WORKFORCE MANAGEMENT · POSITIONING · ATTENDANCE

Smart Workforce Management Solution

Multi-Mode Positioning · Attendance · Area Control

A lightweight wearable terminal for sanitation, gate duty and temporary park staff

Making every person locatable, clockable, manageable and controllable





Solution Overview | 2026

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Solution Overview

SOLUTION OVERVIEW

A workforce management solution for outdoor and park operations: it brings people locations, attendance status and area events onto one platform, making every shift, clock-in and patrol traceable.

Wearable Terminal

Multi-mode positioning
One-touch clock-in / status

→

Connectivity

4G Cat.1
Standard protocol reporting

→

Management Platform

Positioning / attendance
Fences / reports / dashboard

→

Applications

Sanitation / gate duty
Temporary staff & review

Visible
Real-time workforce distribution

Accurate
Objective clock-in records

Controllable
Instant out-of-area & absence alerts

Traceable
Hours & track history

Management Needs

MANAGEMENT NEEDS

Frontline Challenges

- Staff spread across multiple sites; attendance is hard to verify in real time
- High turnover of temporary workers; paper registers are slow and error-prone
- Outdoor work crosses zones, with little objective data on who is on site
- Absence and out-of-area exceptions are detected late

Management Challenges

- Multiple sites and teams lack a unified visual view of personnel
- Attendance relies on manual consolidation; hour calculations are tedious
- Work boundaries and gate areas are hard to control without instant alerts
- Patrol and hour records are missing, leaving no basis for review or settlement

Goal: every person locatable, attendance recordable, areas controllable, hours traceable.

Overall Architecture

END-TO-END ARCHITECTURE

Application	Sanitation	Gate Duty	Temporary Staff	Management Dashboard	
Platform	Positioning	Attendance	Geofence	Staff Records	Reports
Connectivity	4G Cat.1	Standard Protocol	Live / Sleep Reporting		
Terminal	TM922A Terminal	Multi-Mode Positioning	One-Touch Clock-In	Status Reporting	Low-Battery Alert

A decoupled terminal–connectivity–platform–application architecture, configurable on demand and ready to scale with workforce needs.

Platform Capabilities

PLATFORM CAPABILITIES

People

- Real-time Positioning
- Multi-Mode Positioning
- Online Status
- One-Touch Clock-In
- Remote Upgrade

Management

- Staff Distribution
- Team Management
- Attendance Stats
- Geofence
- Dashboard

Attendance

- Clock In
- Clock Out
- Hourly Stats
- Exception Alerts
- Data Export

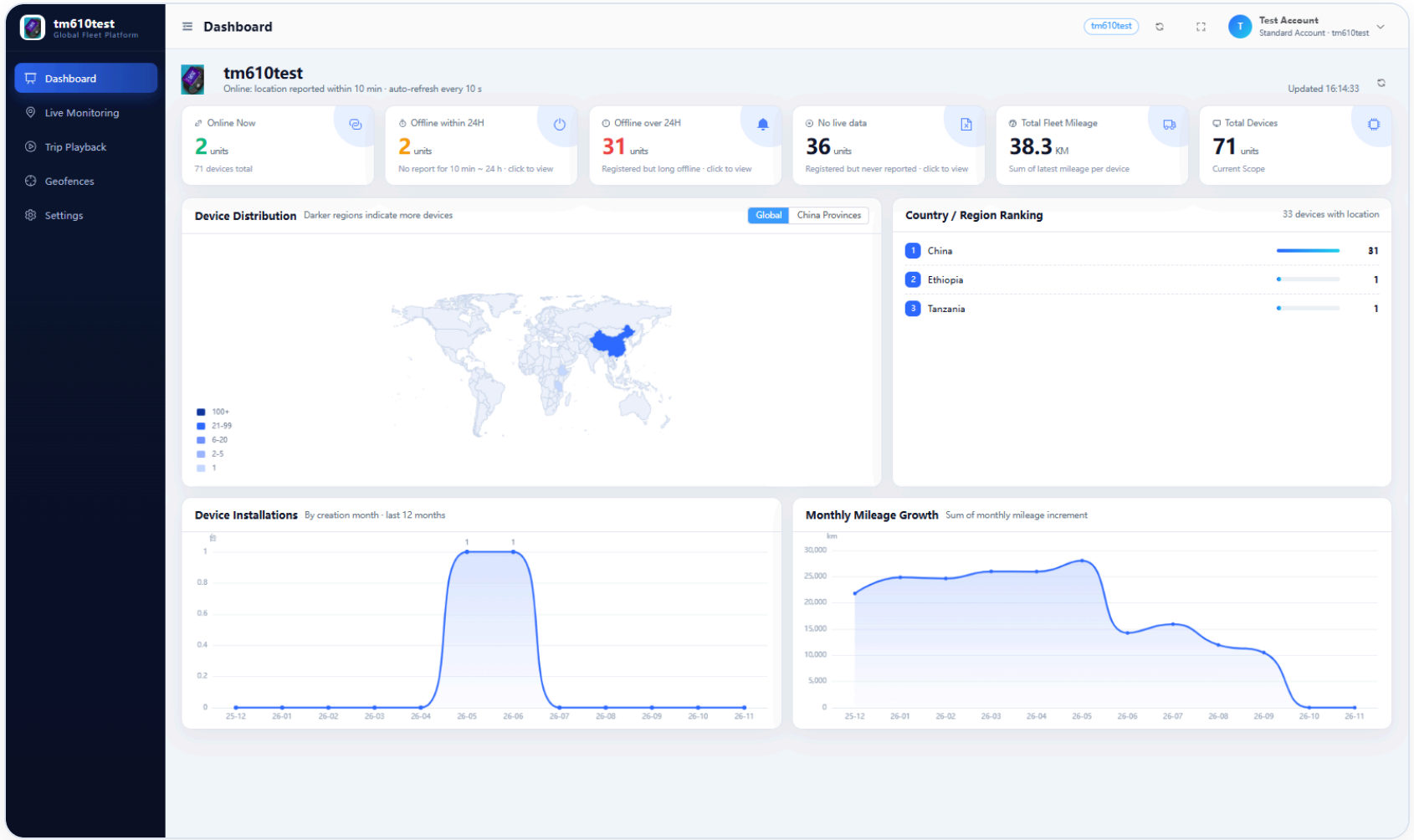
Control

- Out-of-Area Alert
- Absence Alert
- Track Playback
- Area Ranking
- Report Review

The platform is organised around “People – Management – Attendance – Control”, covering outdoor operations and park workforce management.

Workforce Dashboard

WORKFORCE DASHBOARD

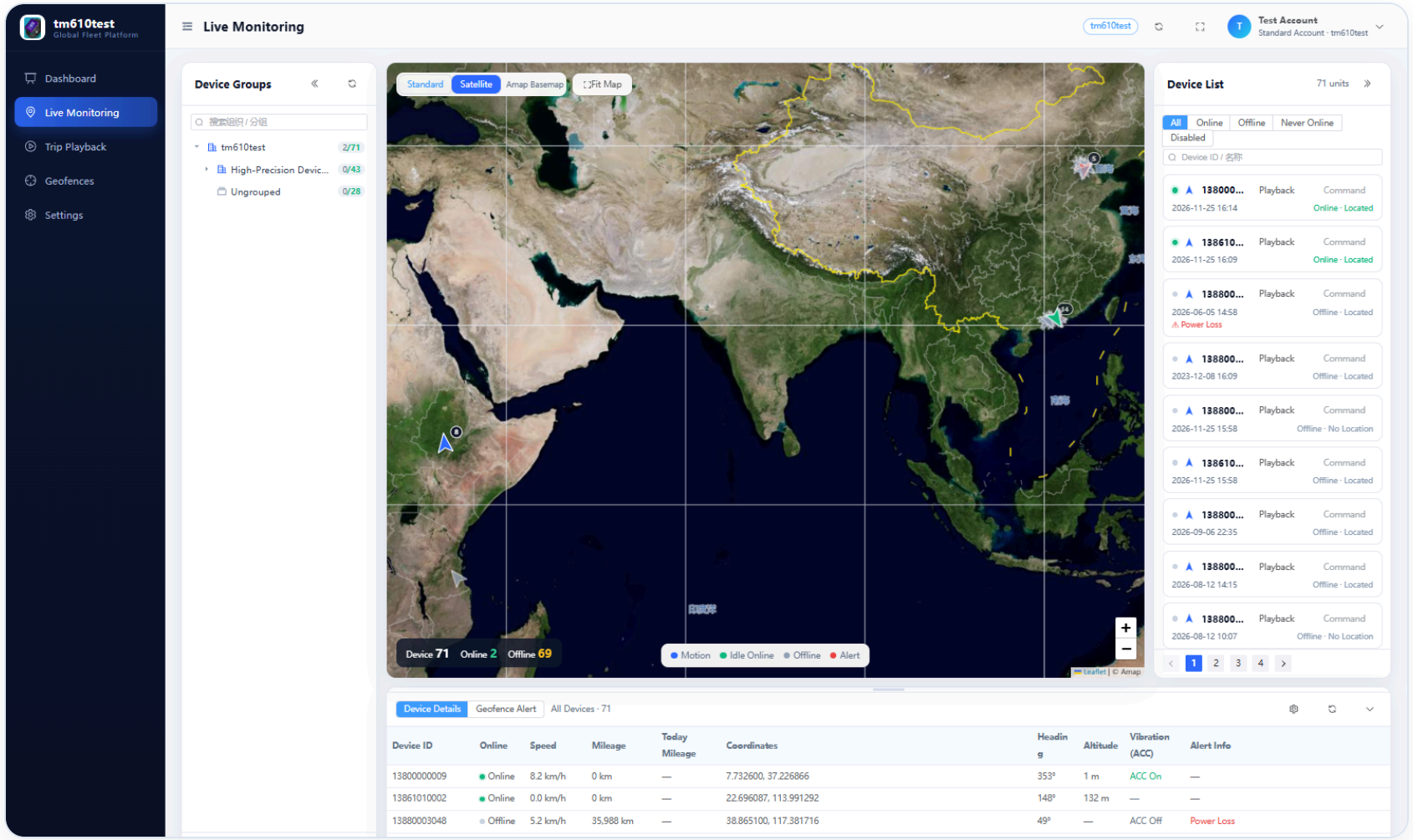


Key Points

- Online / offline staff counts, clear attendance at a glance
- Geographic distribution and area ranking, multi-level views
- Growth and activity trends to support shift planning

Live Monitoring

LIVE MONITORING

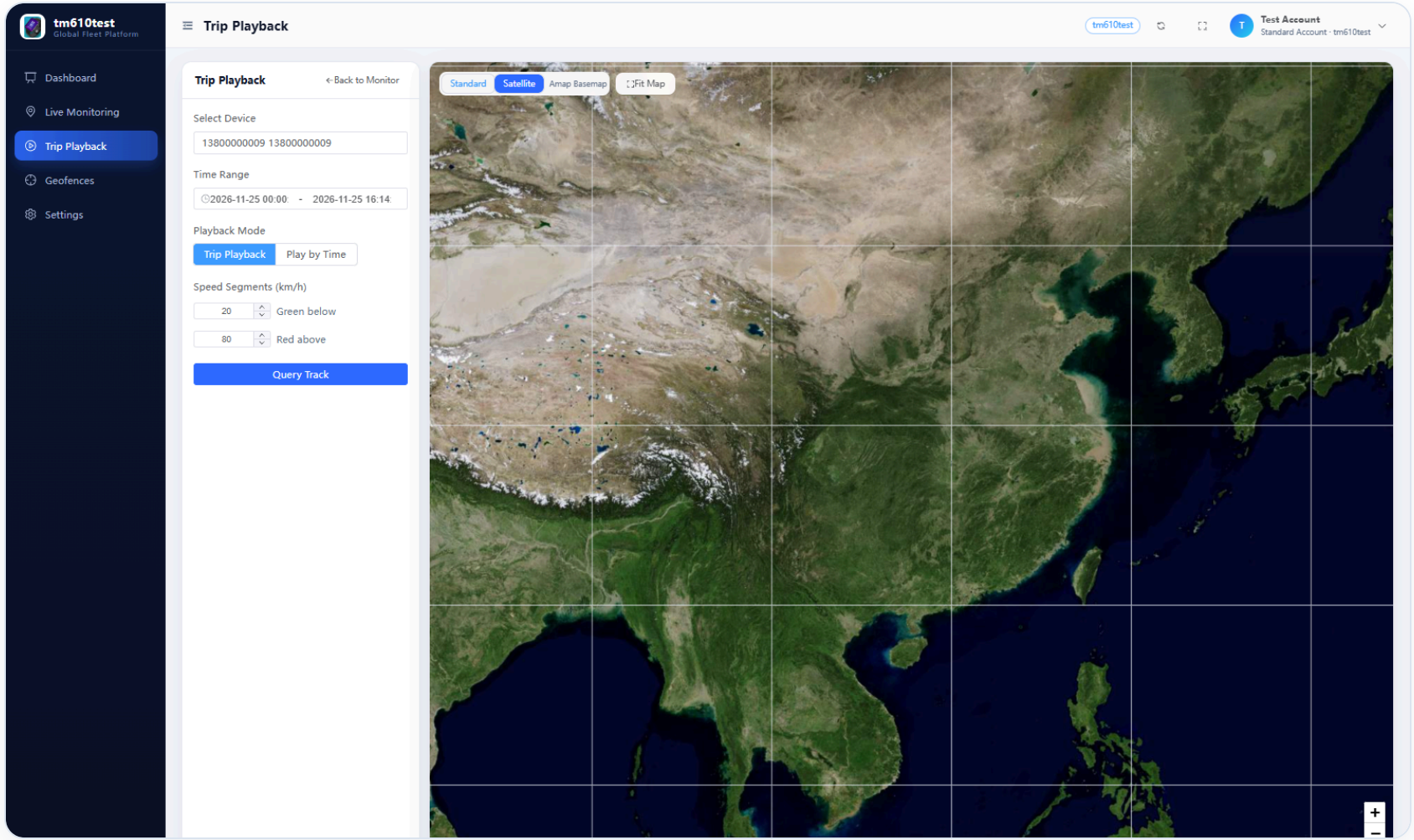


Key Points

- Staff markers overlaid on the map for an instant workforce overview
- List with online status, location time and coordinates
- Filter by organisation / team and search by status

Track Playback

TRACK PLAYBACK

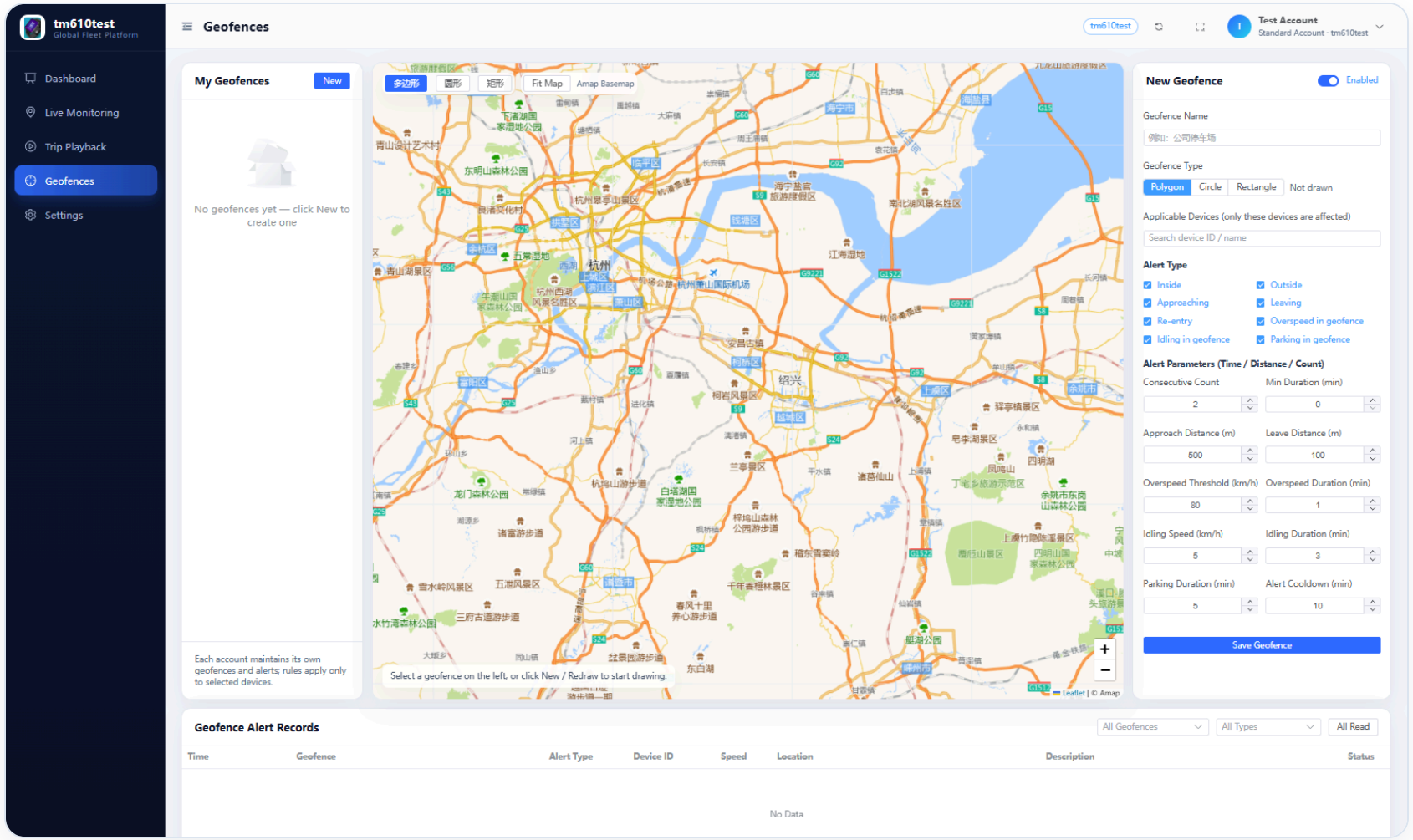


Key Points

- Replay work or patrol routes by person and time range
- Segmented colouring and secondary playback
- For hour verification, area patrols and review

Geofence & Settings

GEOFENCE & SETTINGS



Key Points

- Circle / polygon / district fences with entry-exit alerts
- Searchable fence alarm records with multiple filters
- Central configuration of organisation and platform parameters

Wearable Terminal

TM922A TERMINAL



TM922A Smart Wearable Terminal

A lightweight wearable terminal for sanitation, gate duty and temporary park staff. It combines GPS / Beidou multi-mode positioning, 4G Cat.1, one-touch clock-in and status reporting in an all-day device that connects every person to one management platform.

- Multi-Mode Positioning
- 4G Cat.1
- One-Touch Clock-In
- Status Reporting
- Low-Battery Alert
- IP65 Waterproof

Five Core Capabilities

FIVE CORE CAPABILITIES

Five capabilities that matter most in outdoor and park workforce management, turning “visible, accurate, controllable” into every shift and task.

01

Multi-Mode Positioning

GPS / Beidou / AGPS / WiFi positioning, accuracy better than 10 m.

Stable positioning outdoors, in parks and near buildings; staff distribution is visible and tracks traceable.

02

One-Touch Clock-In

A short press records clock-in / clock-out with time and location uploaded automatically.

Replaces paper registers, reduces proxy or missed sign-ins, and makes hour statistics objective and settlement-ready.

03

Unified Staff Management

Organisations, teams and staff profiles managed centrally with live online status.

Temporary staff can be onboarded quickly; cross-area deployment and distribution are clear at a glance.

04

Geofence Area Control

Circle / polygon / district fences with instant entry-exit alerts.

Work boundaries and gate areas can be set; out-of-area and absence exceptions are detected immediately.

05

Data & Reports

Multi-dimensional statistics and export for attendance, hours, tracks and alerts.

Generate reports in one click to support settlement, performance review and operations optimisation.

Specifications

SPECIFICATIONS

Positioning & Communication

Positioning	GPS + Beidou + AGPS + WiFi
Accuracy	< 10 m
Network	4G Cat.1 (LTE FDD + TDD)
Antenna	25×25×2 mm ceramic
Report Interval	Active 30 s / Sleep 15 min
Protocol	Standard positioning data

Appearance & Endurance

Dimensions	86 × 41 × 31 mm
Weight	approx. 87 g
Material	PC / stainless clip
Waterproof	IP65
Battery	1700 mAh / 3.7 V
Operating Time	~12 h (locate + clock-in) / 24 h (locate)

c['spec3']

Clock-In	Short-press LED button for clock-in / clock-out
Status Prompt	Indicator LED + platform status alert
Exception Alert	Out-of-area / absence / low battery
Remote Config	Parameter delivery and remote upgrade
Data Interface	Standard positioning data, platform-ready
Protection	IP65 waterproof and dustproof

One-Touch Operation

Power On	Hold power 3 s; indicator on
Clock In	Short-press LED; platform records time and location
Clock Out	Press LED again; platform records time and location
Status Reporting	Location and online status reported at set intervals
Low-Battery Alert	Platform receives an alert when battery is low
Remote Upgrade	Configuration and firmware delivered from platform

Use Cases

USE CASES

Sanitation Operations

Routes and staff distribution visible in real time; clock-ins record hours automatically; fences protect work boundaries.

Gate Duty

On-duty status and arrival time recorded automatically; out-of-area or absence alerts; patrol tracks replayable.

Temporary Park Staff

Temporary workers onboarded quickly; attendance and area permissions managed together; mobile staff clearly tracked.

Area Patrol & Review

Replay patrol routes by person and time; analyse attendance and hours to support review and operations improvement.

Demo Platform

DEMO PLATFORM

W

Workforce Management Platform

Positioning · Attendance · Area Control

Demo Environment

URL	**http://dw.tm-device.com/**
Account	**13880000339**
Password	**123456**
Org Code	**PLATFORM**

First login requires the organisation code and a CAPTCHA as prompted. Demo data is for feature experience only.

Every person, visible, manageable and controllable

From wearable terminals to the management platform, building a management foundation for outdoor operations and park staff.

Multi-Mode Positioning | Attendance | Clock-In | Workforce Management | Area Control