



d-STATION^{3D}

Data Sheet

d-STATION^{3D}, 1.3 MegaPixel

Technical Specifications

System setup	Integrated system setup with sensor, positioning unit and electronic
Dimensions	W 380 x D 380 x H 350 mm
Camera sensor	b/w, CCD, USB
Camera resolution	1.296 x 964 pixel
Projection technology	Miniaturised Projection Technique
Light source	3 W LED (white)
Number of projected fringes	128
Minimum acquisition time	1.3 sec per scan (980 msec in the fast mode)
Sensor weight	14 kg
Power supply	AC 110 / 220 Volt, 50 – 60 Hz
Control unit	150 W, USB 2.0
Operating system	Windows XP Professional 32 Bit / 64 Bit, Windows 7 64 Bit

Field of View (FOV)

	Triangulation angle: 20 degrees Base length: 50 mm Operating distance: 170 mm		
Field of view [mm] ⁽¹⁾		120	
Field of view size [mm] ⁽²⁾		70 x 90	
Measuring depth [mm] ⁽³⁾		50	
x,y resolution [µm] ⁽⁴⁾		75	
Resolution limit (z) [µm] ⁽⁵⁾		5	
Noise (z) [µm] ⁽⁶⁾		± 6	
Feature accuracy [µm] ⁽⁷⁾		± 20	

System Configurations

	OD	OD ^{PRO}	HE
Positioning unit	turn table	turn / tilt table	turn / tilt table
Dell Workstation	desktop	professional	--
OPTOCAT for Windows version	odontes	odontes ^{PRO}	professional
Supported example applications			
Single tooth (crown, inlay)	x	x	x
Bridges	(x)	x	x
16 unit models	--	x	x
Dental impressions	--	x	x
Individual scanning tasks	--	--	x

Annotation

The overview given in the table above provides a summarisation about the currently available standard system configurations. Availability of customer-specific system configuration provided on request. The system supports export data formats like STL, PLY, VRML and ASC and can be combined smoothly with third-party software tools for CAD or inspection tasks.

Please note:

All data specified in this data sheet apply to single image captures only.

The measurement specifications given are average values for the central measuring range achieved under defined measurement conditions and after precise calibration of the sensor. They solely apply in combination with the measuring and evaluation setup provided by Breuckmann. Furthermore, all accuracy and resolution details depend on the object surface and the scanning conditions.

- (1) All values stated in this data sheet are approximated values, indicating the order of the value. For example, the field of view `120´ may have an image diagonal between 115 and 125 mm.
- (2) Field of view size relating to the level of the operating distance.
- (3) Maximum distance in z-direction.
- (4) The values for lateral resolution are calculated theoretically (ratio of the field of view and pixel number of camera chip used).
- (5) The resolution limit is defined as the theoretically achievable accuracy using a phase evaluation of 10 bit and 128 line pairs.
- (6) The noise value is measured as deviation of the measured points against a best-fit curve. The noise of the measured 3D-data highly depends on the noise of the camera chip.
- (7) The feature accuracy is defined according to the VDI guideline 2634/2.

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