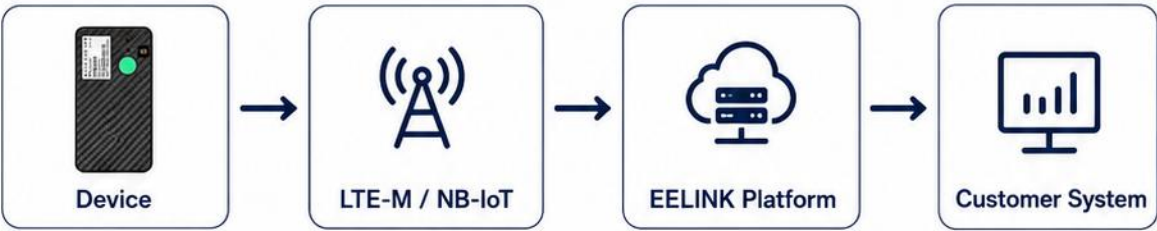
Area	Recommendation
 GNSS	Prefer locations with practical sky exposure and avoid severe antenna shielding.
 Installation	Balance concealment, physical protection and communication performance.
 Network	Validate coverage before mass deployment.
 Integration	Use EELINK protocol or a customer backend workflow.



Typical concealed installation on trailer undercarriage.

Integration & Deployment

GPT12-X Ultra can be deployed with EELINK's platform environment or integrated into customer workflows and backend systems.



Integration Scope

Area	Notes
Protocol	EELINK protocol support for device communication workflows.
Data transport	Project-specific use of customer backend integration paths.
Deployment use	Suitable for asset-visibility platforms and industrial IoT programs.
Program type	Standard deployment or customized OEM / ODM implementation.

Field Deployment

1

Open back cover & insert Nano-SIM



2

Press power button to turn on



3

Press to install at target spot and confirm deployment



Typical Use Cases

