

PENTAX | R-2500DN Series

Capture the full picture!

- Long Range: reflectorless measuring up to 600 m
- Effective 3.1 MP camera
- Easy transfer to a PC via USB, SD connection and Bluetooth
- Bluetooth Class1 Long Link: 100 m
- Dust & Water resistance: IP66



3.1
MEGA
PIXELS



2=1
DUAL FUNCTION



80th
PENTAX
SURVEYING
SINCE 1933
TI Asahi Co., Ltd.
anniversary



PENTAX

R-2500DN



2=1 DUAL FUNCTION

Communicate and collaborate without ambiguity

Data measurements can be misinterpreted by anyone, from office team members to clients. And changes due to poor communication become exponentially more expensive with each step in the project's development. The R-2500DN total station combines a non-prism total station with an advanced 3.1-megapixel digital camera, enabling you to visualise the points measured. Detailed pictures made with the Pentax Total Station enable all to accurately review the actual situation at the time of measurement – helping catch possible mistakes in the process. Detailed pictures provide immediate visual feedback.

SIMPLY MEASURING

MEASURE

Rectangular and polar data can easily be recorded at the same time. All data is saved to the SD card in CSV format, ready to use on your PC.

CAPTURE

The point mark can easily be placed on the measured point, just like operating a digital camera. The colour of the point mark can be changed depending on the image to increase its visibility.

ANALYSE & COMPARE

The point attributes and the measurement values can be superimposed as a layer on the image captured. All recorded data is now shown on one image, combining the imaging and measuring functionalities of the R-2500DN.





Accident Investigation



Archaeology & Palaeontology



Architecture & Cultural Heritage



Forensic & Crime Scene Investigation



Geology



Surveying



Infrastructure & Road construction



General Construction

VERIFIABILITY

The R-2500DN goes one step beyond the competition for verifiable results: each location capture results in a digital image that displays exactly what the user was viewing and targeting at the time of measurement. This provides an extra level of verification and eliminates potential confusion over data and their associated targets.

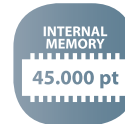


Quarrying



Stockpiles

KEY FEATURES



Technical Specifications Digital Camera R-2500DN Series

Sensor		CMOS 3.1 megapixels
Image resolution		2048x1536 / 1600x1200 / 1280x960 / 640x480
LCD		1.5" Color TFT 34mm x 24 mm (502x240 dot.)
EV compensation		-2EV ~ +2EV (0.5EV step)
White Balance		Auto/Daylight/Light Bulb/Fluorescent/Cloudy
ISO Sensitivity		100/200/400
File format		JPEG (FQ:1/4, NQ:1/8, EQ:1/16)
File management		DCF(Ver1.0) / FAT16
Digital zoom		1x / 2x / 3x
Play back function		Yes
External memory		SD (up to 1GB)
Focus length		50mm
Focus range		20m ~ ∞ (fixed focus length)
Field of view		8.8°
Effective Diameter		2048x1536 / 1600x1200 / 1280x960 / 640x480
I/F		USB 2.0
Power		Internal (Supplied from TS battery)
Data Process (TS)	Data recording method	Internal Memory
	Internal Memory *6	45,000 point
	Special function	PowerTopoLite + DSC
	I/F	RS-232C, SD CARD, USB
Display / Keyboard	Display type	Graphic LCD / 20 characters x 8 lines / 240 x 96 pixels
	Quantity	1 (2nd display is optional)
	Keys	22 each(12 numeric / 5 function / 5 special)
	Display back light	Intensity settings: 10 steps
	Laser Pointer	Yes
	Data Clock	Yes



The number of snaps depending on setting & memory size

★★★	256MB	512MB	1GB
L	156	305	626
M(=Mcut)	253	495	1017
S(=Scut)	396	774	1591
SS(=SScut)	1546	3020	6206
★★	256MB	512MB	1GB
L	311	604	1241
M(=Mcut)	501	974	2002
S(=Scut)	777	1510	3103
SS(=SScut)	3110	6043	12415
★	256MB	512MB	1GB
L	622	1208	2483
M(=Mcut)	972	1888	3880
S(=Scut)	1555	3022	6208
SS(=SScut)	NO SELECT	NO SELECT	NO SELECT

* Specifications are subject to change without notice

The mentioned number of sheets showing the maximum of pictures taken is an approximate value. The maximum picture you can take depends on the capacity of SD card you will use.

Model	R-2501DN	R-2502DN	R-2503DN	R-2505DN
Magnification			30 x	
Effective aperture			45mm (EDM45mm)	
Resolving power			3.0"	
Field of view			2.6% (1°30')	
Minimum focus			1.0m	
Focus			Manual	
Distance measurement	Laser Class	Visible Laser: Class IIIa (Reflectorless) / Class II (Prism, sheet)		
Measurement range (Good condition) *3				
	Reflectorless *1		1.5 ~ 600m	
	Reflector sheet *2		1.5 ~ 600m (800m)	
	Mini prism		1.5 ~ 2500m (3000m)	
	1P		1.5 ~ 7000m(9000m)	
	3P		1.5 ~ 9000m(9999m)	
Accuracy *4	Prism / Reflector Sheet		1.5m ~ 10m : ±(3+2ppm x D)mm 10m ~ : ±(2+2ppm x D)mm	
	Reflectorless		1.5m ~ 150m : ±(3+2ppm x D)mm	
	Reflectorless		1.5m ~ 300m : ±(5+2ppm x D)mm 300m ~ : ±(7+10ppm x D)mm	
At Auto-ATM. Correction	Prism / Reflector sheet		1.5m ~ 10m : ±(3+10ppm x D)mm 10m ~ : ±(2+10ppm x D)mm	
	Reflectorless		1.5m ~ 300m : ±(5+10ppm x D)mm 300m ~ : ±(7+18ppm x D)mm	
Measurement time *5	Minimum count	0.1mm (Fine mode) , 1mm (Normal mode) , 10mm (Track mode)		
	Repeat meas.	Normal(1mm)	Prism / Ref.sheet 2.0sec.	Ref.less 2.0sec.
		Quick(1mm)	Prism / Ref.sheet 1.2sec.	*6
		Track(10mm)	Prism / Ref.sheet 0.4sec.	Ref.less 0.4sec.
	Initial meas.	Normal(1mm)	Prism / Ref.sheet 2.5sec.	Ref.less 2.4sec.
		Quick(1mm)	Prism / Ref.sheet 1.7sec.	*6
		Track(10mm)	Prism / Ref.sheet 2.5sec.	Ref.less 2.5sec.
Angle measurement	Measuring method	Absolute rotary encoder		
	Detection method	Vertical / Horizontal angle		
		2 sides		1 side
	Minimum count	0.5" / 1"	1" / 5"	
	Accuracy (ISO17123-3)	1"	2"	3"
Compensator	Axis	3 axis *7		2 axis
	Range	±3'		
Tangent Screw		1 Speed		
Sensitivity of vials	Plate level	20"/1div. (electronic)	30"/1div. (electronic)	30"/1div.
	Circular level	8'/2mm		
Plummet		Visible Laser, ±0.5mm (instrument height 1.5m)		
Base		Detachable		
	Dust and Water Protection	IP66 (instrument only)		
Ambient temperature		-20°C ~ 50°C / -4°F ~ 122°F (Working range)		
Tripod thread		5/8" x 11		
Dimensions/Weight	Dimensions	190(W) x 343(H) x 177(L)mm		
	Weight (incl. Battery)	5.7kgs.		
	Carrying case	373(W) x 286(H) x 465(L)mm / 2.9kgs.		
Battery pack BP07	Power source	Li-ion 2500mAh x 2 (hot swap)		
	Operation time	Continuous approx. 4.5 hrs (ETH+EDM), 15 hrs (ETH) with approx. 2.2 hrs of charging time		
	Weight	110g x 2 pcs		
Battery charger BC05 and AC Adapter AC05				
	Input voltage (AC05)	AC 100 ~ 240V		
	Output voltage (BC05)	DC8.4V		
Data Process	Data recording method	Internal Memory		
	Coordinates data *8	60.000		50.000
	Special function	PowerTopoLite		
	I/F	RS-232C, SD CARD, USB, Bluetooth		
Display / Keyboard	Display type	Graphic LCD / 20 characters x 8 lines / 240 x 96 pixels		
	Quantity	2		
	Keys	22 each(12 numeric / 5 function / 5 special)		
	Display back light	Intensity settings: 10 steps		
	Laser Pointer	Yes		
	Date clock	Yes		

- *1 The measurement range and accuracy of reflectorless, and time required to measure may vary by the shape, size of surface area and reflection rate of the target and its environment. The measurement range of reflectorless is determined by the white side of the Kodak Gray Card.
- *2 Reflector sheet: PENTAX genuine Reflector sheet
- *3 The measurement range may vary by conditions of the environment. Normal conditions: 20km visibility with slight shimmer. Good conditions: 40km visibility, overcast, no heat, no shimmer and moderate wind.
- *4 When automatic atmospheric correction is on, the EDM error is 10ppm in prism and reflector sheet mode.
- *5 EDM measuring time is determined in good conditions. It may take longer than usual to measure the distance exceeding 4000m in prism mode and 300m in reflectorless mode.
- *6 Quick mode, which functions with prism and reflector sheet, is effective only under normal mode(1mm) and up to 500m.
- *7 In addition to dual-axis correction in the (X) and (Y) direction, mechanical error in the instrument is corrected.
- *8 Number of points to be recorded may vary by usage. Maximum number of points to be recorded per job site: 3000 points. Maximum number of job files to be recorded: 50 job files. Maximum data points to be sent from PC to the instrument: 3000 points

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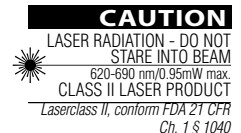
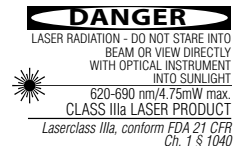
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The CE marking assures that this product complies with the requirements of the EC directive for safety.



You should be able to use any SD card in your camera. While Pentax does not guarantee compatibility with any particular manufacturer or model, we have seen consistent compatibility with SD cards from Panasonic (1GB), SanDisk (1GB), and Toshiba (1GB)



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