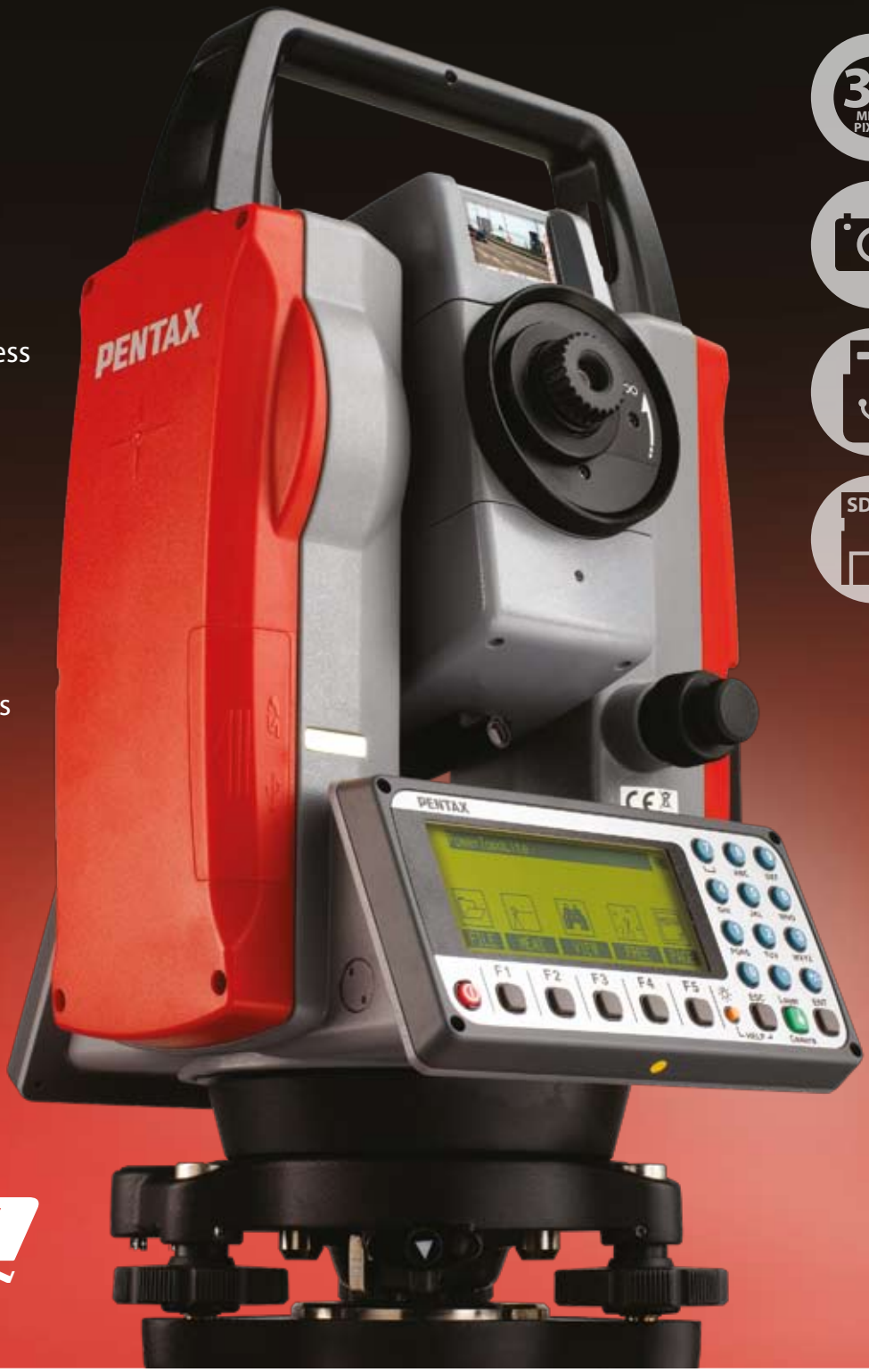
PENTAX | R-400VDN Series Visio

CAPTURE THE FULL PICTURE!



- 400m reflectorless EDM range
- Effective 3.1 MP camera
- Easy transfer to a PC via USB, SD connection
- Dual axis compensator 3″ and 5″ models
- Adjustable laser plummet

3.1 MEGA PIXELS

SD

2=1 DUAL FUNCTION

PENTAX

R-400VDN

NO SPECIALISED TRAINING REQUIRED! EASY TO USE

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.

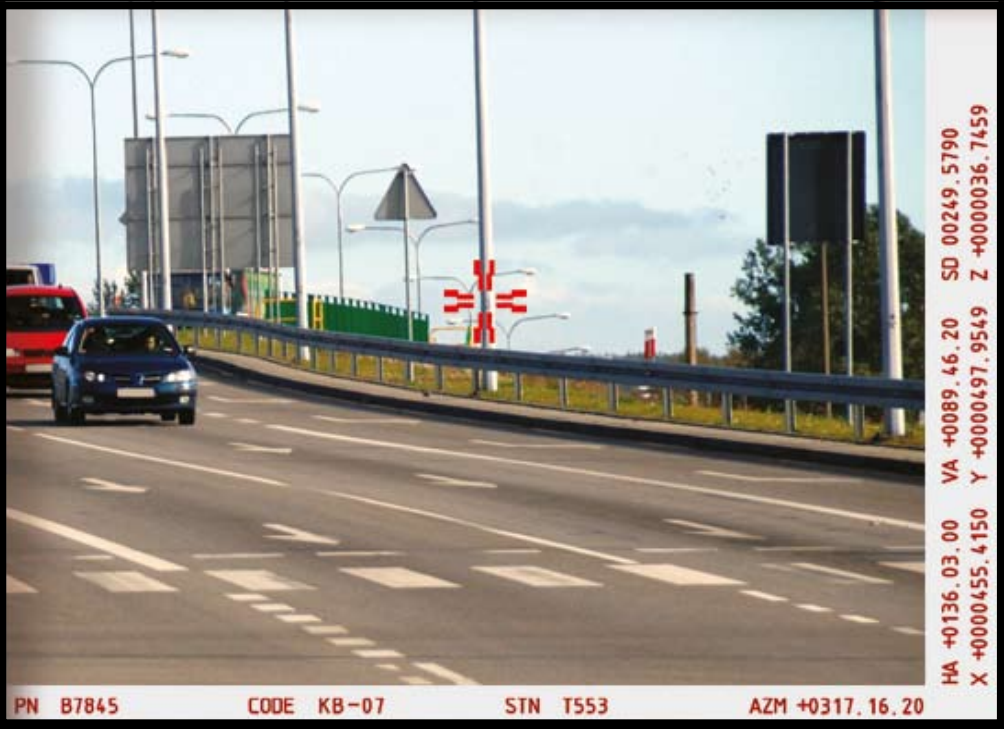
CAPTURE
The point mark can easily be placed on the measured point, just like operating a digital camera.
The colour of the point mark can be changed depending on the image to increase its visibility.

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-400VDN.

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-400VDN 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 Visio 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.



PENTAX | R-400VDN applications

VERIFIABILITY
with geotagged photo of the target


Accident Investigation


Archaeology & Palaeontology


Architecture & Cultural Heritage


Forensic &
Crime Scene Investigation


Geology


Surveying


Infrastructure &
Road construction

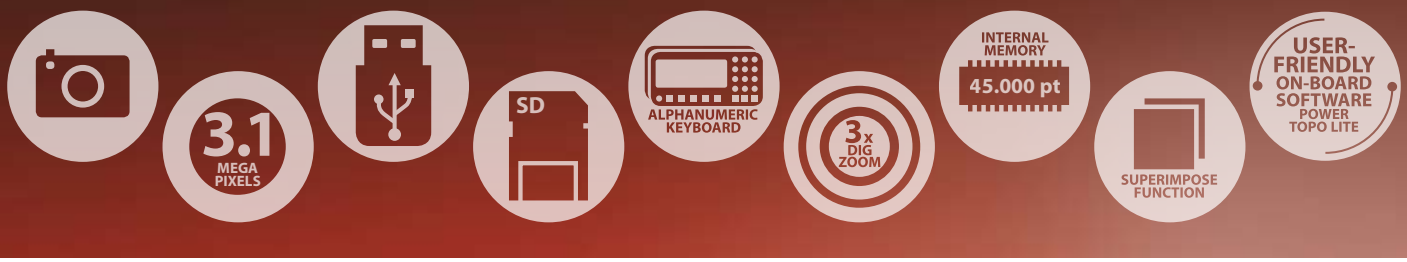

General Construction

The R-400VDN 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-400VDN Series

Model		R-423VDN	R-425VDN
Degital Camera(DSC)	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)	
	WhiteBlance	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	f/5.6	
	I/F	USB 2.0	
	Power	Internal (Supplied from TS battery)	

PENTAX | Total Station R-400VDN Series Specifications

Model		R-423VDN	R-425VDN
Telescope	Magnification	30 x	
	Effective aperture	45mm (EDM45mm)	
	Resolving power	3.0″	
	Field of view	2.6 % (1° 30′)	
	Minimum focus	1.0 m	
	Focus	Manual	
Distance measurement	Laser Class	Visible laser: Class III a (3R) (Reflectorless) / Class II (2) (Prism, sheet)	
Measurement range	Reflectorless **(*1)**	1.5 ~ 400 m	
(Good conditions) (*3)	Reflector sheet **(*2)**	1.5 ~ 600 m (800 m)	
	Mini Prism	1.5 ~ 1,600 m (2,000 m)	
	1 P	1.5 ~ 5,500 m (7,000 m)	
	3 P	1.5 ~ 7,000 m (9,000 m)	
Accuracy	Prism / Reflector sheet	1.5 ~ 10 m: ± (3 + 2 ppm x D) mm / 10 m ~: ± (2 + 2 ppm x D) mm, Quick: ± (3+2ppm×D) mm **(*5)**	
	Reflectorless	1.5 ~ 300 m: ± (5 + 2 ppm x D) mm / 300 m ~: ± (7 + 10 ppm x D) mm	
	Minimum count	0.1 mm (Fine mode) / 1 mm (Normal mode) / 10mm (Track mode)	
Meassuring time (*4)	Repeat meas. Normal (1 mm)	Prism / Reflector sheet 2.0 sec - Reflectorless 2.0 sec	
	Quick (1 mm)	Prism / Reflector sheet 1.2 sec **(*5)**	
	Track (10 mm)	Prism / Reflector sheet 0.4 sec - Reflectorless 0.4 sec	
	Initial meas. Normal (1 mm)	Prism / Reflector sheet 2.5 sec - Reflectorless 2.4 sec	
	Quick (1 mm)	Prism / Reflector sheet 1.7 sec **(*5)**	
	Track (10 mm)	Prism / Reflector sheet 2.5 sec - Reflectorless 2.5 sec	
Angle measurement	Measurement method	Absolute rotary encoder	
	Direction method	Vertical / Horizontal angle: 2 sides	Vertical / Horizontal angle: 1 side
	Minimum count	1″ / 5″ selectable	
	Accuracy (ISO 17123-3)	3″	5″
Compensator		2 Axis	
Target screw		1 speed	
Sensitivity of vials	Plate level	30″ / 2 mm	
	Circular level	8′ / 2 mm	
Plummet		Laser Plummet	
Base		Detachable	
Dust & water resistance		IP56 (instrument only)	
Ambient temperature		-20°C ~ +50°C / -4°F ~ 122°F (working range)	
Tripod thread		5/8″ x 11	
Dimensions / Weight	Dimensions	180 (W) x 342 (H) x 177 (L) mm	
	Weight (incl. battery)	5.5 kg	
	Carrying case	250 (W) x 365 (H) x 425 (L) mm	
Battery pack	Power source	Ni-MH 4300 mAh (rechargeable) DC 6.0 V	
	Operation time	Approx. 7.0 hrs (ETH + EDM) / 15hrs (ETH) with approx. 2.2 hrs of charging time	
	Weight	380 g	
Battery charger	Input Voltage	AC 100 ~ 240 V	
and AC adapter	Output Voltage	DC 7.5 V	
	Weight	280 g	
Data Process	Data recording method	Internal Memory	
	Coordinates data **(*6)**	45,000	
	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 optional)	
	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. (KODAK is a trademark of Eastman Kodak Company)
*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 EDM measuring time is determined in good conditions. It may takes longer than usual to measure the distance exceeding 4000m in prism mode and 300m in reflectorless mode. Also the measurement time in reflectorless mode is influenced by the share, size and surface area and reflection rate of the target and its environment.
*5 Quick mode, which functions with prism and reflector sheet, is effective only under normal mode(1mm) and up to 500m.
*6 Number of points to be recorded may vary by usage.
Maximum number of point to be recorded per job site: 3000 points
Maximum number of job file to be recorded: 50 job files
Maximum data points to be sent from PC to the instrument: 3000 points

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

ISO
ISO 9001:2000
ISO 14001:2004

DANGER
LASER RADIATION - DO NOT STARE INTO BEAM OR VIEW DIRECTLY WITH OPTICAL INSTRUMENT INTO SUNLIGHT
620-690 nm/4.75mW max.
CLASS IIIa LASER PRODUCT
Laserclass IIIa, conform FDA 21 CFR Ch. 1 § 1040

CAUTION
LASER RADIATION - DO NOT STARE INTO BEAM
620-690 nm/0.95mW max.
CLASS II LASER PRODUCT
Laserclass II, conform FDA 21 CFR Ch. 1 § 1040

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