



TAS-Z6 ROBOTIC TOTAL STATION

High Precision · High Efficiency · Silent Robotic Surveying

SILENT PRECISION FOR INTELLIGENT SURVEYING

TAS - Z6 Robotic Total Station, equipped with a powerful Android-based intelligent system, offers a user-friendly experience, enabling quick operation and enhancing work efficiency. Its Power Search and Automatic Target Recognition (ATR) functions are remarkable.

Power Search can find prisms in any direction within 300 meters in 15 seconds, while ATR ensures precise aiming, allowing for accurate measurements within 1200 meters. This enables single-man operation and continuous monitoring. TAS-Z6 is a smart choice for power, performance, and productivity which essentially optimize the time and cost with utmost accuracy.

✓ Power Search

Power Search delivers high-speed target recognition with 360°horizontal and 20°vertical coverage, scanning and detecting prisms within 300 m across the entire worksite.

✓ ATR

Automatically recognizes and measures the prism at distances up to 1200 m. Performs a precise square-spiral search within a preset window, systematically scanning the area until the prism is detected.

✓ Torque Drive

Rotating at up to 180°/s, Ultra-quiet servo system for smooth, distraction-free surveying.

✓ Prism Track

Prism Lock tracks and locks onto a moving prism at speeds up to 20°/s, allowing the instrument to follow dynamic targets seamlessly.



Silent Robotic Operation

Ultra-quiet servo system for smooth, distraction-free surveying



Power Search & ATR

High-speed target search and automatic tracking for maximum efficiency



True One-Man Surveying

Full robotic control enables single-operator fieldwork



High-Speed Torque-Drive Servo

Direct-drive design for rapid response and ultra-smooth motion



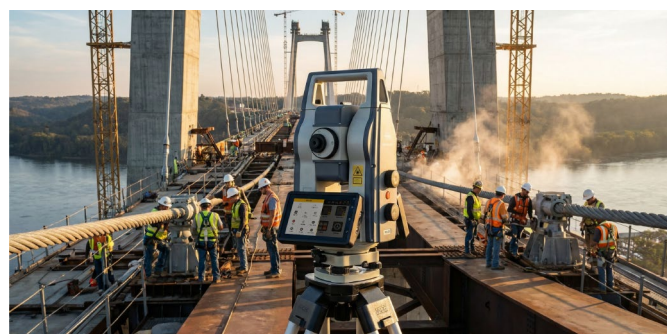
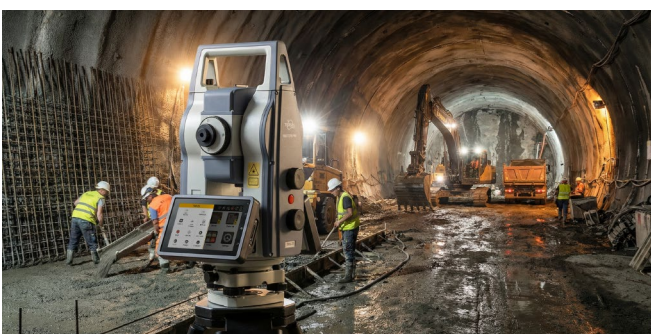
Integrated Camera & Guide Light

Visual guidance for fast, intuitive aiming and staking



Up to 12 h Battery Life

Reliable all-day operation without interruptions

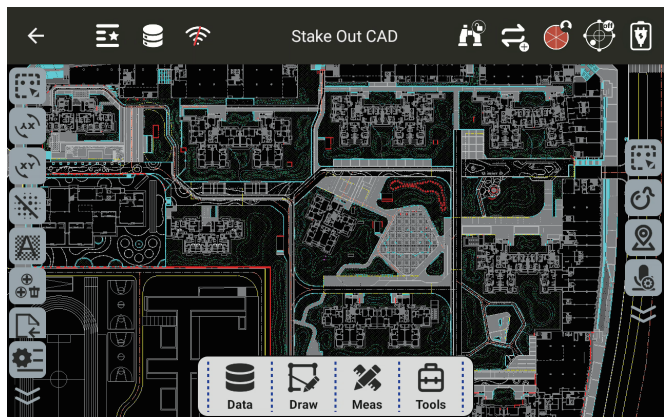
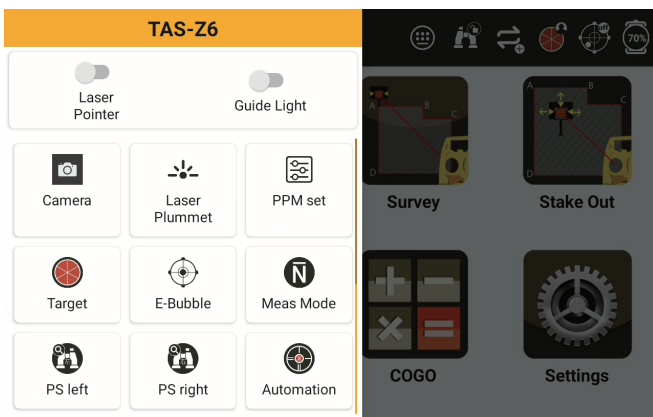


SOFTWARE

Single-Operator Measurement Mode

TAS-Z6 features integrated control software with long-range Bluetooth (up to 600 m) and WAN connectivity for unlimited-distance, single-operator workflows.

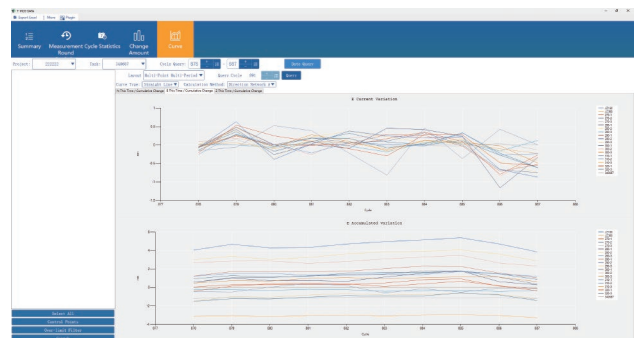
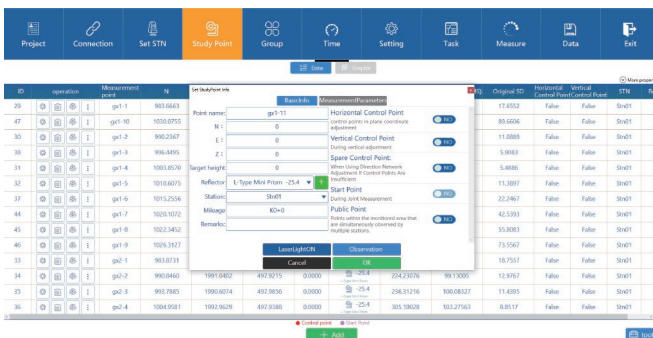
- **Faster Operation:** Toolbar access to measurement modes, automated settings, and PS/ATR commands.
- **Powerful Capabilities:** Open CAD drawings, sketch on-screen, and use road measurement tools.
- **Comfortable Experience:** Stream real-time camera view and remotely control horizontal/vertical rotation.
- **Smarter control:** Real-time viewing of the robotic total station's camera feed on the controller enables point-and-aim operation.



TAS-MOS

TAS-MOS is a dedicated automated monitoring software designed to work seamlessly with the TAS-Z6 robotic total station. Together they form a fully automated monitoring system that streamlines the entire workflow — from intelligent measurement to real-time analysis and remote control — enhancing efficiency and reliability in monitoring applications.

- **Automatic Learning** – Adapts to site conditions for optimized performance.
- **Automatic Measurement** – Conducts scheduled and repetitive measurements without manual intervention.
- **Automatic Data Processing** – Processes raw data instantly with consistent accuracy.
- **Automatic Plotting** – Generates real-time displacement charts and trends.



APPLICATIONS



Civil Construction

Automated stakeout, elevation measurement, and structural positioning for construction project.



Monitoring

Deformation and safety monitoring for infrastructure, construction sites, and sensitive environments.



Tunneling & Mining

Alignment control, excavation monitoring, and deformation analysis in tunneling and mining operations.



Energy & Industrial Projects

Geometric measurement, equipment alignment, and installation control for energy and industrial facilities.



Infrastructure & Transportation

Precise positioning and verification for roads, bridges, railways, and city infrastructure.



Smart Construction & Digital Sites

BIM-enabled digital construction sites, integrated with UAVs, laser scanning, and IoT for real-time project monitoring.

TECHNICAL SPECIFICATIONS

Distance Measurement

Range	Standard prism mode: 4000 m
	Reflector: 1200 m
	Non-prism ⁽¹⁾ : 1000 m
Accuracy	Standard prism mode: 1 mm + 1 ppm
	Reflector: 3 mm + 2 ppm

Angle Measurement

Method	Absolute encoding technology
Angle Display (least count)	0.1"
Accuracy	1"
Detection Method	
	Horizontal & Vertical disc: four-way detection

Memory

Internal Memory	32 GB ROM / 3 GB RAM
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Robotic Functions

Power Search (PS) ⁽²⁾	1.5 to 300 m
Automatic Target Recognition (ATR) ⁽³⁾	1.5 to 1200 m
Long-range Bluetooth Communication	Up to 600 m
Automatic Tracking and Re-locking	Support

Physical

Weight	9.5 kg
Dimension	430 x 255 x 235 mm

Environmental Specifications

Operating Temperature	- 20°C to + 50°C
Storage Temperature	- 40°C to + 70°C
Waterproof / Dustproof	IP66

Imaging System

Wide-angle Camera Sensor	5 MP HD wide-angle camera
Touch-to-aim Visual Measurement	Support
Optical Zoom	30 ×

Operating System & Communication

Operating System	Android 9.0
Wireless Communication	Bluetooth, Wi-Fi
Interfaces	USB, Micro-USB, RS232

Battery & Power

Battery	6400 mAh
Continuous Working Hours	6 h x 2
External Input Voltage	12 V to 30 V

Note:

(1) Distance measurement performed without a reflector, using direct laser reflection from the target surface.

(2) High-speed prism search function that automatically scans a wide area to rapidly detect and lock onto the target prism.

(3) Automatic detection, recognition, and tracking of the target prism for continuous measurement and robotic operation.



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Descriptions, specifications and related materials are subject to change.

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