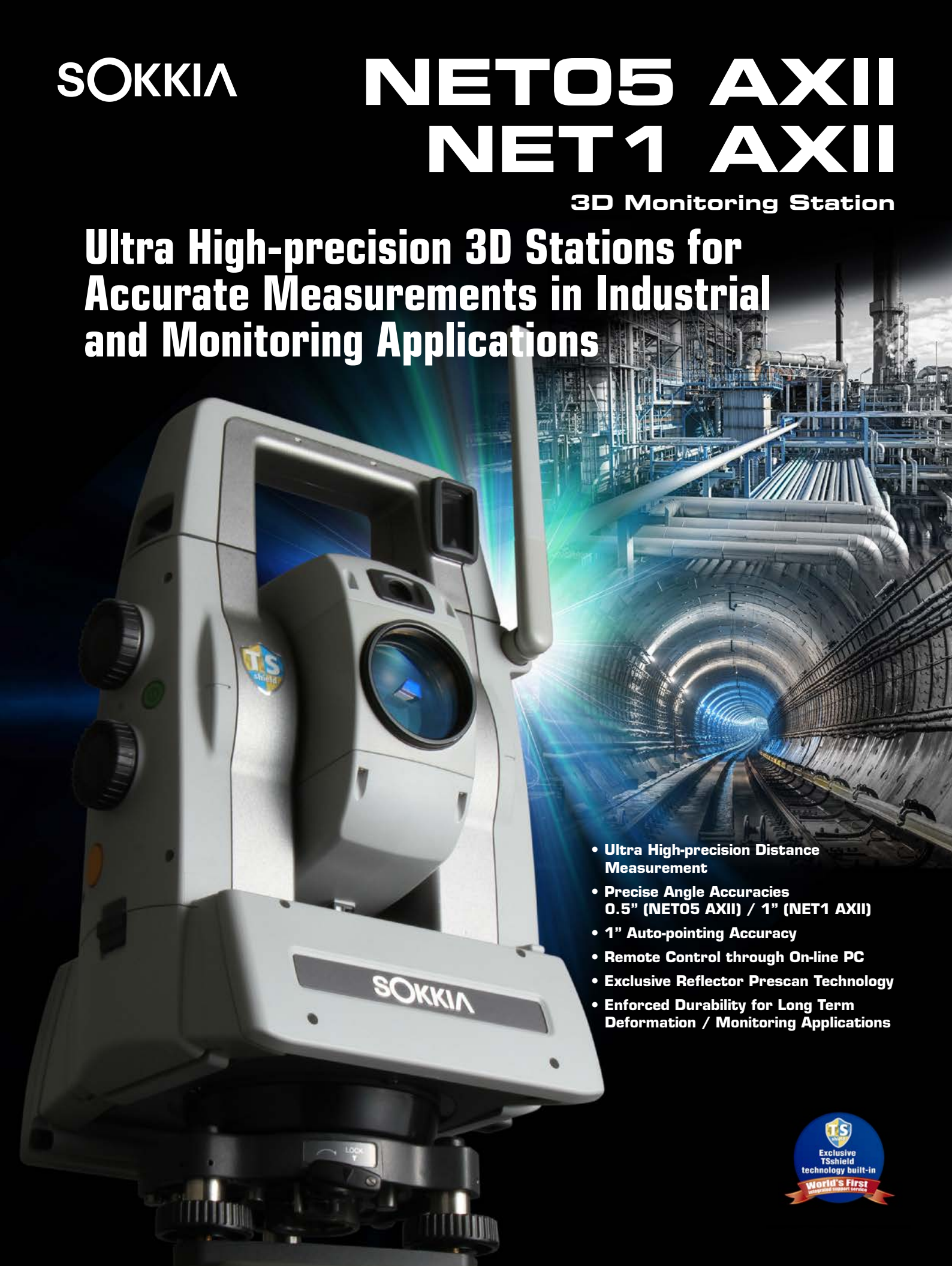
SOKKIA

NET05 AXII
NET1 AXII

3D Monitoring Station

Ultra High-precision 3D Stations for Accurate Measurements in Industrial and Monitoring Applications



- Ultra High-precision Distance Measurement
- Precise Angle Accuracies 0.5" (NET05 AXII) / 1" (NET1 AXII)
- 1" Auto-pointing Accuracy
- Remote Control through On-line PC
- Exclusive Reflector Prescan Technology
- Enforced Durability for Long Term Deformation / Monitoring Applications

Exclusive TSshield technology built-in

World's First

Ultra High-precision 3D Stations for Accurate Measurements

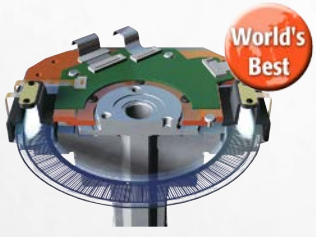
Monitoring

Engineering structures, such as buildings, dams, tunnels and bridges, can always be affected by movement caused by excavation, heavy construction and piling placement – in addition to natural hazards, such as harsh weather, soil movement, change of ground water level or any number of other factors. The NET Series provides superior measuring precision and is equipped with environmental protection and various functions necessary in high-precision monitoring applications.

Industrial Measurement

The NET05 AXII, when used with reflective sheet targets, can achieve sub-millimeter accuracy. It is excellent for measuring the shape and alignment of large-scale structures, such as various plants and bridges, as well as for precise measurement of ships, railroad cars and airplanes.

Advanced Angle Measurement System



The Sokkia's IACS (Independent Angle Calibration System) technology provides "best in class" angle accuracy.

First Order Survey

The NET Series offers high-precision angle accuracy (NET05 AXII: 0.5", NET1 AXII: 1"), which can be applied for a wide range of precise measurements. The high-precision 3D station is equipped with an automatic tracking system and can be configured by remote control.

Ultra High-precision Distance Measurement

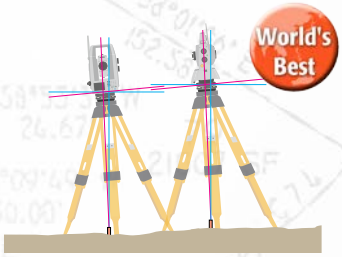
NET05 AXII

Using reflective sheet targets, the NET05 AXII provides sub-millimeter accuracy (0.5 mm + 1 ppm) in a range of up to 200 m.

NET1 AXII

The reflectorless measurement range of the NET1 AXII model is doubled to 400 m (1,310 ft.) with Kodak white side (90% reflective).

Adjusting Mechanism for Angle Measuring



The biaxial level compensation mechanism has a wide adjusting range of ±6', which is twice as wide as the previous models. This enables highly accurate measuring performance.

Superior Auto-Pointing Accuracy

The auto-pointing accuracy* with the standard prism is 1" (1 mm at 200 m), and 4" (1 mm at 50 m) with a reflective sheet.

* Auto-pointing accuracy is verified using the methods specified by ISO 17123-3.

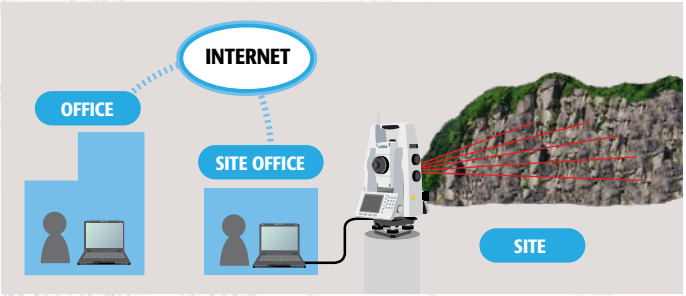
IP65 Dust and Water Protection Rating

The system provides protection from dust, hard rain, as well as other inclement weather condtions, and operates extreme temperature ranging from -20°C to 50°C.

Remote Operation by On-line System

A library of special control commands can be provided in order to establish remote operation functionality.

*Please contact us for the details of the special commands.



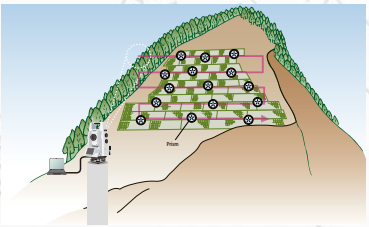
TSshield™

Every NET total station is equipped with a telematics-based multifunction communications module, providing the ultimate security and maintenance capabilities for the investment. If an activated instrument is lost or stolen, a coded signal can be sent to the instrument to disable it – making the total station secure anywhere in the world. Software updates and firmware enhancements are available through daily connectivity with the cloud-based Sokkia servers.

Reflector Prescan Function for Monitoring Setup*

This function is ideal for structural monitoring applications to make initial setup easy and fast. The NET Series automatically searches within the predetermined area to quickly measure the reflectors as initial positions for subsequent routine measurements. This function works even in low-light or dark conditions where the reflectors cannot be clearly seen by the human eye.

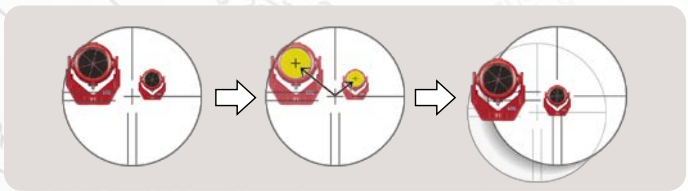
* This function is not included in on-board software, and needs to be implemented in the user's own system using opened command.



Advanced Auto-pointing Algorithm for Multiple Prisms*

The NET Series incorporates an advanced auto-pointing algorithm* optimized for monitoring applications. The NET Series automatically sights the prism closest to the telescope center regardless of the distance from the instrument. This works even if multiple prisms or other reflective objects are in the field-of-view. The feature dramatically enhances the reliability in periodic monitoring of predetermined prism locations.

* With a regular auto-pointing algorithm, the instrument normally sights the nearest target with the strongest reflection.



Target Illumination

Prisms or sheet targets can be located easily in dim lighting conditions using the high-intensity white LED built into the telescope.

Upgraded Durability

Rugged components, built for 24/7 monitoring applications.

Communication Port

Weatherproof multi-port maintains IP65 protection even with an RS-232C data cable or an external battery connected.

Bluetooth®

Standard *Bluetooth* (Class 1) enables communication over a long distance, up to 600 m*

* When used with RC-PR5 Remote Controller. The range can be subject to change depending on the obstacles between the instruments or any environmental radio conditions.

Easy Access to USB Port

Easily import/export data from the office to the field in seconds.

Control Panel

Control panel with touch-screen display and alpha/numeric keyboard.

NET05 AXII / NET1 AXII

3D Monitoring Station

SPECIFICATIONS

Model		NET05 AXII	NET1 AXII
Telescope			
Magnification / Resolving power		30x / 2.5"	30x / 2.5"
Objective aperture: 45 mm (1.8 in.) (50 mm (2.0 in.) for EDM), Image: Erect, Field of view: 1°30' (26 m / 1,000 m), Minimum focus: 1.3 m (4.3 ft.),			
Angle Measurement			
Display resolutions (selectable)		0.1" / 0.5" (0.00002 / 0.0001 gon, 0.0005 / 0.002 mil)	
Accuracy (ISO 17123-3:2001)		0.5"	1"
Dual-axis compensator / Collimation compensation		Dual-axis liquid tilt sensor, working range: ±6' / Collimation compensation available	
IACS (Independent Angle Calibration System)		Provided	
Distance Measurement			
Laser output*1		Reflectorless mode: Class 3R / Prism / sheet mode: Class 1	
Measuring range (under good conditions*2)	One prism*3	1.3 to 3,500 m (4.3 to 11,480 ft.)	
	Reflective sheet RS50N-R*4	1.3 to 200 m (4.3 to 640 ft.)	
	Reflectorless*5	0.5 to 100 m (1.64 to 320 ft.)	0.5 to 400 m (1.64 to 1,310 ft.)
Minimum display		0.00001 m / 0.0001 m (0.0001 ft. / 0.001 ft., 1/64 in. / 1/16 in.)	0.0001 m / 0.001 m (0.001 ft. / 0.01 ft., 1/16 in. / 1/8 in.)
Accuracy (ISO 17123-4:2001) (D=measuring distance in mm)	Prism*3	(0.8 + 1 ppm x D) mm	(1 + 1 ppm x D) mm
	Reflective sheet*4	(0.5 + 1 ppm x D) mm	(1 + 1 ppm x D) mm
	Reflectorless*5	(1 + 1 ppm x D) mm	(2 + 1 ppm x D) mm*6
Measuring time (Fine mode)*7		0.9s (initial 1.5s)	
Auto-Collimating			
Working range (under avarage conditions*8)	One prism*3	1.3 to 1,000 m (4.3 to 3,280 ft.)	
	Reflective sheet RS50N-R*9	5 to 50 m (16 to 160 ft.)	
Sighting accuracy (ISO 17123-3)	Prism*3	1" (1 mm at 200 m)	
	Reflective sheet*9	4" (1 mm at 50 m)	
OS, Interface and Data Management			
Operating system		Windows® Embedded CE 6.0	
Display*10		3.5", transmissive TFT QVGA color LCD with LED backlight, Touch screen, Automatic brightness control	
Keyboard*10		25 keys with backlight	
Trigger key		On right of instrument support	
Data storage		Internal: 500 MB (includes memory for program files) / External: USB flash memory up to 8 GB	
Interface		Serial RS-232C, USB 2.0 (Type A / mini B)	
Bluetooth®*11		Bluetooth Class 1, Ver.2.1+EDR, Operating range: up to 600 m (1,960 ft.)*12	
General			
Target searchlight		LED (white), Blink / On, selectable	
Laser-pointer		Coaxial red laser using EDM beam, ON / OFF, selectable	
Levels		Graphic: 6' (Inner Circle) / Circular level: 10' / 2 mm	
Optical plummet		Magnification: 3x, Minimum focus: 0.3 m (11.8 in.) from tribrach bottom	
Dust and water protection / Operating temperature		IP65 (IEC 60529:2001) / -20ºC to 50ºC (-4 to 122ºF)	
Size with handle*10 (w x d x h)		Single face: 230 x 196 x 393 mm / Dual face: 230 x 207 x 393 mm	
Weight with battery and tribrach*10		Single face: 6.8 kg (15.0 lb) / Dual face: 7.0 kg (15.4 lb)	
Motor type / Rotation Speed		DC motor drive / 85°/s	
Power supply			
BDC70 Standard Battery		7.2V, 5.2Ah / Li-ion rechargeable battery	
Operating time (20ºC)*13		Approx. 4 hours*5	
External battery (option)		BDC60: approx.7 hours / BDC61: approx.14.5 hours	

*1 IEC60825-1:Ed.2.0:2007 / FDA CDRH 21 CFR Part 1040.10 and 11 *2 Good conditions: No haze, visibility about 40km (25 miles), overcast, no scintillation *3 Face the prism to the instrument during the measurement with the distance at 10 m or less *4 Face the reflective sheet target to the instrument *5 With Kodak Gray Card White Side (90% reflective). When brightness on measured surface is 30,000 lx. or less. Reflectorless range/accuracy may vary according to measuring objects, observation situations and environmental conditions *6 Measuring range: 0.5 to 200 m *7 Fastest time under good atmospheric conditions*2, no compensation, EDM ALC at appropriate setting, slope distance *8 Average conditions: Slight haze, visibility about 20 km (12 miles), sunny periods, weak scintillation *9 Figures when the Auto Pointing beam strikes within 15° of the reflective sheet target *10 Control panel and keyboard location may vary depending on region or model *11 Usage approval of Bluetooth wireless technology varies according to country. Please consult your local office or representative in advance *12 Paired with RC-PR5, with instrument height to be more than 1.5 m, no obstacles (like building structures, trees or vehicles) causing interrupting/reflecting radio wave, few sources of radio emissions/interference in the near vicinity of the instrument, no rain *13 Fine distance measurement (single) using Auto Pointing, repeated every 30 seconds

Standard Accessories

- NET total station
- Battery charger (CDC68A)
- Stylus pen
- Lens hood
- USB stick
- Screwdriver
- Adjusting pin x2
- Cleaning cloth
- Precautions for safe operation
- Export restriction card
- Battery x2 (BDC70)
- Power cable
- Lens cap
- Tool pouch
- Carry case
- Lens brush
- Vinyl cover
- Quick start manual
- Laser caution sign-board
- Carry strap

SOKKIA

SOKKIA CORPORATION

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Your local Authorized Dealer is:

Specifications subject to change without notice

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