

Product overview

GPT45-M is a cold chain cargo tracker that records shipment evidence, not just location: temperature, humidity, ambient light, three-axis shock, barometric pressure, an optional external PT1000 probe and position are logged on one synchronised time base, so an excursion can be attributed to a place, a time and a custody stage. It reports over LTE-M, NB-IoT or 2G into the customer's own platform and is available as a white-label ODM design manufactured across China and Vietnam.



7 SENSING CHANNELS	5 GNSS CONSTELLATIONS	3 RADIO ACCESS TECHNOLOGIES	PT1000 EXTERNAL RTD PROBE
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MECHANICAL, ENVIRONMENTAL & POWER

Dimensions	95 × 55.5 × 22.7 mm
Weight	106 g
Ingress protection	IP65
Operating range	−20 °C to +75 °C · 20–90 % RH
Battery	2,550 mAh rechargeable Li-ion, 3.8 V nominal
Charging	USB Type-C, 5 V
Charge time / cycle life	CONFIRMED PER PROJECT
SIM	Nano-SIM (4FF)
Controls & indicators	Power button · red LED (cellular) · blue LED (GNSS)
Memory	4 MB flash · 400 KB SRAM
Offline buffering	Records logged to flash when out of coverage, forwarded automatically on reconnection

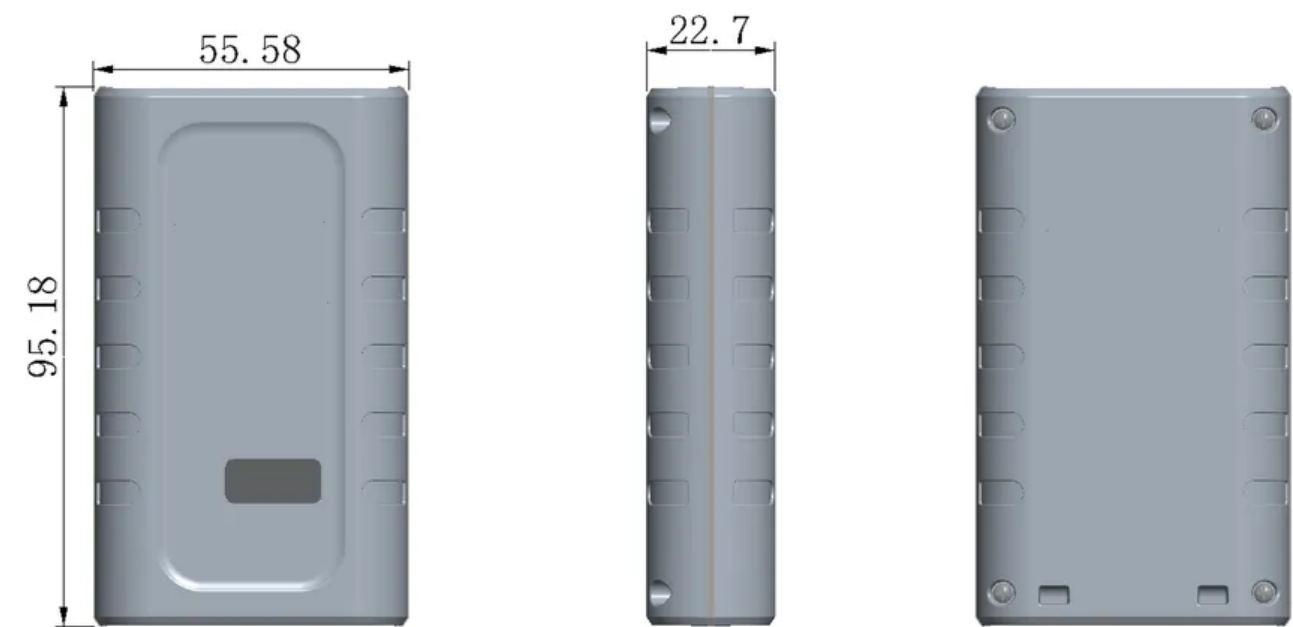
CELLULAR CONNECTIVITY

Radio access	LTE Cat M1 · LTE Cat NB2 · EGPRS (2G)
LPWA module	Quectel BG95-M3, 3GPP Release 14
LTE-M bands	B1 / B2 / B3 / B4 / B5 / B8 / B12 / B13 / B18 / B19 / B20 / B25 / B26 / B27 / B28 / B66 / B85
NB-IoT bands	B1 / B2 / B3 / B4 / B5 / B8 / B12 / B13 / B18 / B19 / B20 / B25 / B28 / B66 / B71 / B85
EGPRS bands	850 / 900 / 1800 / 1900 MHz
Shipping configuration	Module band capability shown; shipping band list and roaming profile are locked per project and destination market
Reporting protocol	EELINK Device Protocol V2.3 over TCP / UDP · SMS and USB command channels
Module approvals	GCF · CE · FCC · IC · KC · JATE / TELEC · RCM plus major-operator approvals, held at module level (Quectel BG95-M3). End-device certification is confirmed per project.

POSITIONING	
GNSS constellations	GPS · GLONASS · Galileo · BeiDou · QZSS (L1, 1575 MHz)
Receiver architecture	Dedicated GNSS receiver, separate from the cellular modem — positioning and reporting run concurrently
GNSS sensitivity	−165 dBm tracking · −145 dBm acquisition
Time to first fix	Hot 5 s · warm 10 s · cold 40 s, typical open sky
Assisted positioning	Wi-Fi access-point scan · cell-ID fallback for indoor and stacked-container conditions
Antennas	LTE bracket antenna · GNSS ceramic patch · on-board 2.4 GHz
Position accuracy	CONFIRMED PER PROJECT — published with validation evidence per configuration

SENSING, ALARMS & INTERFACES	
On-board sensing	Temperature · humidity · ambient light · three-axis accelerometer · barometric pressure
External sensor	PT1000 platinum RTD probe (optional)
Alarms	Temperature & humidity thresholds · light exposure · shock / drop / vibration · geofence · low battery
Sensor accuracy & calibration	CONFIRMED PER PROJECT
Wired interfaces	USB Type-C (configuration, charging, firmware) · UART (AT commands, transparent mode)
Short range	Bluetooth LE · 2.4 GHz Wi-Fi (scan-assisted positioning)
Firmware update	Cellular OTA across a deployed fleet · wired via USB

Mechanical drawing



Reporting profiles (reference)

PROFILE · LOGGING / UPLOADS	
Long-haul ocean or rail	30 min logging · 2 uploads per day
Standard road freight	15 min logging · 4 uploads per day
Actively monitored lane	10 min logging · 12 uploads per day
High-resolution / pharma	5 min logging · 24 uploads per day
Validated runtime	RUNTIME PENDING — released per profile after bench validation of the production configuration. Eelink does not publish modelled battery life as a specification.

Figures marked CONFIRMED PER PROJECT are locked during project definition and released with validation evidence. This datasheet is preliminary and intended for evaluation; the configuration sheet delivered with your order takes precedence.