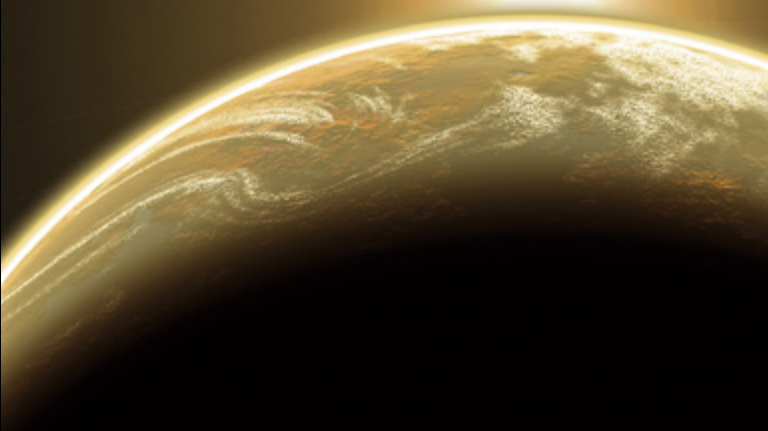


# NIKON

---

## SURVEY PRODUCT CATALOG



[WWW.NIKONPOSITIONING.COM](http://WWW.NIKONPOSITIONING.COM)



# Contents

## Nikon Products

Nikon Total Stations . . . . .	1–10
Nikon Theodolites. . . . .	11–14
Nikon Auto Levels. . . . .	15–18

---

## Accessories

Nikon Total Station Accessories. . . . .	19
Nikon Theodolite and Auto Level Accessories . . . . .	20

# Total Stations

# Nivo C Series



- Survey Pro software on-board
- Windows CE touch-screen
- High quality Nikon optics
- Fast, accurate EDM
- Prism and reflectorless measurements
- Easy-to-use 2nd face keypad
- Hot swappable batteries
- Compact, rugged, and lightweight
- Cable-free Bluetooth®
- Optional laser plummet

Nikon's next generation total station is the Nivo™ Total Station, available in two exciting lines: the Nivo C Series and Nivo M Series.

Both of the Nivo series are the absolute leaders for go anywhere measurement tools. Compact in size and lightweight, they are convenient to carry over long distances. All Nivo models are supported with legendary Nikon high clarity optics, allowing clearer images in bright and low light conditions, making measurements easy and reducing eye stress.

The fast, long range EDM measures in both prism and reflectorless modes. All models measure precisely to objects up to 300 m away without the need for a prism.\*

Nivo models come standard with a traditional optical plummet which can be upgraded to a laser plummet.

*\*Objects with high reflectivity (90%).*

The Nivo C Series is designed with a feature-packed Windows® CE touch-screen interface. Field application software functions are supported by the world class Spectra Precision® Survey Pro™ field software for all your surveying and construction measurement needs.

All Nivo C Series solutions are designed with high productivity in mind, including a dual face display for efficient high precision angle and distance measurements. Work all day long with endless power using hot swappable batteries, you'll never need to worry about interrupting your workflow to change a battery again.

To assist you with the multitudes of data needs of the 21st century, the Nivo C Series includes:

- Support for USB memory sticks
- Wireless cable-free Bluetooth connections to external data collectors
- A USB High-speed data transfer port

The Nivo C Series is available in 2", 3" and 5" models to meet your specific accuracy needs.

# Total Stations

# Nivo M Series



- High quality Nikon optics
- Intuitive powerful software
- Fast, accurate EDM
- Prism and reflectorless measurements
- Easy-to-use keypad
- Hot swappable batteries
- Compact, rugged, and lightweight
- Optional cable-free Bluetooth
- Optional laser plummet

Nikon's next generation total station is Nivo and it is available in two exciting lines: the Nivo C Series and Nivo M Series.

Both of the Nivo series are the absolute leaders for go anywhere measurement tools. Compact in size and lightweight, they are convenient to carry over long distances. All Nivo models are supported with legendary Nikon high clarity optics, allowing clearer images in bright and low light conditions, making measurements easy and reducing eye stress.

The fast, long range EDM measures in both prism and reflectorless modes. Measure precisely to objects up to 300 m away without the need for a prism.\*

Nivo M Series models can support optional Bluetooth communications to external data collectors. In addition all models come standard with a traditional optical plummet which can be upgraded to a laser plummet.

*\* Objects with high reflectivity (90%).*

Nikon has combined simplicity and quality together in perfect harmony to produce the Nikon M Series.

These compact and efficient products use a field-proven Nikon interface and field software that is quick to learn and easy-to-use.

Supporting both prism-based and reflectorless technologies, you can be assured of accurate repeatable measurements all day long to any point.

The distance measurements are fast and flexible with the Nivo M Series. Use the MSR1 & MSR2 keys to separately configure different prism or reflectorless measurement parameters, eliminating time switching between measurement modes.

Nivo M Series field software highlights include:

- A complete set of CoGo functions
- Simple data management of files
- Quick-coding for convenient one-button data collection of point features and your raw target data.

The ultimate in quality for hardworking conditions all day, every day.

The Nivo M Series is available in 2", 3" and 5" models to meet your specific accuracy needs.

SPECIFICATIONS	NIVO 2.C	NIVO 3.C	NIVO 5.C
<b>ANGLE MEASUREMENT</b> Minimum increment: (Degree, Gon, MIL/6400)	Degree: 1/5/10° Gon: 0.2/1/2 mgon MIL/6400: 0.005/0.02/0.05 mil 2°/0.5 mgon	Degree: 1/5/10° Gon: 0.2/1/2 mgon MIL/6400: 0.005/0.02/0.05 mil 3°/1 mgon	Degree: 1/5/10° Gon: 0.2/1/2 mgon MIL/6400: 0.005/0.02/0.05 mil 5°/1.5 mgon
<b>TELESCOPE</b> Minimum focusing distance	30× (18×/36× with optional eyepieces) 40 mm (1.6 in) 1.5 m (4.9 ft)	30× (18×/36× with optional eyepieces) 45 mm (1.8 in) 1.5 m (4.9 ft)	30× (18×/36× with optional eyepieces) 45 mm (1.8 in) 1.5 m (4.9 ft)
<b>TELESCOPE</b> Magnification	30× (18×/36× with optional eyepieces)	30× (18×/36× with optional eyepieces)	30× (18×/36× with optional eyepieces)
<b>TELESCOPE</b> Effective diameter of objective	40 mm (1.6 in)	45 mm (1.8 in)	45 mm (1.8 in)
<b>TELESCOPE</b> Minimum focusing distance	1.5 m (4.9 ft)	1.5 m (4.9 ft)	1.5 m (4.9 ft)
<b>TELESCOPE</b> Beetle illumination	Yes	Yes	Yes
<b>DISTANCE MEASUREMENT</b> Reflectorless mode (White target) <sup>1</sup>	1.5 m to 300 m (4.9 ft to 984 ft)	1.5 m to 300 m (4.9 ft to 984 ft)	1.5 m to 300 m (4.9 ft to 984 ft)
<b>DISTANCE MEASUREMENT</b> Good conditions	3,000 m (9,843 ft)	5,000 m (16,404 ft)	5,000 m (16,404 ft)
<b>DISTANCE MEASUREMENT</b> With single prism	(2+2 ppm × D) mm	(3+2 ppm × D) mm	(3+2 ppm × D) mm
<b>DISTANCE MEASUREMENT</b> Accuracy (Prism/Precise mode) <sup>2</sup>	(3+2 ppm × D) mm	(3+2 ppm × D) mm	(3+2 ppm × D) mm
<b>DISTANCE MEASUREMENT</b> Accuracy (Reflectorless/Precise mode) <sup>2</sup>	(3+2 ppm × D) mm	(3+2 ppm × D) mm	(3+2 ppm × D) mm
<b>MEASURING INTERVAL<sup>3</sup></b>			
Prism mode	Precise mode Normal mode	Precise mode Normal mode	Precise mode Normal mode
Reflectorless mode	Precise mode Normal mode	Precise mode Normal mode	Precise mode Normal mode
Least count	Precise mode Normal mode	Precise mode Normal mode	Precise mode Normal mode
<b>ENVIRONMENTAL SPECIFICATIONS</b>			
<b>OPERATING TEMPERATURE RANGE</b>	-20 °C to +50 °C (-4 °F to +122 °F)	-20 °C to +50 °C (-4 °F to +122 °F)	-20 °C to +50 °C (-4 °F to +122 °F)
<b>ATMOSPHERIC CORRECTION</b>			
Temperature range	-40 °C to +60 °C (-40 °F to +140 °F)	-40 °C to +60 °C (-40 °F to +140 °F)	-40 °C to +60 °C (-40 °F to +140 °F)
Barometric pressure			
	400 mmHg to 999 mmHg 533 hPa to 1,332 hPa 15.8 inHg to 39.3 inHg	400 mmHg to 999 mmHg 533 hPa to 1,332 hPa 15.8 inHg to 39.3 inHg	400 mmHg to 999 mmHg 533 hPa to 1,332 hPa 15.8 inHg to 39.3 inHg
<b>TILT SENSOR</b>	Dual axis	Dual axis	Dual axis
<b>LEVEL VIALS</b>			
Sensitivity of Circular level vial	10/2 mm	10/2 mm	10/2 mm
<b>OPTICAL PLUMMET</b> Magnification	3×	3×	3×
<b>DISPLAY</b>			
Face 1	OVGA, 16 bit color, TFT LCD, backlit (320x240 pixel)	OVGA, 16 bit color, TFT LCD, backlit (320x240 pixel)	OVGA, 16 bit color, TFT LCD, backlit (320x240 pixel)
Face 2	Backlit, graphic LCD (128x64 pixel)	Backlit, graphic LCD (128x64 pixel)	Backlit, graphic LCD (128x64 pixel)
<b>MEMORY</b>	128 MB RAM, 128 MB Flash memory	128 MB RAM, 128 MB Flash memory	128 MB RAM, 128 MB Flash memory
<b>DIMENSIONS (W x D x H)</b>	149 mm x 145 mm x 306 mm (5.8 in x 5.7 in x 12.0 in)	149 mm x 145 mm x 306 mm (5.8 in x 5.7 in x 12.0 in)	149 mm x 145 mm x 306 mm (5.8 in x 5.7 in x 12.0 in)
<b>WEIGHT (APPROX.)</b>			
Main unit (without battery)	3.9 kg (8.6 lb)	3.8 kg (8.4 lb)	3.8 kg (8.4 lb)
Battery	0.1 kg (0.02 lb)	0.1 kg (0.02 lb)	0.1 kg (0.02 lb)
Carrying case	2.3 kg (5.1 lb)	2.3 kg (5.1 lb)	2.3 kg (5.1 lb)
<b>INTERNAL LITHIUM BATTERY (x2)</b> Operating time <sup>4</sup>	approx. 12 hours (continuous distance/angle measurement) approx. 26 hours (distance/angle measurement every 30 seconds) approx. 28 hours (continuous angle measurement)	approx. 7.5 hours (continuous distance/angle measurement) approx. 16 hours (distance/angle measurement every 30 seconds) approx. 20 hours (continuous angle measurement)	approx. 7.5 hours (continuous distance/angle measurement) approx. 16 hours (distance/angle measurement every 30 seconds) approx. 20 hours (continuous angle measurement)
<b>OUTPUT VOLTAGE</b>	3.8V DC	3.8V DC	3.8V DC
<b>RECHARGING TIME</b>	4 hours	4 hours	4 hours
<b>COMMUNICATION PORTS</b>	1 x serial (RS-232C), 2 x USB (host and client)	1 x serial (RS-232C), 2 x USB (host and client)	1 x serial (RS-232C), 2 x USB (host and client)
<b>WIRELESS COMMUNICATIONS</b>	Integrated Bluetooth	Integrated Bluetooth	Integrated Bluetooth

1. White objects with high reflectivity (60% 90%). Measuring distance may vary depending on targets and measuring conditions.

2. (3+3 ppm × D) mm -20 °C to -10 °C, +40 °C to +50 °C (-4 °F to +14 °F, +0.4 °F to +12.2 °F).

3. Measuring time may vary depending on measuring distance and conditions. For the initial measurement, it may take a few more seconds.

4. Battery life specification at 25 °C (77 °F). Operation time may be shorter in low temperatures and if the battery is not new.

SPECIFICATIONS	NIVO 2.M	NIVO 3.M	NIVO 5.M
<b>ANGLE MEASUREMENT</b> Minimum increment: (Degree, Gon, MIL/6400)	Degree: 1/5/10° Gon: 0.2/1/2 mgon MIL/6400: 0.005/0.02/0.05 mil 2°/0.5 mgon	Degree: 1/5/10° Gon: 0.2/1/2 mgon MIL/6400: 0.005/0.02/0.05 mil 3°/1 mgon	Degree: 1/5/10° Gon: 0.2/1/2 mgon MIL/6400: 0.005/0.02/0.05 mil 5°/1.5 mgon
<b>TELESCOPE</b> DIN 18723 accuracy (horizontal and vertical)	30× (18×/36× with optional eyepieces)	30× (18×/36× with optional eyepieces)	30× (18×/36× with optional eyepieces)
Magnification	40 mm (1.6 in)	45 mm (1.8 in)	45 mm (1.8 in)
Effective diameter of objective	1.5 m (4.9 ft)	1.5 m (4.9 ft)	1.5 m (4.9 ft)
Minimum focusing distance	No	No	No
Beetle illumination	No	No	No
<b>DISTANCE MEASUREMENT</b> Reflectorless mode (White target) <sup>1</sup> Good conditions With single prism Accuracy (Prism/Precise mode) <sup>2</sup> Accuracy (Reflectorless/Precise mode) <sup>2</sup>	1.5 m to 300 m (4.9 ft to 984 ft) 3,000 m (9,843 ft) (2+2 ppm × D) mm (3+2 ppm × D) mm	1.5 m to 300 m (4.9 ft to 984 ft) 5,000 m (16,404 ft) (3+2 ppm × D) mm (3+2 ppm × D) mm	1.5 m to 300 m (4.9 ft to 984 ft) 5,000 m (16,404 ft) (3+2 ppm × D) mm (3+2 ppm × D) mm
<b>MEASURING INTERVAL<sup>3</sup></b>			
Prism mode	1.6 sec.	1.5 sec.	1.5 sec.
Precise mode	0.8 sec.	0.8 sec.	0.8 sec.
Normal mode	2.1 sec.	1.8 sec.	1.8 sec.
Reflectorless mode	1.2 sec.	1.0 sec.	1.0 sec.
Normal mode	1 mm (0.002 ft)	1 mm (0.002 ft)	1 mm (0.002 ft)
Precise mode	10 mm (0.02 ft)	10 mm (0.02 ft)	10 mm (0.02 ft)
Normal mode			
<b>ENVIRONMENTAL SPECIFICATIONS</b>			
<b>OPERATING TEMPERATURE RANGE</b> Temperature range	-20 °C to +50 °C (-4 °F to +122 °F) -40 °C to +60 °C (-40 °F to +140 °F)	-20 °C to +50 °C (-4 °F to +122 °F) -40 °C to +60 °C (-40 °F to +140 °F)	-20 °C to +50 °C (-4 °F to +122 °F) -40 °C to +60 °C (-40 °F to +140 °F)
<b>ATMOSPHERIC CORRECTION</b>			
Barometric pressure	400 mmHg to 999 mmHg 533 hPa to 1,332 hPa 15.8 inHg to 39.3 inHg	400 mmHg to 999 mmHg 533 hPa to 1,332 hPa 15.8 inHg to 39.3 inHg	400 mmHg to 999 mmHg 533 hPa to 1,332 hPa 15.8 inHg to 39.3 inHg
<b>TILT SENSOR</b>	Dual axis	Dual axis	Dual axis
<b>LEVEL VIALS</b>			
Sensitivity of Circular level vial	10/2 mm	10/2 mm	10/2 mm
<b>OPTICAL PLUMMET Magnification</b>	3×	3×	3×
<b>DISPLAY</b>	Single side, backlit, graphic LCD (128×64 pixel)	Single side, backlit, graphic LCD (128×64 pixel)	Single side, backlit, graphic LCD (128×64 pixel)
<b>POINT MEMORY</b>	10,000 records	10,000 records	10,000 records
<b>DIMENSIONS (W X D X H)</b>	149 mm x 145 mm x 306 mm (5.8 in x 5.7 in x 12.0 in)	149 mm x 145 mm x 306 mm (5.8 in x 5.7 in x 12.0 in)	149 mm x 145 mm x 306 mm (5.8 in x 5.7 in x 12.0 in)
<b>WEIGHT (APPROX...)</b>			
Main unit (without battery)	3.8 kg (8.4 lb)	3.6 kg (8.0 lb)	3.6 kg (8.0 lb)
Battery	0.1 kg (0.2 lb)	0.1 kg (0.2 lb)	0.1 kg (0.2 lb)
Carrying case	2.3 kg (5.1 lb)	2.3 kg (5.1 lb)	2.3 kg (5.1 lb)
<b>INTERNAL LITHIUM BATTERY (x2)</b> Operating time <sup>4</sup>	approx. 19 hours (continuous distance/angle measurement)	approx. 10 hours (continuous distance/angle measurement)	approx. 10 hours (continuous distance/angle measurement)
Output voltage	approx. 57 hours	approx. 26 hours	approx. 26 hours
Recharging time	(distance/angle measurement every 30 seconds) approx. 62 hours (continuous angle measurement)	(distance/angle measurement every 30 seconds) approx. 31 hours (continuous angle measurement)	(distance/angle measurement every 30 seconds) approx. 31 hours (continuous angle measurement)
<b>COMMUNICATION PORTS</b>	3.8V DC 4 hours	3.8V DC 4 hours	3.8V DC 4 hours
<b>WIRELESS COMMUNICATIONS</b>	1 x serial (RS-232C) Optional integrated Bluetooth	1 x serial (RS-232C) Optional integrated Bluetooth	1 x serial (RS-232C) Optional integrated Bluetooth

1. White objects with high reflectivity (95% 90%). Measuring distance may vary depending on targets and measuring conditions.

2. (3+3 ppm × D) mm, -20 °C to -10 °C, +40 °C to +50 °C (-4 °F to +14 °F, +0.4 °F to +12.2 °F).

3. Measuring time may vary depending on measuring distance and conditions. For the initial measurement, it may take a few more seconds.

4. Battery life specification at 25 °C (77 °F). Operation time may be shorter in low temperatures and if the battery is not new.



# Theodolites



- Four models to choose from: NE-100/101/102/103
- Accurate, affordable, easy-to-use
- Ergonomic keypad
- One-touch function keys
- Large, backlit LCD display
- NE-100/101 models are water-resistant
- NE-102/103 models are waterproof
- 5", 7" and 10" accuracies available

Designed for general construction and survey applications, Nikon NE-100 Series electronic digital theodolites give you accurate measurements in an affordable, easy-to-use platform. Each of the four models has an ergonomic keypad with one-touch keys for all functions, and a large backlit LCD display helps you work productively in the field.

You can instantly convert vertical angles to percent of grade, reset the horizontal angle to zero and lock the horizontal angle displayed on the LCD while you reposition or repeat a measurement. Angle accuracies differ between the models. The NE-100 offers 10" angle accuracy, while the NE-101 offers 7". Both the NE-102 and 103 models offer 5" angle accuracy with the NE-103 featuring vertical axis compensation.

NE-100 series theodolites feature five easy-to-use, one-touch keys: four to perform all common functions and a fifth to control the backlit LCD display and reticle illumination. NE-100 Series theodolites feature a built-in reticle illuminator and backlit LCD display that allow you to work inside buildings as well as in

tunnels, mines and other environments with little or no light. These features also come in handy during low light conditions outdoors, such as near dawn or dusk.

Unlike other instruments that require specialized batteries, NE-100 Series theodolites use six standard AA alkaline batteries. What's more, those batteries can power all models for about 48 hours. A three-level bar graph on the LCD screen displays remaining battery power.

With the Nikon NE-100 Series theodolite models, you can count on reliable performance in tough conditions. The NE-100/101 models have an IP54 rating, meaning water can splash on them from any direction with no harmful effects. Nikon NE-102/103 models have a higher rating of IP56 which means they're waterproof and dustproof.

SPECIFICATIONS		NE-100	NE-101	NE-102	NE-103
<b>ANGLE MEASUREMENT</b>					
Reading system		photoelectric incremental encoder	photoelectric incremental encoder	photoelectric incremental encoder	photoelectric incremental encoder
Circle diameter		79 mm (3.1 in)	79 mm (3.1 in)	79 mm (3.1 in)	79 mm (3.1 in)
Unit of reading		degree/gon/mil	degree/gon/mil	degree/gon/mil	degree/gon/mil
Minimum digital reading		10/20"; 2.5 mgon, 0.05/0.1 mil	5/10"; 1/2 mgon, 0.02/0.05 mil	5/10"; 1/2 mgon, 0.02/0.05 mil	5/10"; 1/2 mgon, 0.02/0.05 mil
Accuracy (DIN 18723)		10"/3 mgon	7"/2 mgon	5"/1 mgon	5"/1 mgon
<b>TELESCOPE</b>					
Effective diameter of objective		45 mm (1.8 in)	45 mm (1.8 in)	45 mm (1.8 in)	45 mm (1.8 in)
Magnification		30x	30x	30x	30x
Image		erect	erect	erect	erect
Field of view		1°20' (2.3 m @ 100 m/2.3 ft @ 100 ft)	1°20' (2.3 m @ 100 m/2.3 ft @ 100 ft)	1°20' (2.3 m @ 100 m/2.3 ft @ 100 ft)	1°20' (2.3 m @ 100 m/2.3 ft @ 100 ft)
Minimum focusing distance		0.7 m (2.3 ft)	0.7 m (2.3 ft)	0.7 m (2.3 ft)	0.7 m (2.3 ft)
Stadia multiplier constant		100	100	100	100
Stadia additive constant		0	0	0	0
Reticle illuminator		Yes	Yes	Yes	Yes
<b>AUTOMATIC VERTICAL COMPENSATOR</b>					
Type		—	—	—	liquid-electric detection
Working range		—	—	—	±3' (out-of-range warning provided)
<b>DISPLAY/KEYPAD</b>					
Front					
Type		dot-matrix LCD (20 characters x 2 lines)	dot-matrix LCD (20 characters x 2 lines)	dot-matrix LCD (20 characters x 2 lines)	dot-matrix LCD (20 characters x 2 lines)
Backlight		1-level illumination	1-level illumination	1-level illumination	1-level illumination
Keypad		5 buttons	5 buttons	5 buttons	5 buttons
Rear					
Type		—	—	—	dot-matrix LCD (20 characters x 2 lines)
Backlight		—	—	—	1-level illumination
Keypad		—	—	—	5 buttons
<b>OPTICAL PLUMMET</b>					
Magnification		2.2x	2.2x	3x	3x
Field of view		5°	5°	5°	5°
Focus range		1.3 m (4.3 ft) fixed	1.3 m (4.3 ft) fixed	0.5 m (1.6 ft) to infinity	0.5 m (1.6 ft) to infinity
<b>LEVEL SENSITIVITY</b>					
Plate level		60"/2 mm	40"/2 mm	30"/2 mm	30"/2 mm
Circular level		10"/2 mm	10"/2 mm	10"/2 mm	10"/2 mm
LEVELING BASE Type		detachable	detachable	detachable	detachable
<b>AMBIENT TEMPERATURE RANGE</b>					
		-20 to 50°C (-4 to 122°F)	-20 to 50°C (-4 to 122°F)	-20 to 50°C (-4 to 122°F)	-20 to 50°C (-4 to 122°F)
<b>ENVIRONMENTAL RATING</b>					
		IP54	IP54	IP56	IP56
<b>DIMENSIONS Instrument</b>					
		153.5 x 172 x 334 mm (6.0 x 6.8 x 13.1 in)	153.5 x 172 x 334 mm (6.0 x 6.8 x 13.1 in)	153.5 x 172 x 334 mm (6.0 x 6.8 x 13.1 in)	153.5 x 172 x 334 mm (6.0 x 6.8 x 13.1 in)
<b>WEIGHT Instrument</b>					
		4.5 kg (9.8 lb)	4.5 kg (9.8 lb)	4.5 kg (9.8 lb)	4.6 kg (10.1 lb)
<b>Carrying case</b>					
		2.5 kg (5.4 lb)	2.5 kg (5.4 lb)	3.9 kg (8.6 lb)	3.9 kg (8.6 lb)
<b>POWER SUPPLY</b>					
Battery type		1.5V alkaline AA x 6	1.5V alkaline AA x 6	1.5V AA Alkaline x 6	1.5V AA Alkaline x 6
Continuous operating time (at 68°F/20°C)		48 hours	48 hours	48 hours	48 hours

# Auto Levels

# AP/AC/AX Series



- Three models to choose from: AP-8/AC-2S/AX-2S
- Compact and lightweight
- Water-resistant construction
- Magnetic-dampened automatic compensator
- Horizontal tangent knobs with unlimited range
- Smooth, precise pointing and angular measurement
- Detachable eyepiece lens

AP/AC/AX Series auto levels are easy to set up and easy-to-use. All three models can attach to both flat- and spherical-head tripods. Horizontal tangent knobs with an unlimited range ensure smooth, precise pointing and angular measurement, and you can operate them with either hand. The detachable eyepiece lens lets you use an optional diagonal eyepiece prism for working in extremely close or steep quarters.

Nikon optics effectively let in more light, so you see brighter, sharper images-especially in low-light conditions. The AP-8 model auto level features a 28x high-magnification telescope, the AC-2S has a 24x telescope, and the AX-2S has a 20x telescope. All three models offer minimum focusing down to 2.46 ft (0.75 m) for better performance in tight spots or on steep slopes.

SPECIFICATIONS	AP-8	AC-2S	AX-2S
<b>TELESCOPE</b>			
Tube length	190 mm (7.5 in)	190 mm (7.5 in)	190 mm (7.5 in)
Image	erect	erect	erect
Magnification	28x	24x	20x
Effective diameter of objective lens	30 mm (1.2 in)	30 mm (1.2 in)	30 mm (1.2 in)
Field of view	1°30' (2.6 ft @ 100 ft)	1°30' (2.6 ft @ 100 ft)	1°30' (2.6 ft @ 100 ft)
Minimum focusing distance	.75 m (2.46 ft)	.75 m (2.46 ft)	.75 m (2.46 ft)
Stadia ratio	1:100	1:100	1:100
Stadia additive constant:	0	0	0
<b>LEVEL VIAL SENSITIVITY</b>			
Circular level	10'/2 mm	10'/2 mm	10'/2 mm
<b>STANDARD DEVIATION</b> (1 km double-run leveling)			
Without micrometer	±1.5 mm	±2.0 mm	±2.5 mm
<b>AUTOMATIC COMPENSATOR</b>			
Type	wire-hung, magnetic damper	wire-hung, magnetic damper	wire-hung, magnetic damper
Compensation range	±16'	±16'	±16'
Setting accuracy	±0.5"	±0.5"	±0.5"
<b>HORIZONTAL CIRCLE</b>			
Diameter of circle	110 mm (4.3 in)	110 mm (4.3 in)	110 mm (4.3 in)
Minimum increment	1°/1 g	1°/1 g	1°/1 g
Reading estimation	0.1°/0.1g	0.1°/0.1g	0.1°/0.1g
<b>DIMENSIONS</b>			
Instrument (L x H x W)	190 x 128 x 123 mm (7.5 x 5.0 x 4.8 in)	190 x 128 x 123 mm (7.5 x 5.0 x 4.8 in)	190 x 128 x 123 mm (7.5 x 5.0 x 4.8 in)
Carrying case	292 x 170 x 163 mm (11.5 x 6.7 x 6.4 in)	292 x 170 x 163 mm (11.5 x 6.7 x 6.4 in)	292 x 170 x 163 mm (11.5 x 6.7 x 6.4 in)
<b>WEIGHT</b>			
Instrument	1.25 kg (2.8 lb)	1.25 kg (2.8 lb)	1.25 kg (2.8 lb)
Carrying case	1.2 kg (2.7 lb)	1.2 kg (2.7 lb)	1.2 kg (2.7 lb)



- Four models to choose from: AS-2/2C, AE7/7C
- Compact and lightweight
- Waterproof construction
- Automatic air-dampened compensator
- Standard optical sight lens
- Powerful telescopes with improved minimum focusing
- Carrying case, adjusting pins and lens cap included

Nikon AS/AE Series auto levels feature waterproof, nitrogen-filled, high-power telescopes that help you make precise measurements even in the wettest conditions. They feature a unique automatic air-dampened compensator to prevent magnetic interference, and an endless horizontal fine drive to ensure smooth, precise pointing and angular measurement. AS/AE Series auto levels are easy to set up and easy-to-use. All four models can attach to both flat- and spherical-head tripods, and the standard optical sight lens helps you find your target quickly, easily and accurately. A mirror with a pentaprism lets you view the circular bubble as an erect image during setup and sighting.

SPECIFICATIONS	AS-2/2C	AE-7/7C
<b>TELESCOPE</b>		
Tube length	259 mm (10.2 in)	220 mm (8.7 in)
Image	erect	erect
Magnification	34x	30x
Effective diameter of objective lens	45 mm (1.8 in)	40 mm (1.6 in)
Field of view	1°20' (2.3 ft @ 100 ft)	1°30' (2.6 ft @ 100 ft)
Minimum focusing distance	1.0 m (3.28 ft)	0.3 m (0.98 ft)
Stadia ratio	1:100	1:100
Stadia additive constant:	0	0
Resolution power	2.5"	3"
<b>LEVEL VIAL SENSITIVITY</b>		
Circular level	10'/2 mm	10'/2 mm
<b>STANDARD DEVIATION</b> (1 km double-run leveling)		
Without micrometer	±0.8 mm	±1.0 mm
With micrometer	±0.4 mm	±0.45 mm
<b>AUTOMATIC COMPENSATOR</b>		
Type	wire-hung, air damper	wire-hung, air damper
Compensation range	±12'	±16'
Setting accuracy	±0.3"	±0.35"
<b>HORIZONTAL CIRCLE</b>		
Diameter of circle	80 mm (3.2 in) (AS-2C only)	118 mm (4.6 in) (AE-7C only)
Minimum increment	1°/1 g	1°/1 g
Reading estimation:	1'/1 cg	0.1°/0.1 g
<b>DIMENSIONS</b>		
Instrument (L x H x W)	259 x 136 x 142 mm (10.2 x 5.4 x 5.6 in)	220 x 136 x 142 mm (8.7 x 5.4 x 5.6 in)
Carrying case	379 x 195 x 197 mm (14.9 x 7.7 x 7.8 in)	379 x 195 x 197 mm (14.9 x 7.7 x 7.8 in)
<b>WEIGHT</b>		
Instrument	1.8 kg (4.0 lb)/1.9 kg (4.2 lb)	1.7 kg (3.7 lb)
Carrying case	1.8 kg (4.0 lb)/1.9 kg (4.2 lb)	1.8 kg (4.0 lb)/1.9 kg (4.2 lb)



## TOTAL STATION ACCESSORIES

### DATA TRANSFER CABLES

**RS-232C: Cable TS to PC (9-pin)**  
Connects Nikon total station with PC through serial port

**Mini USB Cable**  
Connects Nikon total station with PC through USB port

### POWER SUPPLIES

**Nivo C & M Series**  
On-board Li Ion battery  
Dual battery charger  
AC adaptor for battery charger

**DTM-322**  
(4) NiMH AA batteries  
4 x AA battery charger  
Input cord and adaptor

### PRISMS AND EYEPIECES

**Diagonal Eyepiece Prism (Erect Image)**  
For telescope (black body)

**Solar Filter (52 mm) Objective**

**Low-Power Eyepiece Lens**  
Mag. 18x with Nivo C & M Series  
Mag. 21x with DTM-322

**High-Power Eyepiece Lens**  
Mag. 36x with Nivo C & M Series  
Mag. 41x with DTM-322

**Lens Cap (Plastic snap-on)**

### INSTRUMENT CASES

Plastic case for Nivo C & M Series  
Plastic case for DTM-322

## TRIPODS AND RANGE POLES

### TRIPODS

Wooden, Heavy Duty, Round Head Tripod  
Aluminum, Heavy Duty, Quick Clamp Tripod  
Advanced Fiberglass Composite, Heavy Duty  
Tri-Max Tripod

### RANGE POLES

2 m Aluminum Range Pole  
2 m Carbon Fiber Range Pole  
2 m Carbon Fiber Snap-Lock Range Pole

## ELECTRONIC THEODOLITE ACCESSORIES

### TRIBRACHS

**Tribrach Type W20**  
With circular level (10'/2mm)  
Without optical plummet

**Tribrach Type W-21**  
With optical plummet

**Tribrach: Optical Plummet Twist Focus**  
With optical plummet twist focus

### INSTRUMENT CASES

Plastic Instrument Case for  
NE-100/101/102/103

### PRISMS AND EYEPIECES

**Diagonal Eyepiece Prism (Erect Image)**  
Used for steep sighting, plumbing and when using the instrument in confined areas  
For Main Telescope of Theodolite NE-100 Series

**Low-Power Eyepiece Lens**  
18X when attached to NE-100 Series

### High-Power Eyepiece Lens

36x when attached to NE-100 Series Theodolite  
**Tubular Compass Adapter for NE-100 Series**  
To mount HEC21001 Tubular Compass onto NE-100 Series  
Carrying Handle

## AUTOMATIC LEVEL ACCESSORIES

### PRISMS AND EYEPIECES

**Optical Micrometer in Meters for AS/AE Series**

**Plane Parallel Micrometer for AS-2/AS/AE-7 Series with leatherette case**

**Illuminator-3 for AS/AE Series**  
For hairlines on Eyepiece Reticle of AS-2/AS/AE-7 Series

**Diagonal Eyepiece Prism (Erect Image)**

**Low-Power Eyepiece Lens**  
22x when attached to AS-2/AS-2C  
19x when attached to AE-7/AE-7C  
17x when attached to AC-2S

**High-Power Eyepiece Lens**  
43x when attached to AS-2/AS-2C  
37x when attached to AE-7/AE-7C  
35x when attached to AC-2S







**NIKON**

10355 Westmoor Drive

Suite #100

Westminster, CO 80021

USA

+1-720-587-4700 Phone

888-477-7516 (Toll Free in USA)

[www.nikonpositioning.com](http://www.nikonpositioning.com)

**For more information and sales contacts:**

[www.nikonpositioning.com](http://www.nikonpositioning.com)



Contact your local dealer: