

# Radiography Technology Guide

DEXIS LLC  
dexis.com

Sirona Dental Systems LLC  
sirona.com

Imaging Sciences International  
i-CAT.com

PracticeWorks  
kodakdental.com/go/ortho

Name of product	DEXIS® Digital X-ray (intraoral digital sensor, software)	GALILEOS COMFORT	i-CAT®	Kodak 9000C 3D Panoramic and Cephalometric System
Cost	\$13,995 (system, 1-year DEXcare support, in-office training)	\$199,995	\$169,999	\$90,545 without 3D \$129,000 with 3D
Digital or Analog	Digital	Digital	Digital	Digital
Footprint	N/A	5.9' x 5.9'	< 17 square feet	Width x depth: 2230 mm (88") x 1700 mm (79")
Patient seated or standing?	N/A	Both	Seated	Seated
Field of view	Universal intraoral size for bitewings, periapicals	15 x 15 x 15	Adjustable field of view for standard or landscape. Standard scan: 4-, 6-, 8-, 10-, 13-cm height & 16-cm diameter extended field of view: (cephalometric): 17-cm height & 23-cm diameter	Focused 50 x 37 mm
Voxel size	N/A	0.300/0.150 mm <sup>3</sup>	4 mm, .3 mm, .25 mm, .2 mm, .125 mm	76 x 76 x 76 (isotropic voxel)
Quality of image	Effective pixel size: 40 microns	0.3/0.15 mm (voxel size)	0.4 mm voxel	(in pixels/voxels) .094
Scan technology	N/A	200 individual pulsed exposures in 14 seconds	Cone beam	Ceph – one shot
Scan time	Exposure time typically less than 1 second	14 seconds	5, 8.9, or 26.9 seconds	22 seconds 3D, 12 seconds pan, 1 second ceph
Dose per image	Dependent on machine furnishing radiation source	29 µSv	36 µSv	Digital panoramic 7 to 22 µSv 3D exam performed with Kodak 9000 3D system 5 to 19 µSv
Reconstruction time	Time from exposure to image appearing on screen typically 3 seconds; acquisition time varies depending on PC performance	3 minutes	< 30 seconds	Depends on the PC
Software integration	All major practice management software programs	Comprehensive software package already included with system	Streamlined for dental workflow Free i-CAT Vision™ for unlimited networking and sharing DICOM 3 compatible output for sharing with third-party applications; Automatic Pan and Ceph reconstruction; new practice management interface available with a growing list of providers; DICOM functionality/PACS interface; Automatic nerve canal estimation	Kodak orthodontic imaging software
Can it be serviced by office personnel?	Certain functions; if needed, extended hours telephone and personal remote assist (Web-based) technical support is available	Basic Service	No	No
Ceph superimposition	DEXIS imaging software allows for the capture or import of pans and cephs	Yes	No, but it can be done in third-party software.	Yes

<i>AFP Imaging .afpimaging.com</i>	<i>Gendex Dental Systems gendex.com</i>	<i>Panoramic Corp pancorp.com</i>	<i>Planmeca planmecausa.com</i>	<i>Air Techniques Inc airtechniques.com</i>	<i>J. Morita USA jmoritausa.com</i>
<b>NewTom VG Cone Beam 3D</b>	<b>Orthoralex® 9200 DDE</b> (Digital Pan/Ceph)	<b>PC-1000/Laser 1000</b> Panoramic/ Cephalometric X-ray	<b>PLANMECA ProMax</b>	<b>ScanX Digital Imaging</b>	<b>Veraviewepocs 2D/3D</b>
\$189,900	\$46,500 Pan \$59,700 Pan/Ceph	\$14,995	ProMax 3D Panoramic System Complete: \$187,000 <sup>†</sup>	ScanX: \$21,995 ScanX Intraoral: \$13,495 ScanX Duo: \$9,995	Contact your dealer or J. Morita USA for pricing information
Digital	Digital	Analog	Digital	Digital	Digital
3.7' x 5'	7.5'H x 4.4'W x 4'D	4' D x 6' W	3D with Digital Pan: 5.5' x 5'; 3D with Digital Pan-Ceph: 5.5' x 7'	ScanX: 24"H x 15"W x 15.5"D ScanX I/O: 15.5" x 15" x 15 1/8" ScanX Duo: 12" x 10" x 10.5"	(with cephalometric) W 6.6' x D 4.4' x H 7.7'
Seated, standing or wheelchair accessible	Standing	Both	Seated, standing or wheelchair accessible	Seated	Standing
9.84 inches	10 standard projections plus Transcan tomographic program five cephalometric projections	Panoramic (6" x 12"), cephalometric (8" x 10"), & TMJ	8 x 8 cm; 8 x 5 cm; 4 x 8 cm; 4 x 5 cm with stitching program: Variable larger volume areas available - area is variable depending on combination of stitched volumes.	N/A	3D: 40 x H 40, 40 x H 80, 80 x H 80 mm; cephalometric: LA 225 x 254 mm; PA 225 x 203 mm
0.3 mm cubic isometric	N/A	N/A	16 mm in high-resolution mode normal to low-dose mode .32 mm in low-resolution mode	N/A	3D: 125 µm (micrometer) voxel
0.3 mm cubic isometric	1536 x 2725 pixel (PAN); 2304 x 2529 pixel (CEPH-MAX)	N/A	120+ voxels (501 x 501 x 501 voxels)	20 lp/mm	Minimum 2.0 lp/mm at MTF 10%
360° rotation - 360 image slices	Vertical slicing Transcan tomography	N/A	2D cephalometric imaging through Vertical Scanning. Horizontal and vertical segmenting are available on the 2D panoramic.	Phosphor Storage Plates	CBCT Volume Scan for 3D imaging, TDI horizontal scan for panoramic and cephalometric
18 seconds	12 seconds for standard Pan	12 seconds (panoramic), .4 to 2 seconds in eight increments (cephalometric)	16 to 18 seconds, pulsed x-ray	First intraoral image: 17 seconds. View consecutive images in as little as 4 seconds or an entire full mouth series in less than 2 minutes	3D image: approx. 9.4 seconds panoramic image: high-speed mode-7.4 seconds; superfine mode-approx. 15 seconds
Approximately 50 uSv	>10mA	N/A	18 µsv to 252 µsv for default program selections	N/A	3D Image: 1.8 times* as high as that of a panoramic x-ray with film exposure and 1/5** the CTDIw value of a conventional CT
1 minute, 40 seconds is typical	Typically 6 seconds	N/A	High and normal resolution: 60 seconds Low-dose settings: 30 seconds	N/A	Approximately 1 minute for 40 x 40 mm FOV size with core 2 duo 2.2GHz processor
Most third-party software programs	A variety of off-the-shelf software packages. VixWin™ Platinum is recommended	N/A	3D x-ray software is bridged via optional Quicklaunch Program with Simplant and N-Liten. 2D pan and pan/ceph may work with any software that has TWIN drivers.	Air Techniques Visix Imaging Software and other approved vendors	i-Dixel; can be integrated into a clinic network environment and supports DICOM standard 3.0 to export the image data to third-party, 3D imaging software.
Yes	Routine maintenance and cleaning by office personnel	No	Supported by authorized PLAN- MECA dealers, and may also be supported by phone and remote Internet in certain cases. Both machines are self-diagnostic with troubleshooting codes.	No, our authorized dealers provide service.	No
Yes	Yes	No	ProMax and ProMax 3D have a ceph upgrade for real 2D cephalometric imaging; cephalometric superimposition with software such as Dolphin.	Yes, but only the ScanX model, not intraoral or duo.	No

\* Effective dose is calculated in accordance with the ICRP 2007 Draft for exposure of the Mandibular Molar Region with Morita's recommended loading factor (80kV, 3mA, 9.4sec., Å? 40 x H 40 mm). Comparison is to the Veraviewepocs film (75kV, 8mA, 16 sec).

\*\* CTDIw value measurement is made according to IEC 60601-2-44 with Morita's recommended loading factor. The comparison is to the reference CTDIw value for the maxillofacial and paranasal sinuses indicated in ICRP Pub. 87 Appendix A. (Exposure made for Ø 40 x H 40 mm).