3D Imaging
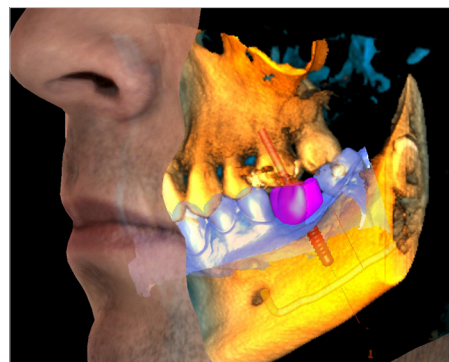
Powerful diagnostics for next level treatment planning.

3D Tooth Incisors

DAP: 456 mGycm²
CTDI: 789 mGy
120 kV   40
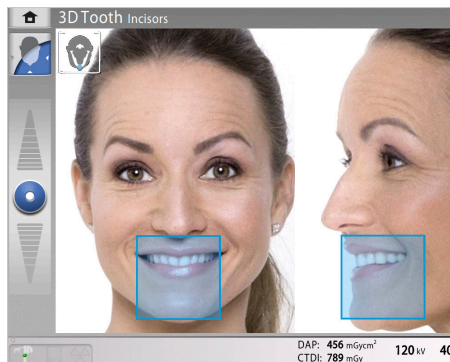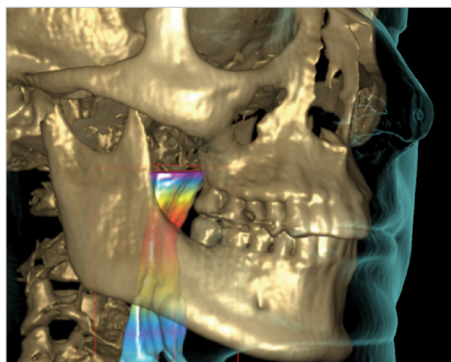
PLANMECA

Unique 3D combination – an industry first

We're the first company to combine three different types of 3D data with one X-ray unit. Our 3D family brings together a Cone Beam Computed Tomography (CBCT) image, 3D face photo and 3D model scan into one 3D image — using the same advanced software. This 3D combination creates a virtual patient in 3D, helping you with all your clinical needs.

3D X-ray image

Cone Beam Computed Tomography (CBCT) is an X-ray imaging technology where a large number of 2D images are taken of a patient from different angles. A 3D volumetric image is then calculated from these 2D projections. The resulting images can be viewed with our advanced imaging software from any angle, including the axial, coronal, sagittal and cross-sectional planes.
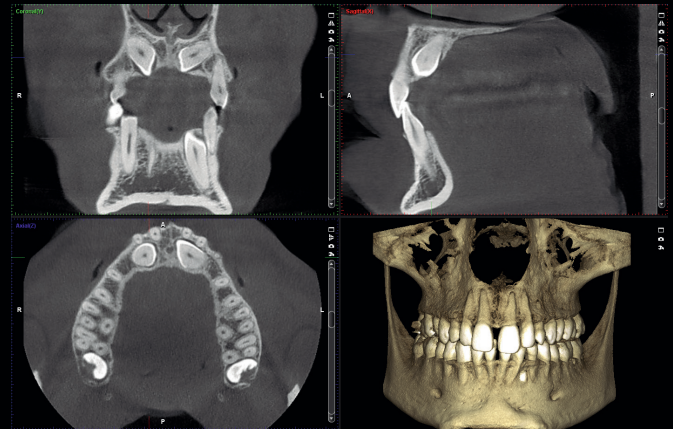

3D face photo

Planmeca ProFace® is an exclusive 3D face photo system available for our medium to large field-of-view 3D X-ray units. This pioneering integrated system produces a realistic 3D face photo and CBCT image in a single imaging session. You can also take a separate 3D face photo without exposing your patient to any radiation.


3D model scan

You can use all of our 3D X-ray units to scan both impressions and plaster casts — an exciting feature that was an industry first for our CBCT units. With our advanced **Planmeca Romexis®** software, the digitized models are available immediately and stored for later use.
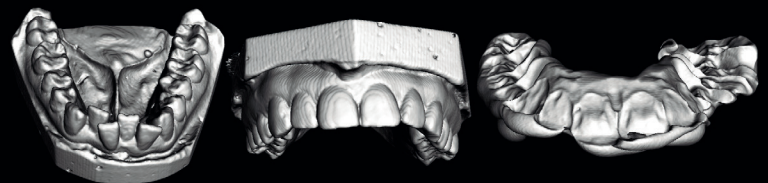
Airways visualization

Visualize and measure airways and sinus volumes before and after treatment for simplified diagnosis and treatment planning. Our advanced software tools allow accurate measurements in 3D space. Measurements can easily be reviewed using the saved views.
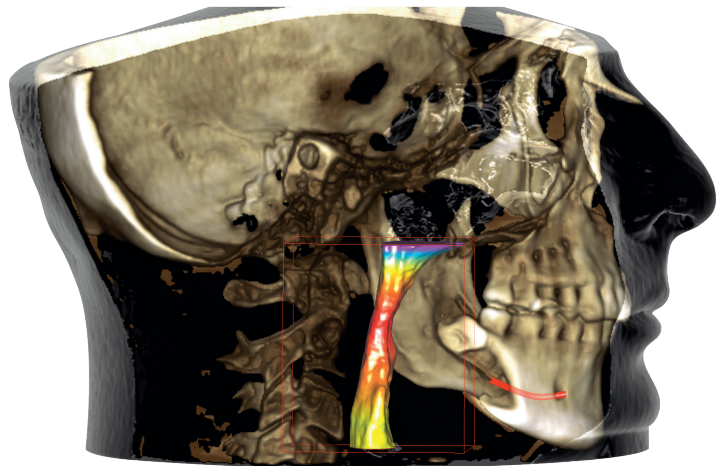
See more than ever before

Intelligent solutions for the best image quality

Our intelligent high-tech solutions and algorithms guarantee an ideal imaging geometry, perfect usability, and crystal-clear images free from noise and artifacts.

SCARA technology

The precise, free-flowing, computer-controlled SCARA (*Selectively Compliant Articulated Robot Arm*) arm construction can produce any movement pattern required. This enables accurate and reliable volume positioning and volume diameter adjustment, reducing the amount of radiation your patients are exposed to.

Flexible volume positioning

Our future-proof imaging platform is designed so that it can freely produce any movement pattern needed for optimal imaging results. This enables accurate and reliable volume positioning as well as volume diameter adjustment, reducing patient exposure to radiation.

Ready-made imaging protocols

For your convenience, our imaging units offer ready-made imaging protocols for different diagnostic tasks. When necessary, you can easily adjust any parameter to your imaging needs.

Optimized contrast for all patient images

The 120 kV tube voltage* enables optimized image quality for even the most challenging areas of interest – reducing artifacts and ensuring better contrast images.

Detailed endodontic imaging

All our CBCT imaging units support examining the finest anatomical details. The endodontic imaging mode allows capturing images with an extremely high resolution, with the 75 μm voxel size being perfect for visualizing small details.
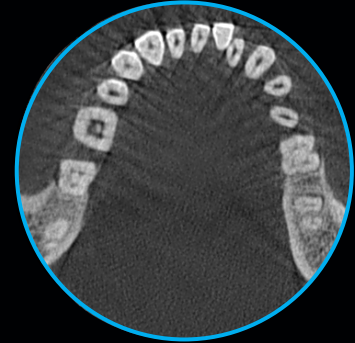

*Available for Planmeca Viso® only

Movement artifact correction with Planmeca CALM®

- Iterative movement correction algorithm
- Eliminates the need for retakes
- Cancels the effects of patient movement
- Excellent when imaging more lively patients

Without movement artifact correction

With the Planmeca CALM® movement removal algorithm

Metal artifact reduction with Planmeca ARA™

- Reliable algorithm for artifact removal
- Removes shadows and streaks caused by metal restorations and root fillings
- Easy to adjust before or after imaging
- Tried and tested – result of extensive scientific research
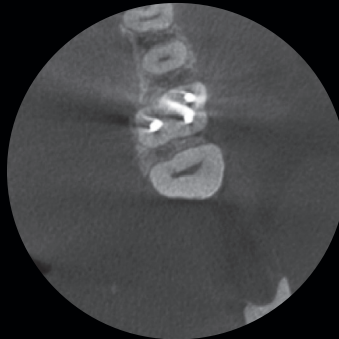
Without artifact removal
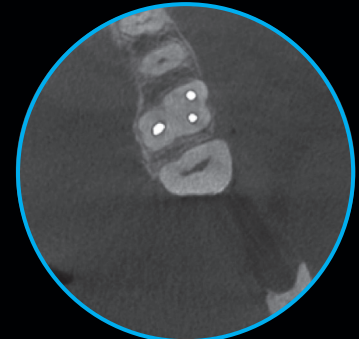
With the Planmeca ARA™ artifact removal algorithm
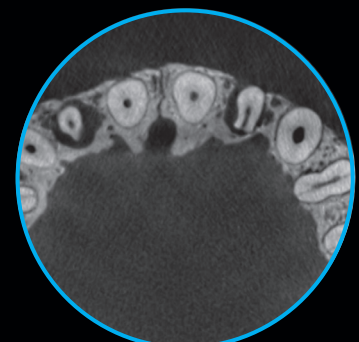
Noise removal with Planmeca AINO™

- Reduces noise in images while preserving important details
- Allows lower exposure values by reducing noise
- Improves image quality when using small voxel sizes (e.g. in the endodontic imaging mode)
- Enabled by default when using the **Planmeca Ultra Low Dose™** imaging protocol
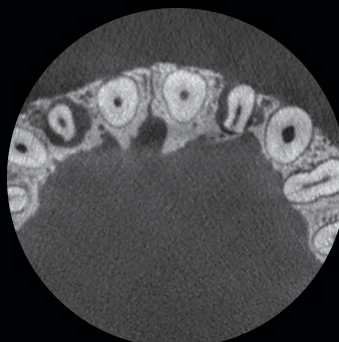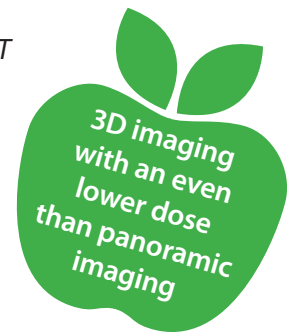
Without noise removal

With the Planmeca AINO™ noise filter

Proven low dose imaging

*Our 3D X-ray units offer a unique **Planmeca Ultra Low Dose™** imaging protocol that enables CBCT imaging with an even lower patient radiation dose than standard 2D panoramic imaging.*

Remarkably lower patient doses

The Planmeca Ultra Low Dose™ (ULD) protocol decreases the exposure values and thus the patient dose at the same time as Planmeca's other intelligent 3D imaging algorithms maintain the image quality at a diagnostically acceptable level – all to achieve the optimal balance between image quality and patient dose.

Our ULD protocol can achieve up to six times lower effective doses compared to standard protocols.*

*Charuakkra, A., Mahasantipiya, P., Lehtinen, A., Koivisto, J., J.rnstedt, J. (2022). Comparison of subjective image analysis and effective dose between low-dose cone-beam computed tomography machines. Dentomaxillofacial Radiology. https://doi.org/10.1259/dmfr.20220176

Scientifically proven

Planmeca ULD helps clinicians adhere to the ALADA (As Low As Diagnostically Acceptable) principle in their practice and is ideal for a wide range of clinical cases, from implant planning to orthodontics. But don't just take our word for it – the use of Planmeca ULD and its benefits have been studied and scientifically proven in a number of scientific studies.

Scan to see our peer-reviewed ULD studies

3D imaging with an even lower dose than panoramic imaging
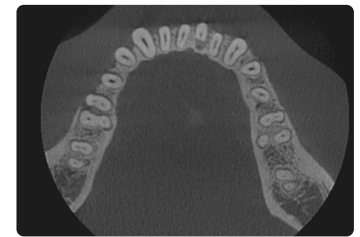
Normal Radiation Dose
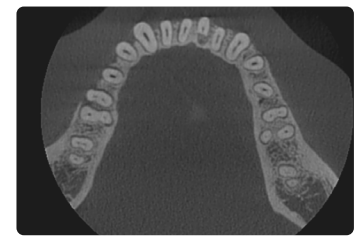
Planmeca Ultra Low Dose™
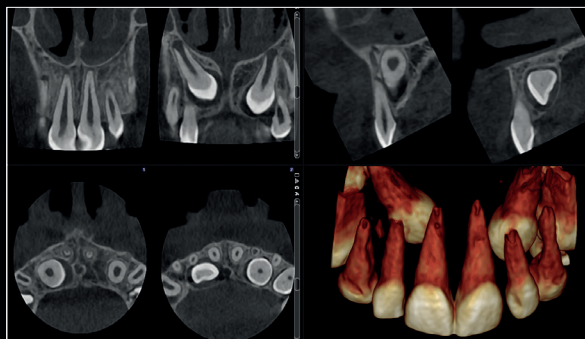
Planmeca ProMax® 3D Classic
- FOV Ø 50 x 50 mm / Voxel size 150 µm
- Effective patient dose 14.4 µSv

Planmeca ProMax® 3D Mid
- FOV Ø 85 x 50 mm / Voxel size 400 µm
- Effective patient dose 4.0 µSv

Planmeca ProMax® 3D Mid
- FOV Ø 200 x 170 mm / Voxel size 600 µm
- Effective patient dose 16 µSV

The optimal 3D unit for every imaging need

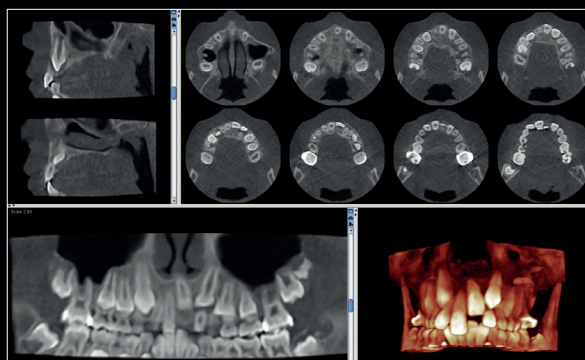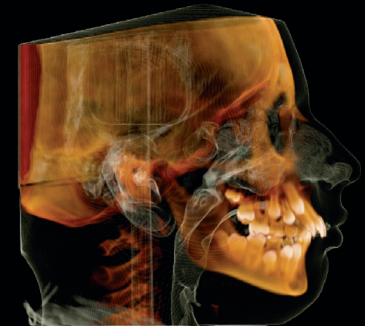|		Normal mode		Low dose mode	
		Voxel size	Effective patient dose with ULD	Voxel size	Effective patient dose with ULD
Planmeca ProMax® 3D Classic					
	Ø 8 x 8 cm – Teeth	200 µm	30 µSv	400 µm	9 µSv
Planmeca ProMax® 3D Plus					
	Ø 20 x 10 cm – Jaw	400 µm	25 µSv	600 µm	10 µSv
Planmeca ProMax® 3D Mid					
	Ø 10 x 10 cm – Teeth	200 µm	40 µSv	400 µm	8 µSv
	Ø 20 x 10 cm – Jaw	400 µm	25 µSv	600 µm	10 µSv
	Ø 20 x 17 cm – Face	400 µm	39 µSv	600 µm	16 µSv
Planmeca Viso® G7 and Viso® G5					
	Ø 10 x 10 cm – Teeth	450 µm	101 µSv	450 µm	25 µSv
	Ø 14 x 10 cm – Jaw	600 µm	61 µSv	600 µm	15 µSv
	Ø 16 x 16 cm – Face	600 µm	51 µSv	600 µm	13 µSv

Standard 2D panoramic effective patient dose is approximately 15 µSv.

Ease of operation

Our intuitive patient positioning and imaging protocols ensure smooth and fast imaging workflows.

Improved patient comfort

The open-face architecture of our imaging units offers both effortless positioning and an unrestricted view of the patient. At the same time, it allows the patient to feel comfortable without feeling closed-in while also accommodating wheelchair access through side entry.

Intuitive use

The clear and straightforward graphical user interface guides you through the imaging process, while the ready-made imaging protocols save more time for your patients. For an even faster workflow, the control panel can also be operated remotely from the imaging workstation.

Free 3D volume positioning

The 3D volume can be positioned freely and accurately for maximum flexibility.
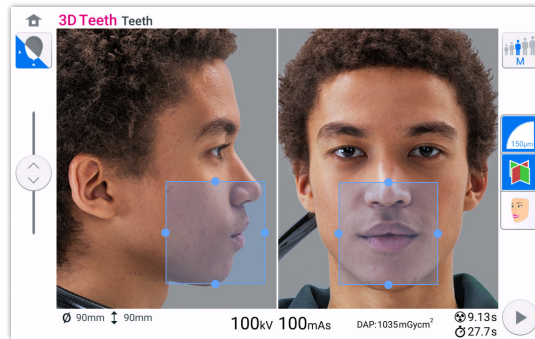
Successful imaging every time

All our imaging units support taking scout images for perfect positioning to ensure successful imaging every time.
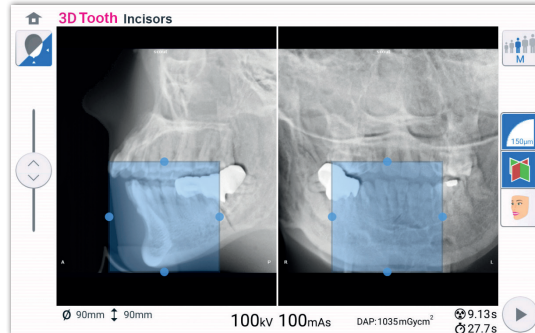
2D and 3D imaging with one sensor

There is no need to change sensors when alternating between CBCT and panoramic imaging. Our advanced **SmartPan™** imaging system uses the same 3D sensor to acquire 2D images. Together with our intelligent Planmeca CORE™ pre-processing algorithm, they make the ideal solution for daily panoramic imaging.

10 YEAR

Quality. Safety. Protection.

3D IMAGING COVERAGE

PLANMECA
Warranty Care

Planmeca 3D imaging units now have the option of five additional years of protection.

That's a decade of peace of mind.

SCAN HERE
TO LEARN MORE

Planmeca Viso®

The next generation has arrived

Planmeca Viso® *is an ideal combination of premium image quality and high-end usability. It possesses all the qualities of a world-class CBCT unit – and more. The unit is an impressive step forward in the evolution of cone beam imaging and fulfills all extraoral imaging needs from dental to demanding maxillofacial imaging in all clinical environments, be they private clinics or large hospitals.*

Live virtual FOV positioning

Patient positioning is done directly from the CBCT unit's control panel using integrated cameras and a live patient view. Adjust the size and location of the FOV freely with just the tip of your fingers.
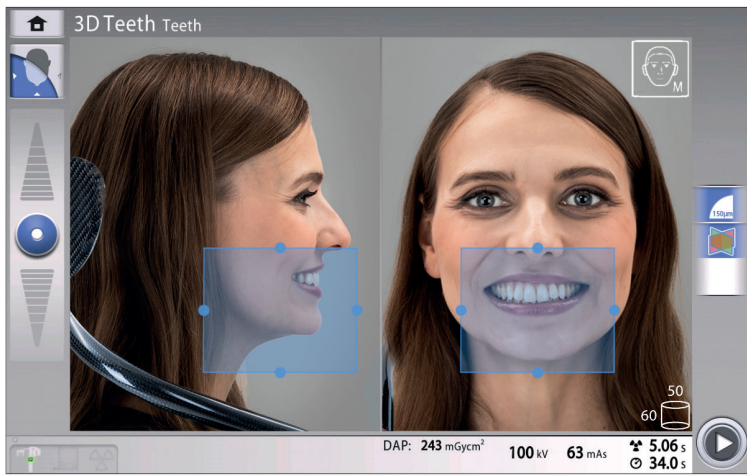
Freely adjustable volume

Planmeca Viso® offers a wide selection of volumes to cover all clinical needs – from single tooth to full skull imaging. The volume size can be adjusted freely. The unit's remarkable 3D sensor is also fully capable of 2D imaging.

Integrated face photo for improved patient communication

Planmeca Viso enables capturing highly detailed Planmeca ProFace® facial photos. It is a unique way of producing a realistic 3D face photo and a CBCT image with a single scan. The 3D face photo can also be created separately, without exposing the patient to any radiation.

Unique occipital support

The unit's occipital support provides stability without compromising patient comfort and offers an unimpeded view of facial tissue.

The size and location of the FOV can be further optimized in the scout view.

PLANMECA

Planmeca Viso® 3D Family

10 YEAR
3D IMAGING COVERAGE
PLANMECA Warranty Care

*Our **Planmeca Viso®** CBCT imaging unit family consists of two models — both offering exceptional image quality, numerous cutting-edge features, and premium usability. The units are capable of three-dimensional imaging, as well as panoramic, extraoral bitewing, and cephalometric imaging. The next generation of CBCT imaging is here in full force.*

Planmeca Viso® G5

A Ø20x10 cm scan covering the entire jaw area can be acquired in a single scan. The volume size can be adjusted freely from Ø3x3 to Ø20x17 cm.

Planmeca Viso® G7

A Ø30x20 cm scan covering the entire maxillofacial area can be acquired in a single scan. The volume size can be adjusted freely from Ø3x3 to Ø30x30 cm.

Planmeca Viso® G5

Planmeca Viso® G7

	G5	G7
Planmeca CALM® movement artifact correction	✔	✔
Planmeca Ultra Low Dose™ imaging	✔	✔
Tube voltage 120 kV	✔	✔
Endodontic mode	✔	✔
3D dental programs	✔	✔
3D ENT programs*	✔	✔
3D face photo*	✔	✔
3D models scan*	✔	✔
2D panoramic imaging	✔	✔
Cephalometric imaging, one-shot*	✔	✔
Maximum volume, single scan	Ø20x10 cm	Ø30x20 cm
Maximum volume	Ø20x17 cm	Ø30x30 cm
Viewing requirements	Tooth, single arch, dual arch, advanced airway, orthodontics, TMJ, OMS and C7	Tooth, single arch, dual arch, advanced airway, orthodontics, TMJ, OMS and C7
Volume sizes	Ø3x3–20x17 cm Unlimited volume sizes	Ø3x3–30x30 cm Unlimited volume sizes

*Optional equipment

Planmeca ProMax® 3D Family

True all-in-one units for all your imaging needs

Planmeca ProMax® 3D is a product family consisting of exceptional all-in-one units.

Planmeca ProMax® 3D LEC

Planmeca ProMax® 3D Classic

Planmeca ProMax® 3D LEP

	3D LEC	3D Classic	3D LEP	3D Plus	3D LEM	3D Mid
Planmeca CALM® movement artifact correction		✔		✔		✔
Planmeca Ultra Low Dose™ imaging		✔		✔		✔
Endodontic mode	✔	✔	✔	✔	✔	✔
3D dental programs	✔	✔	✔	✔	✔	✔
3D ENT programs*			✔	✔	✔	✔
3D face photo*	✔	✔	✔	✔	✔	✔
3D models scan*	✔	✔	✔	✔	✔	✔
SureSmile certification*	✔	✔			✔	✔
2D panoramic imaging	✔	✔	✔	✔	✔	✔

*Optional equipment

Planmeca ProMax® 3D Plus   *Planmeca ProMax® 3D LEM*   *Planmeca ProMax® 3D Mid*

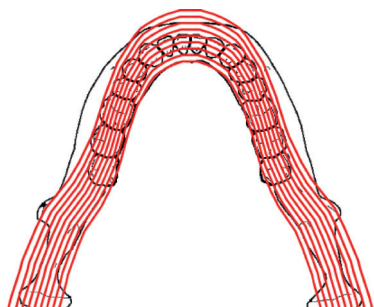|	3D LEC	3D Classic	3D LEP	3D Plus	3D LEM	3D Mid
Cephalometric imaging, scanning	✔	✔	✔	✔	✔	✔
Cephalometric imaging, one-shot*	✔	✔	✔	✔	✔	✔
Maximum volume, single scan	Ø8x8 cm	Ø8x8 cm	Ø20x10 cm	Ø20x10 cm	Ø20x10 cm	Ø20x10 cm
Extended volume, single scan	Ø11x8 cm	Ø11x8 cm				
Maximum volume	Ø14x10.5x8 cm	Ø14x10.5x8 cm			Ø20x17 cm	Ø20x17 cm
Viewing requirements	Tooth, single arch, dual arch, basic airway	Tooth, single arch, dual arch, basic airway	Tooth, single arch, dual arch, basic airway, limited orthodontics and TMJ	Tooth, single arch, dual arch, basic airway, limited orthodontics and TMJ	Tooth, single arch, dual arch, advanced airway, orthodontics, TMJ and OMS	Tooth, single arch, dual arch, advanced airway, orthodontics, TMJ and OMS
Volume sizes	Ø5x5–11x8 cm 9 volume sizes	Ø5x5–11x8 cm 9 volume sizes	Ø4x5–20x10 cm 15 volume sizes	Ø4x5–20x10 cm 15 volume sizes	Ø4x5–20x17 cm 16 volume sizes	Ø4x5–20x17 cm 16 volume sizes

2D and 3D imaging with one sensor

There is no need to change sensors when alternating between CBCT and panoramic imaging. Our advanced SmartPan™ imaging system uses the same 3D sensor to acquire 2D images. Together with our intelligent Planmeca CORE™ pre-processing algorithm, they make the ideal solution for daily panoramic imaging.

2D SmartPan™ — unique panoramic imaging

Our advanced **SmartPan™** imaging system uses the same 3D sensor also for 2D panoramic imaging.

SmartPan produces nine different parallel panoramic layers with an about 2 mm shift and one autofocus layer.

2D programs

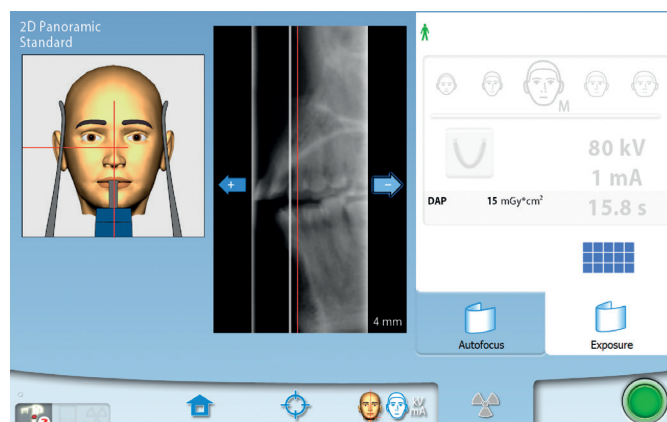|	
Standard: Basic panoramic programs	Standard panoramic
	Lateral TMJ (closed & open)
	PA TMJ (closed & open)
	PA sinus
Standard	Child (Pediatric) mode for each standard and optional program to reduce the dose
Optional	Horizontal and vertical segmenting for panoramic program
Optional	True Bitewing
Optional: Advanced panoramic programs	Interproximal panoramic
	Orthogonal (perio) panoramic
	Lateral-PA TMJ
	Lateral multiangle TMJ
	PA multiangle TMJ
	PA linear sinus
	Lateral sinus

Imagine your X-ray unit recognizing your patient's anatomy

The unique **Autofocus** feature enables error-free patient positioning and reduces the need for retakes. AutoFocus automatically positions the focal layer using a low dose scout image of the patient's central incisors. It uses landmarks in the patient's anatomy to calculate placement. The result is a perfect panoramic image — every time.

Better diagnostic value with extraoral bitewings

True Bitewing program, adult

True Bitewing program, 5-year-old child

- Ideal for all patients — no sensor positioning required

- Consistently opens interproximal contacts, giving better diagnostic value

- See 24% more teeth versus intraoral bitewings[1]

- More clinical data: canine to third molar

- Clinically proven to be effective at caries detection[1]

- Reveal the alveolar crest of both arches consistently[1]

- Better at detecting bone loss than intraoral bitewings[1]

- View apices of each tooth doubling as a periapical

- Enhanced clinical efficiency — takes less time and effort than conventional intraoral bitewings

- Enhanced patient experience and comfort — eliminates gagging

[1] *"Accuracy of extraoral bitewing radiography in detecting proximal caries and crestal bone loss", by doctors Micah Chan, DDS, MS, Tenzin Dadul, MDS, Robert, Langlais, DDS, MS, David Russell, DDS, Mansur Ahmad, BDS, PhD. University of Minnesota.*

Quality cephalometry for orthodontics

Our exceptional equipment and advanced software have been designed to meet all your orthodontic needs.

Cephalometric imaging with Planmeca 3D X-ray units

- The functional and easy-to-use head positioner ensures accurate positioning for all cephalometric projections

- The carbon fiber ear posts and nasal positioner are extremely stable, hygienic, and transparent to radiation

- The unit automatically aligns itself to take cephalometric exposures and then selects a corresponding collimator

- The rotating tube head in the 3D unit eliminates the need to remove the 3D sensor

- Dedicated collimation options for pediatric imaging

Two equipment options:

One-shot Planmeca ProCeph™ cephalostat

- Effective one-shot cephalostat

- Short exposure time — no motion artifacts, low patient dose

- Image sizes from Ø18 x 20 cm to Ø30 x 25 cm

- Available for all Planmeca 3D X-ray units

Scanning Planmeca ProMax® cephalostat

- Digital cephalostat that scans your patient's head horizontally using a narrow X-ray beam with an extremely low effective dose of radiation

- Exceptional flexibility in image formats, with field sizes of up to Ø30 x Ø27 cm
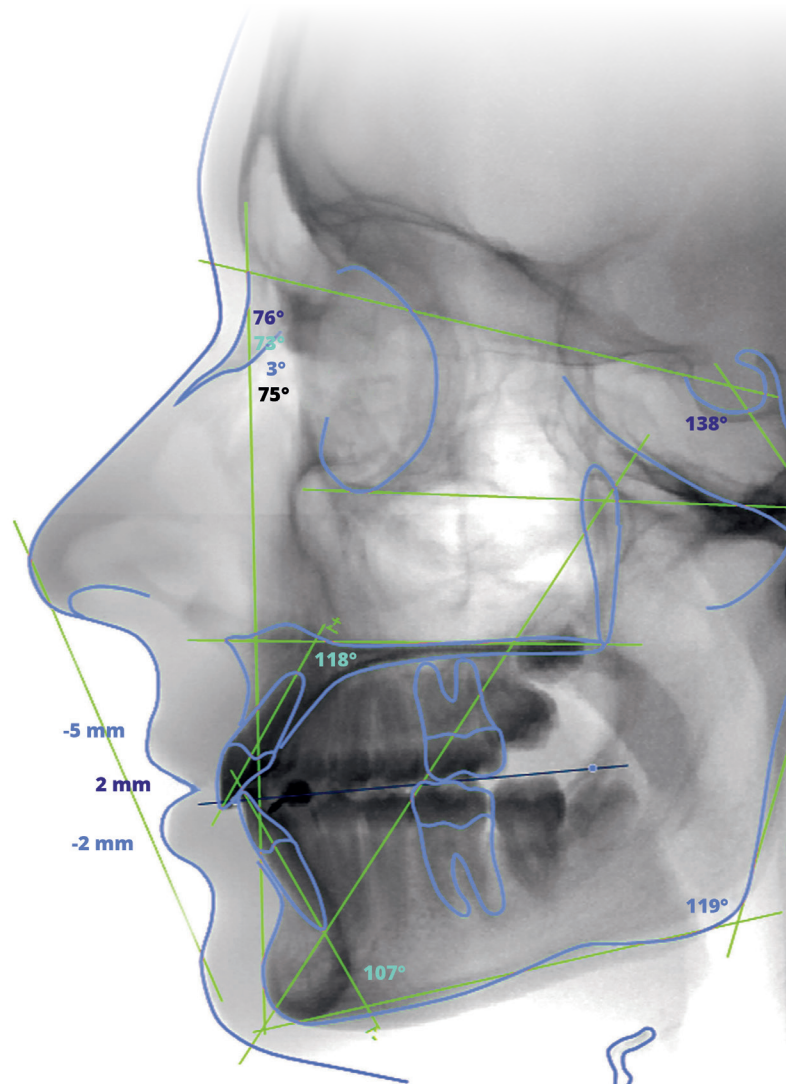
Two options for cephalometric analyses:

Planmeca Romexis®
Cephalometric Analysis module

Take advantage of the **Planmeca Romexis® Cephalometric Analysis** module's wide range of orthodontic and orthognathic tools.

- Automatic landmark identification

- Tools for creating cephalometric analyses, superimpositions, and surgical treatment plans (VTO) in minutes

- Fully customizable analyses, norms, and reports

- Microsoft Excel export and import function

- Compatible with the Windows operating system

Online automatic analysis service

Acquire cephalometric analyses regardless of the time and place with the **Planmeca Romexis®** automatic cephalometric analysis service.

- Online automatic cephalometric tracing in a few seconds

- Over 50 analyses available for download immediately after tracing

- Direct link from the **Planmeca Romexis®** 2D module for ordering analyses

Planmeca Romexis® – one software for all your needs

*We offer a revolutionary all-in-one software solution for clinics of all sizes. Our world-leading **Planmeca Romexis**® software is the brains behind all of our products, bringing together all the devices at your dental clinic from CAD/CAM to imaging devices and dental units. The easy-to-use Romexis software supports the most versatile range of 2D and 3D imaging modalities.*
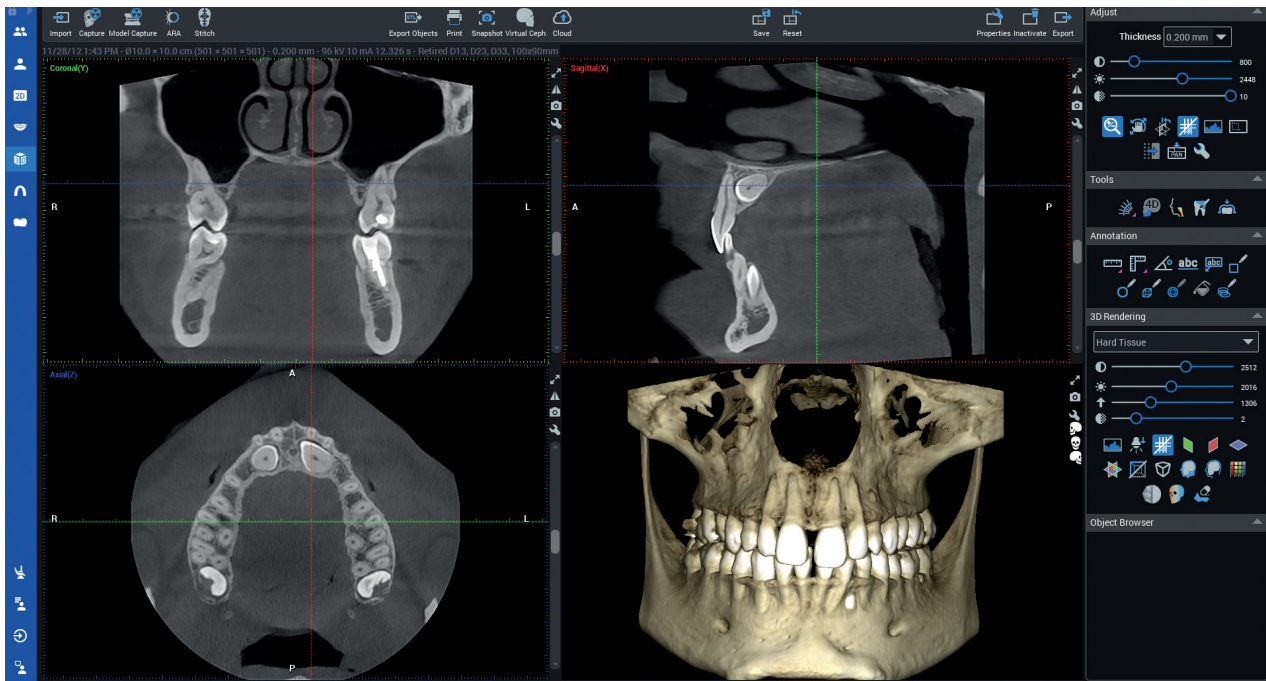

Excellent tools for quality images

With a complete set of tools for image viewing, enhancement, measurement, drawing and annotations, **Planmeca Romexis®** improves the diagnostic value of radiographs. Versatile printing and image import and export functionalities are also included. The software consists of different modules — so you can choose those most suited to your needs.

Convenient 3D diagnosis

The **Planmeca Romexis®** 3D rendering view gives an immediate overview of the anatomy and serves as an excellent patient education tool. The images can be instantly viewed from different projections or converted into panoramic images and cross-sectional slices. Measuring and annotation tools — such as nerve canal tracing — assist in safe and accurate treatment planning.

Best compatibility with other systems

Planmeca Romexis® offers excellent compatibility with other systems, allowing you to freely use third-party products at your clinic. TWAIN support and DICOM standard compliance ensure that our flexible software can be used effortlessly with most systems.
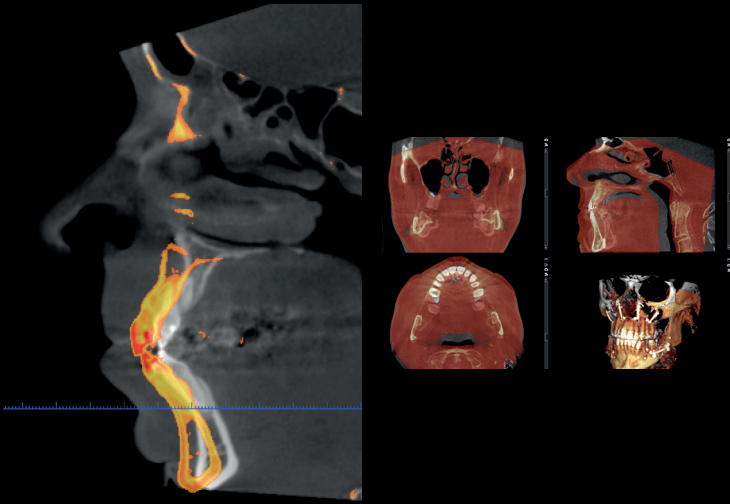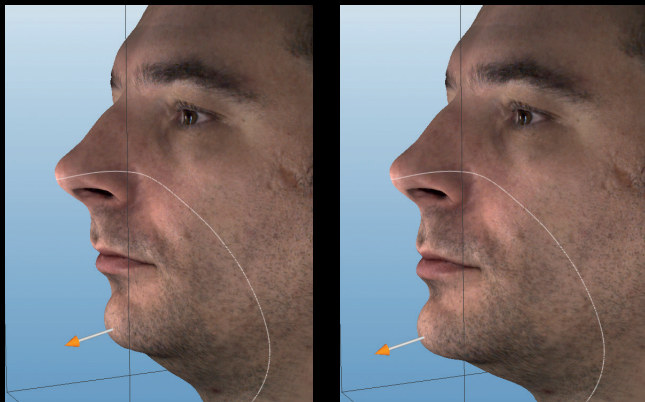
Superimpose CBCT

Planmeca Romexis® allows the superimposition of two CBCT images. It is a valuable tool for before-and-after comparisons and can be used for orthognathic surgery follow-ups, as well as orthodontic treatments.
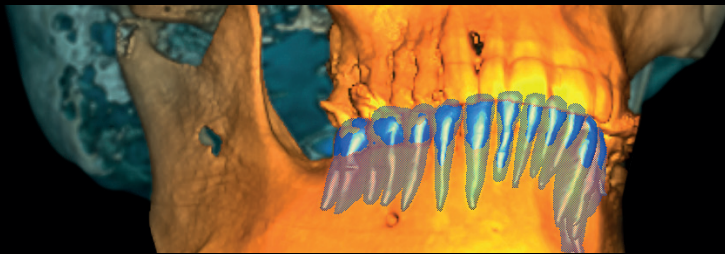
Tooth segmentation

Planmeca Romexis® provides an intuitive and efficient tool for segmenting a tooth and its root from a CBCT image.

Shaping tool for 3D face photo

The shaping tool allows for free modification of **Planmeca ProFace®** surfaces to simulate the effects of treatments or surgery.

3D cephalometry

The **Romexis® 3D Cephalometry** module allows for performing cephalometric tracing and analysis in 3D. Placing anatomical landmarks is done intuitively on 3D or 2D slice views. The module includes two analysis types: TFA Perrotti Analysis and Orthognathic Surgery Analysis.

The complete implant workflow

Our **Planmeca Romexis® 3D Implant Planning** module offers all the necessary tools for fully digital implantology — from planning to guided surgery. The software's implant library includes realistic implant models as well as collections of sleeves for guided surgery. After completing the implant plan, a surgical guide can be immediately designed in the same **Planmeca Romexis®** software with just a few clicks.
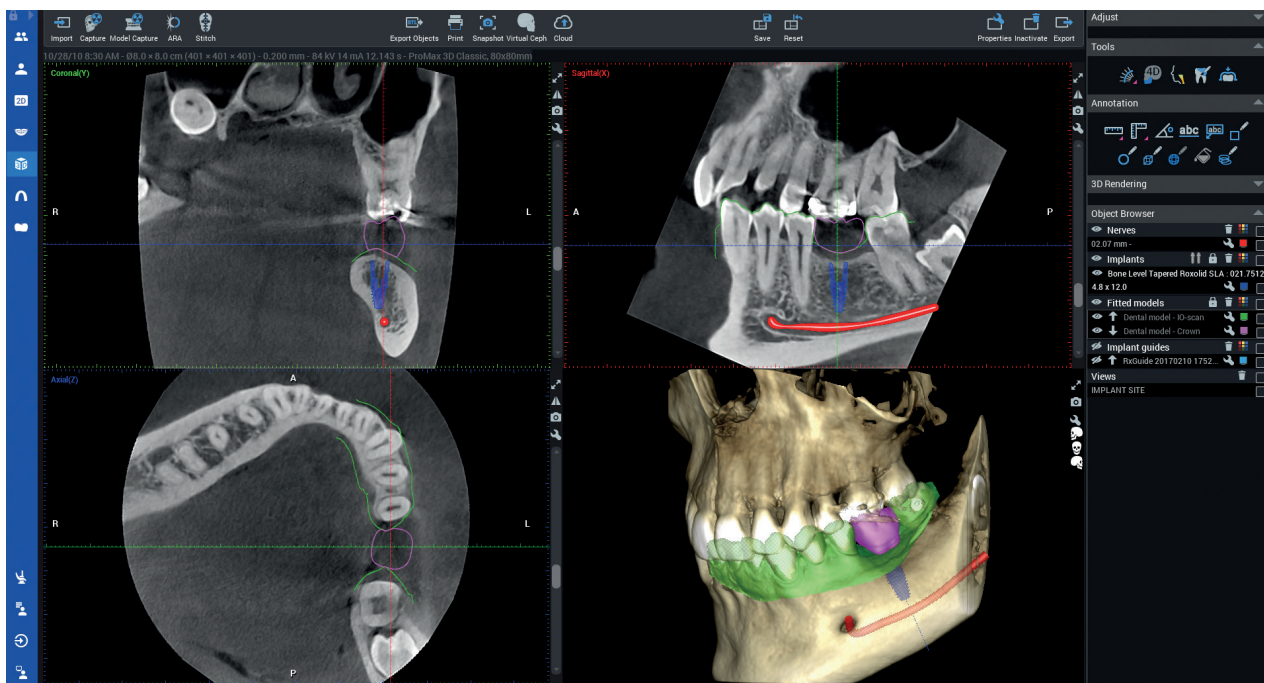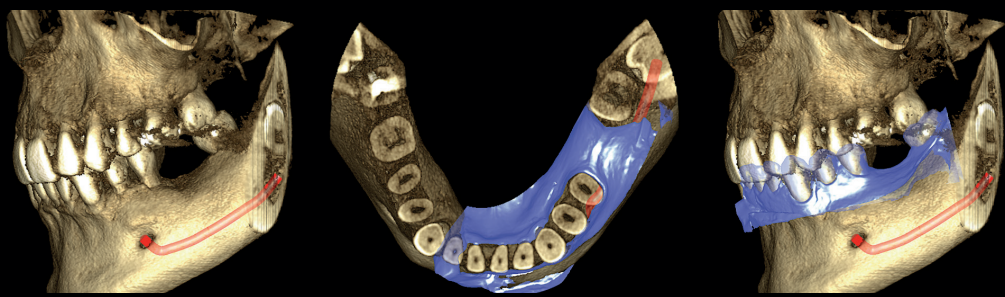

The **Planmeca Romexis®** software platform provides the perfect environment for top-down implant planning. By superimposing a crown and dental model onto CBCT data, users can create a complete virtual setup for optimally positioning the implant — taking prosthodontic and surgical perspectives into account.

Realistic implant models from over 120 manufacturers

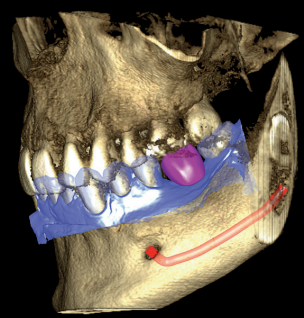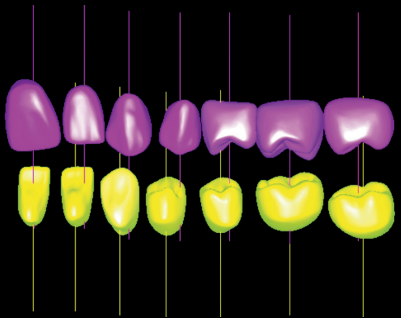Scan to see all the implants included in the Romexis implant library.

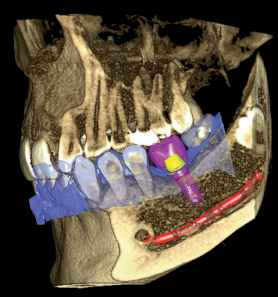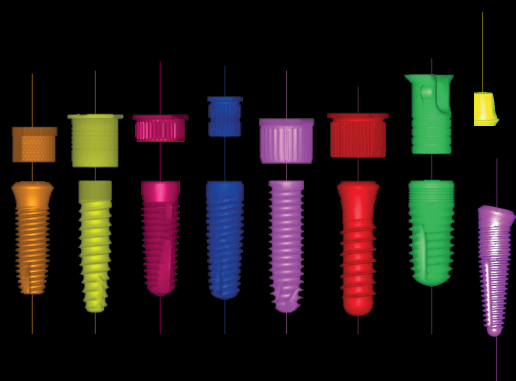# Top-down implant workflow

Mark the nerve on the CBCT image

Superimpose the 3D model scan onto the CBCT image with the Planmeca Romexis® software

Use the Planmeca Romexis® crown library, or import a patient-specific crown from the CAD system to the software

Select the preferred implant and sleeve from the extensive Planmeca Romexis® library and find the optimal position for it from a prosthetic and surgical perspective
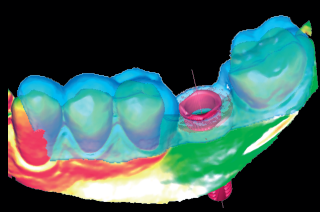
Design the surgical implant guide with just a few clicks in Planmeca Romexis® — the software will create an open STL file of the design

Romexis allows designing both tooth- and mucosa-supported guides.

Print the surgical guide with any suitable 3D printer.

Share images and expertise online

Planmeca Romexis® Cloud is a secure image transfer service for *Planmeca Romexis®* users and their partners for sharing image and patient data with any specialist or patient. You can share images and expertise securely with all partners who use Planmeca Romexis, the free *Planmeca Romexis® Viewer,* the free *Planmeca Romexis®* LabApp or the *Planmeca mRomexis™* mobile tablet application.

Romexis Cloud – versatile possibilities for communication

- External applications, DVDs and insecure file transfers are history – images can be sent directly from **Planmeca Romexis®**

- Share images and data with your dental partners and patients

- The Romexis software and **Planmeca Romexis® Cloud** subscriptions are required to send new cases – recipients only need an e-mail account at minimum

Visit **online.planmeca.com**
to subscribe and start sending images now.

Receive cases with free Planmeca Romexis® Viewer application

Planmeca Romexis® Viewer is a free application that can be exported and sent together with images from **Planmeca Romexis®**.

- Full-featured viewer application

- No installation required

- Mac and Windows support

- Distribute to specialists or patients

Visit **planmeca.com/Viewer** for downloading Planmeca Romexis Viewer software.

Planmeca Romexis® user
- Radiology center
- General practice

Planmeca Romexis® Cloud
- Images
  - 3D CBCT
  - 3D photo
  - 3D surface scan
  - Panoramic
  - Cephalometric
  - Intraoral
  - Photo
- Referrals
- Interpretations
- Treatment plans

Anybody, anywhere
- General practitioner
- Colleague
- Radiologist
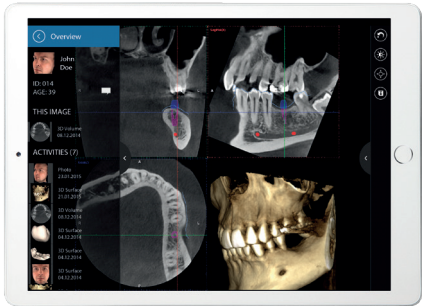- Specialist
- Dental lab
- Patient

Increased flexibility with Planmeca mRomexis™ tablet application

Use our fast, easy, and light **Planmeca mRomexis™** mobile imaging application to view all your images in the **Planmeca Romexis®** database on a local network, or to carry images with you on your tablet device. You can also use the application to capture 2D X-ray images with Planmeca equipment, or to take photos with the tablet camera.

Download the Planmeca mRomexis application for iOS and Android from the **App Store or Google Play**.

Access to unique X-ray device data

Take the efficiency of your clinic to the next level with real-time information on networked equipment usage and events. Our digital tools offer several quality assurance and service benefits for local users and also allow you to remotely monitor your clinic from anywhere.

Planmeca equipment can be networked to gather valuable data on their use.

- Detailed X-ray log book with dosage and sensor information
- Meet regulatory requirements with automatic recording of image exposure values: kV and mAs
- Enhanced operational planning — exposure counts and modality distribution
- Enhance operational planning — usage hours
- Use detailed event logs to improve quality assurance — including radiation hygiene
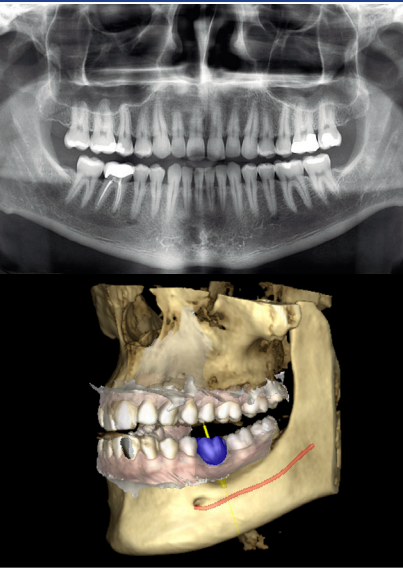- Maximize equipment uptime with fast and accurate trouble-shooting

2D/3D Imaging   CAD/CAM   Cabinetry   Dental Units

At Planmeca, we do things differently. We are in a unique position as one of the largest, privately owned dental manufacturers in the world. It means we set our own priorities. Our Finnish-based research and development team collaborate with industry thought leaders around the globe to reach higher and bring superior products to the dental space.

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Better care through innovation