SOKKIA

CX Series

Reflectorless Total Stations

Tradition Meets Innovation

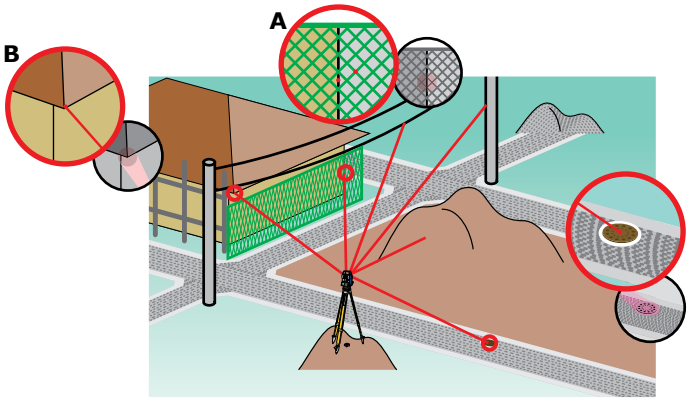
- **RED-tech Technology Reflectorless EDM**
- **Long-range Bluetooth® Technology*1**
- **Advanced Angle Measurement System**
- **The Longest*2 Battery Life – 36 Hours!**
- **Waterproof, Rugged, and Operator Friendly**
- **Advanced Security and Maintenance with TSshield™**

*1 Offered as an option in some areas.
*2 As of December 2011.

The All New Sokkia CX: Inspired b

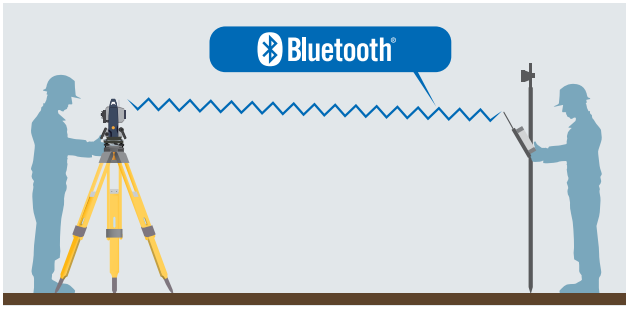
■RED-tech Technology Reflectorless EDM

- Fastest measurment time in its class.
- Sokkia traditional pinpoint precision in reflectorless distance measurement.
- Reflectorless operation from 30cm to 500m.
- Coaxial EDM beam and laser-pointer provide fast and accurate aiming.
- Ensures accuracy even with reflective sheets.



The ultra-narrow EDM beam can precisely measure walls, corners, manholes on the road surface, even chain-link fences and tree branches.

■Long-Range Bluetooth® Technology*



- The CX series of total stations features Bluetooth Class1 wireless technology for reliable data communications.
- All CX data is instantly available at the Bluetooth-equipped controller.

*Offered as an option in some areas.

■Advanced Angle Measurement System

- CX features Sokkia's original absolute encoders that provide long-term reliability in any job site condition. Dual-axis compensator ensures stable measurements even when setup on uneven terrain.
- Sokkia's traditional motion clamp and tangent screw are employed to ensure stable angle measurement.
- CX-101 and CX-102 feature groundbreaking IACS (Independent Angle Calibration System) technology for extremely reliable angle measurement.

■The Longest Battery Life - 36 Hours!

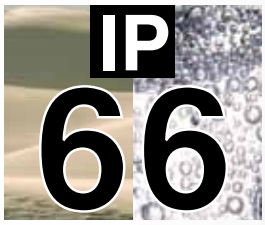
- The CX single battery can last up to 36 hours.*
- Greatly reduces likelihood of low power during any full-days work.
- Eliminates the need for nightly recharging or carrying extra batteries.

*Operating time will vary depending upon environmental conditions and CX activity

y Tradition, Ready for The Future

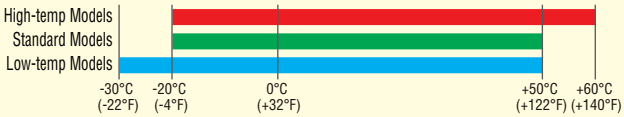
■Waterproof, Rugged, and Operator Friendly

- IP66 dustproof / waterproof rating.
- Metal chassis and heavy duty handle add ruggedness.
- Standard usage temperature range -20 to +50°C. Low temperature models can be used as low as -30°C* and high temperature models up to +60°C.*



*Low and High temperature models available as options.

Operating temperature range



- USB TypeA port for convenient added memory. Use of included USB accessory assures IP66 protection.

- One-touch star key [★] offers instant access to functions.

- Conveniently located “trigger” key lets you take a series of measurements with the push of a button without taking your eye off the telescope.

- Control panel features 10-key pad with large LCD taht provides optimum viewing and convenience.*

*Control panel location may vary depending on region or model.

- Green / Red telescope guide light enhances work efficiency in a range up to 150m.

- Built-in laser plummet with five brightness levels is equipped for quick instrument setting in all lighting conditions.*

*Offered as an option in some areas.

■TSshield

Every CX total station is equipped with a telematics-based multifunction communications module providing the ultimate security and maintenance capabilities for your investment.

If an activated instrument is lost or stolen, you can send a coded signal to the instrument and disable it – Your total station is secure anywhere in the world!

And, in the same module, you have daily connectivity to cloud-based Sokkia servers that can inform you of available software updates and firmware enhancements.

*For more detail of TSshield, please refer to the TSshield’s leaflet.

CX Series

CX-101/CX-102/CX-103/CX-105/CX-107

Compact X-ellence Station

SPECIFICATIONS

Model		CX-101	CX-102	CX-103	CX-105	CX-107
Telescope						
Magnification / Resolving power		30x / 2.5"				30x / 3.5"
Others		Length: 171mm (6.7in.), Objective aperture: 45mm (1.8in.) (48mm (1.9in.) for EDM), Image: Erect, Field of view: 1°30' (26m/1,000m), Minimum focus: 1.3m (4.3ft.), Reticle illumination: 5 brightness levels				
Angle Measurement						
Display Resolution		0.5" / 1" (0.0001 / 0.0002gon, 0.002 / 0.005mil)	1" / 5" (0.0002 / 0.001gon, 0.005 / 0.02mil)			
Accuracy (ISO 17123-3:2001)		1"	2"	3"	5"	7"
IACS (Independent Angle Calibration System)		Provided		-		
Dual-axis compensator / Collimation compensation		Dual-axis liquid tilt sensor, working range: ±6' (±111mgon) / Collimation compensation available				
Distance Measurement						
Laser output *1		Reflectorless mode: Class 3R / Prism / sheet mode: Class 1				
Measuring range (under average conditions*2)	Reflectorless*3	0.3 to 500m (1.0 to 1,640ft.)				
	Reflective sheet*4/*5	RS90N-K: 1.3 to 500m (4.3 to 1,640ft.) , RS50N-K: 1.3 to 300m (4.3 to 980ft.), RS10N-K: 1.3 to 100m (4.3 to 320ft.)				
	Mini prisms	CP01: 1.3 to 2,500m (8,200ft.), OR1PA: 1.3 to 500m (1,640ft.)				
	One AP prism	1.3 to 4,000m (4.3 to 13,120ft.) / Under good conditions*6: 5,000m (16,400ft.)				
	Three AP prisms	to 5,000m (16,400ft.) / Under good conditions*6: to 6,000m (19,680ft.)				
Display Resolution		Fine/Rapid: 0.001m / 0.01ft. / 1/8in. Tracking: 0.01m / 0.1ft. / 1/2in.				
Accuracy*2 (ISO 17123-4:2001) (D=measuring distance in mm)	Reflectorless*3	(3 + 2ppm x D) mm*7				
	Reflective sheet*4	(3 + 2ppm x D) mm				
	AP/CP prism	(2 + 2ppm x D) mm				
Measuring time*8		Fine: 0.9s (initial 1.7s), Rapid: 0.7s (initial 1.4s), Tracking: 0.3s (initial 1.4s)				
Interface and Data management						
Display / Keyboard		Graphic LCD, 192 x 80 dots, backlight, contrast adjustment / Alphanumeric keyboard / 25 keys with backlight				
Control panel location*9		On both faces				On one face
Trigger key		On right instrument support				
Data storage	Internal memory	Approx. 10,000 points				
	Plug-in memory device	USB flash memory (max. 8GB)				
Interface		Serial RS-232C, USB2.0 (Type A, for USB flash memory)				
Bluetooth modem (option)*10		Bluetooth Class 1, Ver.2.1+EDR, Operating range: up to 300m (980ft.)*11				
General						
Laser-pointer*12		Coaxial red laser using EDM beam				
Guide light*12		Green LED (524nm) and Red LED (626nm), Operating range: 1.3 to 150m (4.3 to 490ft.)*2				
Levels	Graphic	6' (Inner Circle)				
	Circular level	10' / 2mm				
Optical plummet (option)		Magnification: 3x, Minimum focus: 0.3m (11.8in.) from tribrach bottom				
Laser plummet		Red laser diode (635nm±10nm), Beam accuracy: ≤1.0mm@1.3m, Class 2 laser product				
Dust and water protection		IP66 (IEC 60529:2001)				
Operating temperature*13		-20 to +50ºC (-4 to +122ºF)				
Size with handle*9		Control panel on both faces: W191 x D181 x H348mm (W7.5 x D7.1 x H13.7in.) Control panel on one face: W191 x D174 x H348mm (W7.5 x D6.9 x H13.7in.)				
Weight with battery & tribrach		Approx. 5.6kg (12.3 lb.)				
Power supply						
Battery	BDC70 detachable battery	Li-ion rechargeable battery				
Operating time (20ºC)	BDC70	Approx. 36 hours (single distance measurement every 30 seconds)				
	External battery*14 (option)	BDC60: approx. 44 hours, BDC61: approx. 89 hours (single distance measurement every 30 seconds)				

*1 IEC60825-1:Ed.2.0:2007 / FDA CDRH 21 CFR Part 1040.10 and 11 *2 Average conditions: Slight haze, visibility about 20km (12 miles), sunny periods, weak scintillation. *3 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. *4 When the measuring beam's incidence angle is within 30º in relation to the reflective sheet target. *5 Measuring range in temperatures of -30 to -20°C (-22 to -4°F) with Low Temperature models and 50 to 60°C (122 to 140°F) with High Temperature models: RS90N-K: 1.3 to 300m (4.3 to 980ft.), RS50N-K: 1.3 to 180m (4.3 to 590ft.), RS10N-K: 1.3 to 60m (4.3 to 190ft.) *6 Good conditions: No haze, visibility about 40km (25 miles), overcast, no scintillation. *7 Measuring range:0.3 to 200m *8 Typical, under good conditions. Reflectorless measurement time may vary according to measuring objects, observation situations and environmental conditions. *9 Control panel location may vary depending on region or model. *10 Usage approval of Bluetooth wireless technology varies according to country. Please consult your local office or representative in advance. *11 No obstacles, few vehicles or sources of radio emissions/interference in the near vicinity of the instrument, no rain. *12 The laser-pointer and the guide light do not work simultaneously. *13 Low Temperature models:-30 to 50 °C (-22 to 122°F) and High Temperature models:-20 to 60°C (-4 to 140°F, No direct sunlight) are available on built-to-order basis. *14 For CX-101, CX-102 and Low temperature models.

Standard Accessories

●CX main unit ●Battery (BDC70) ●Battery charger (CDC68) ●Power Cable ●Lens cap
●Lens hood ●Tool pouch ●Screwdriver ●Lens brush ●Adjusting pin x2 ●Cleaning cloth
●Operation manual ●USB memory ●Laser caution sign-board ●Carrying case ●Carrying strap

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