CASTELLINI

EN
IMAGING
X-RADIUS
TRIO PLUS
FullView

MAKING SPACE FOR EXCELLENCE

X-RADiUS TRiO PLUS
FullView

ENHANCED FEATURES FOR CLINICAL IMAGING

X-RADiUS TRiO PLUS combines the intelligence of a modular 2D and 3D imaging concept with the latest innovations in radiology and the new Neowise software, which features advanced tools and filters for diagnosis and planning.

SOMAX SCAN

The new Somax Scan function, which detects the subject's facial physiognomy, can also be integrated. Using radiation-free technology, Somax Scan acquires a volumetric image of the face and dentofacial structures. Combining multiple diagnostic data sources (facial scan and X-ray scan) on the Neowise software reduces the number of pre-surgical sessions and helps predict the post-surgical aesthetic outcome, particularly useful with orthodontics and maxillofacial surgery.

FULL VISUAL SYSTEM

This dual-camera system aids proper patient positioning and monitoring both before and during the scan: it also allows correct patient alignment thanks to the use of virtual guides for both 2D and 3D scans. Speeds up procedures and streamlines the workflow.

iES - DC^{III} FOR PAN AND CEPH

A powerful image Enhancement System (iES) automatically optimises image viewing according to your preferred pre-established settings. The innovative direct conversion technology present in the 2D DC^{III} detectors significantly increases image definition and contrast while keeping the dose low.

STABILITY AND CLINICAL ERGONOMICS

The head support adapts to the anatomical shape of the skull; together with the two supplied bites, it allows correct positioning, even with partially/totally edentulous and paediatric patients. Three integrated laser guides ensure proper patient alignment and reduce the risk of having to repeat the scan.

INTEGRATED COOLING

When you need to perform a large number of examinations in one day, this accessory lets you maximise device performance without slowing down the productivity of the practice.

MODULARITY AND ESSENTIAL DESIGN

The outstanding modularity of X-RADiUS TRiO PLUS allows for performance upgrades that cover classic 2D and volumetric needs. It is also possible to add the latest-generation direct conversion technology in the PAN and CEPH sensors. The innovative direct conversion technology implemented on 2D DC[III] detectors significantly increases image definition and contrast while keeping doses low.

MAXIMUM PERFORMANCE

Ultra-high levels of detail for guided surgery, prosthetic design, endodontic studies and implantology.

INTELLIGENT LIGHTING

The lighting system enhances the design and makes the practice more welcoming. Customised colours and adjustable intensity help patients feel confident and relaxed while indicator lights show the progress of the various stages of the scan.

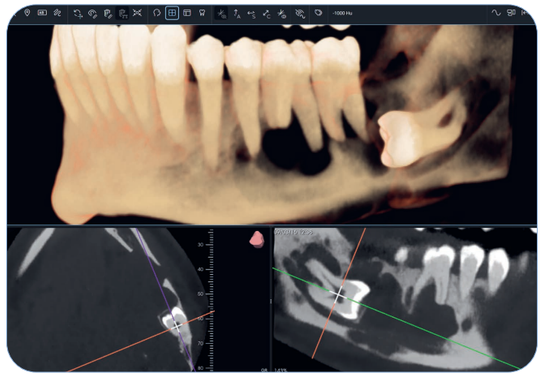
ADAPTABILITY AND CONFIGURABILITY

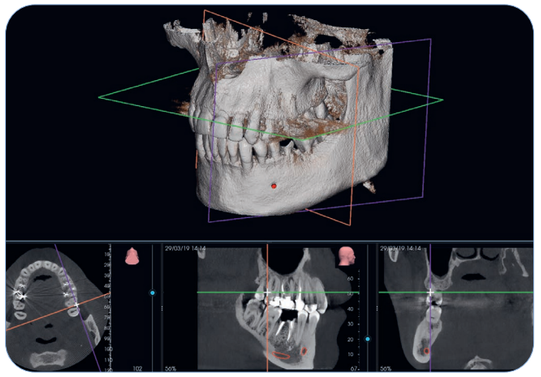
The teleradiography arm can be installed by selecting the right or left side of the device at the time of ordering.

A SOLUTION FOR EVERY NEED

FlexiFOV functionality lets dentists adapt the field of view to the patient's morphology and diagnostic needs, ensuring only the area of interest is irradiated. The “Standard” configuration allows you to perform mainly dental anatomy assessments, while the “Premium” configuration lets you evaluate the Head & Neck anatomical area. Additional FOV groups are available for specific scans such as ENDO, TMJ and CERVICAL & EAR.

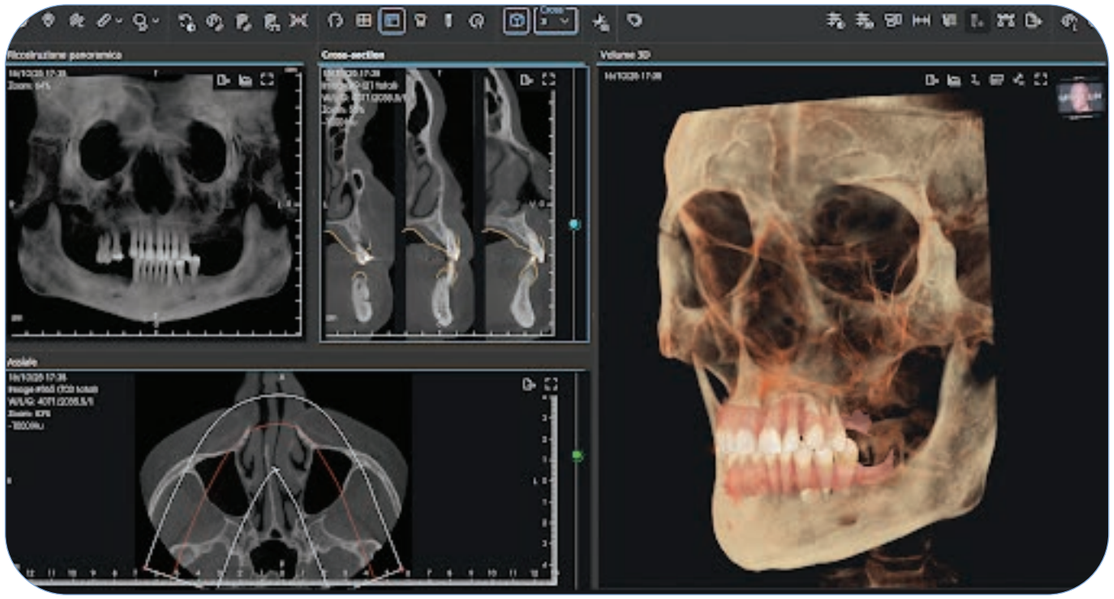
STANDARD 3D SCANS

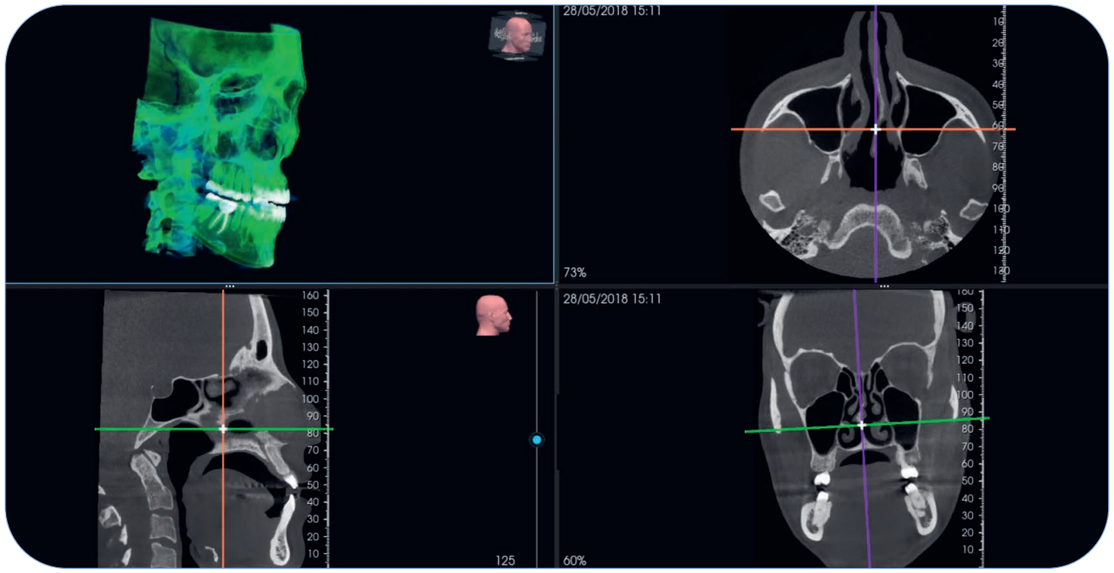




STANDARD LEVEL	
FOV	**DIAGNOSTIC AREA**
13x10	Nose + Maxillary sinuses (Adult) Both TMJs with ascending branches (Child)
13x6	Both TMJs without ascending branches (Child)
11x8	Dual dental arch - third molars included (Adult)
10x10	Dual dental arch or Maxillary sinuses (Adult)
10x6	Dental arch (Adult)
8x8	Dual dental arch or Maxillary sinuses (Child)
8x6	Dental arch (Child)
6x6	Dental semi-arch (Adult)

PREMIUM 3D SCANS

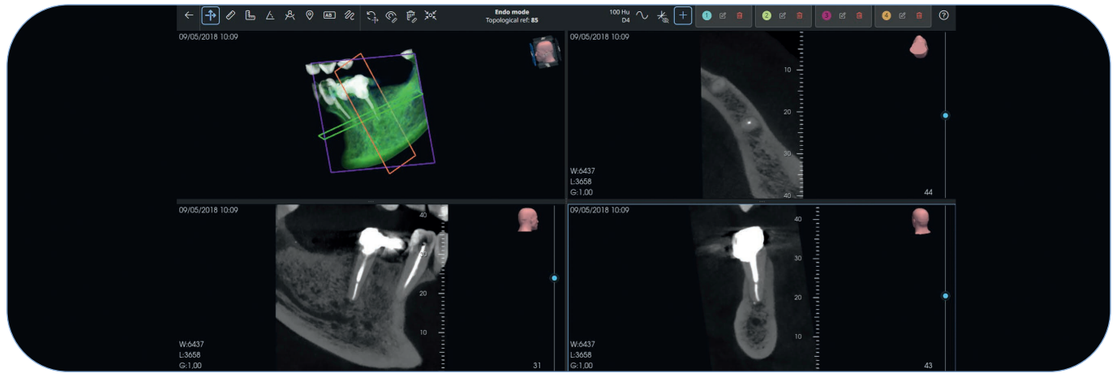




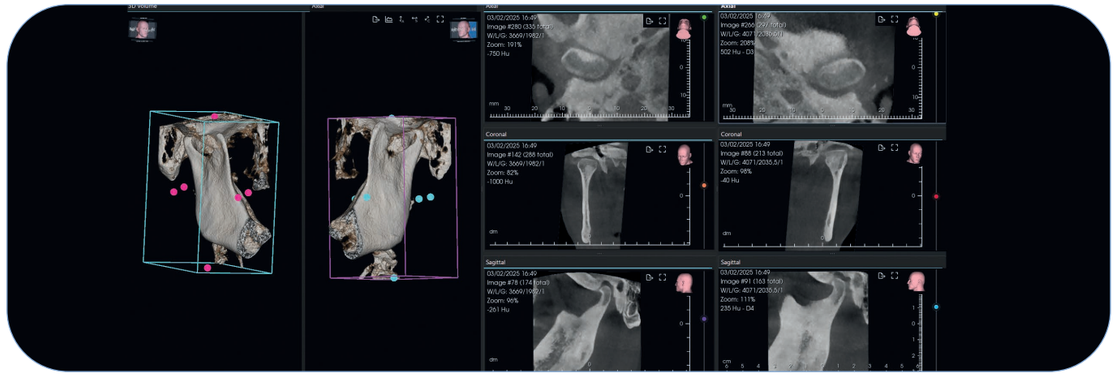
PREMIUM LEVEL	
FOV	**DIAGNOSTIC AREA**
15x16	Maxillo (Adult)
15x10	Both TMJs with ascending branches (Adult) Dentition + Maxillary sinuses + TMJ (Child)
15x6	Both TMJs (Adult)
13x16	Nose + Maxillary sinuses + Frontal sinuses (Adult)

3D SCANS OPTIONAL PACK

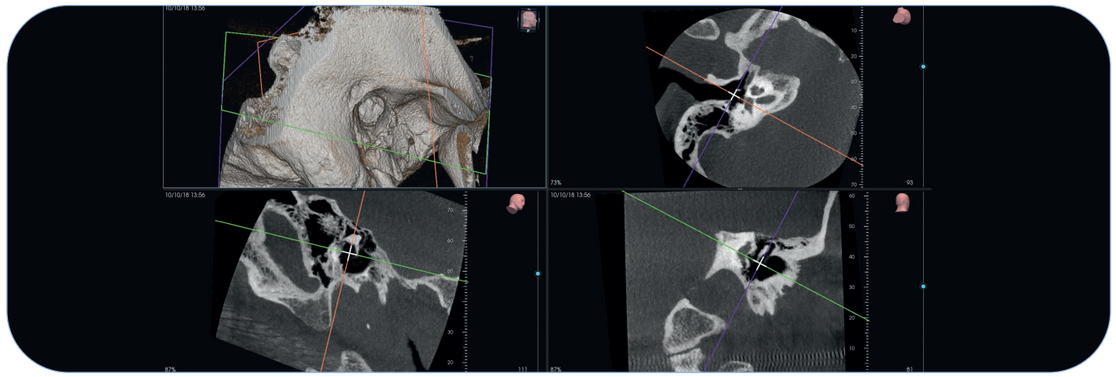
ENDO



TMJ



CERVICAL & EAR

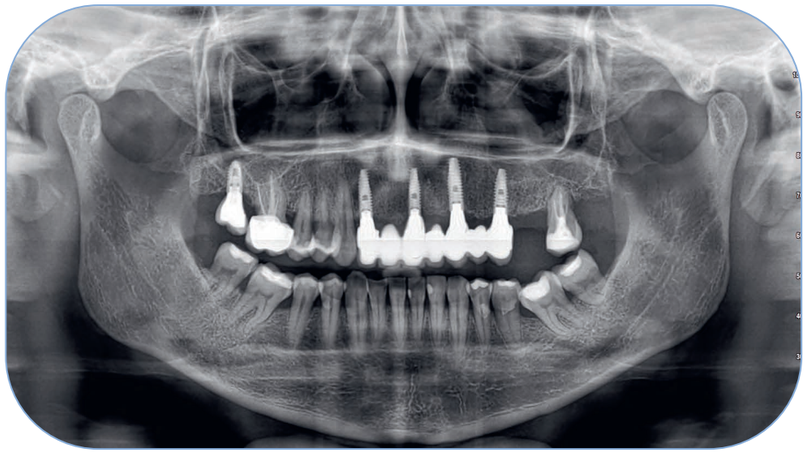


STANDARD LEVEL – ENDO PACK	
FOV	**DIAGNOSTIC AREA**
5x4	Dental semi-arch / Endo single tooth (Child)
4x4	Endo dental sector (Adult)

STANDARD LEVEL – TMJ PACK	
FOV	**DIAGNOSTIC AREA**
15x10	Both TMJs with ascending branches (Adult) Dentition + Maxillary sinuses + TMJ (Child)
15x6	Both TMJs (Adult)

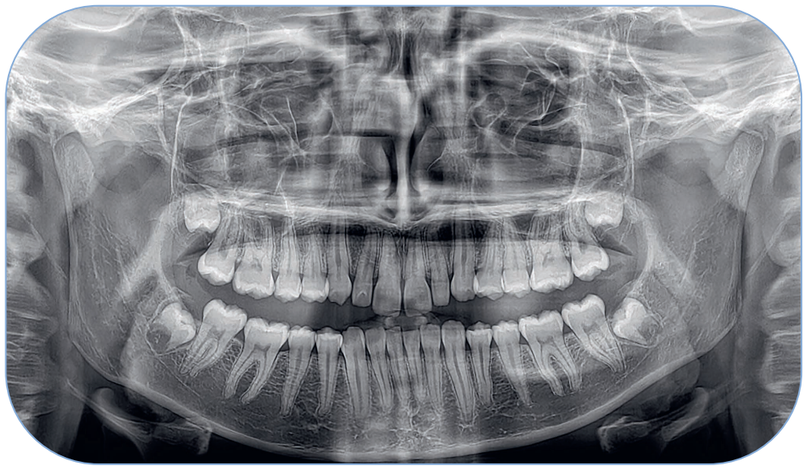
PREMIUM LEVEL – ENDO PACK	
FOV	**DIAGNOSTIC AREA**
5x4	Dental semi-arch / Endo single tooth (Child)
4x4	Endo dental sector (Adult)

PREMIUM LEVEL – CERVICAL & EAR PACK	
FOV	**DIAGNOSTIC AREA**
9x16	Complete cervical spine tract
9x9	Partial cervical spine tract
7x6	Inner ear



STANDARD PANORAMIC IMAGE

Allows complete, accurate display of the dental arches, maxillary sinuses and temporomandibular joints. The ORTHO version significantly improves the view of the interproximal spaces.

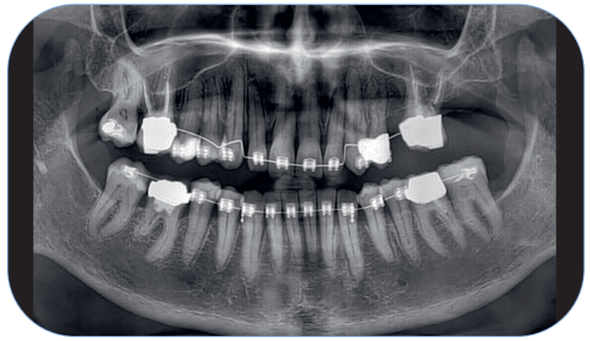


DC[III] ULTRA HD PANORAMIC IMAGE

Provides an exceptionally detailed clinical overview with low doses.

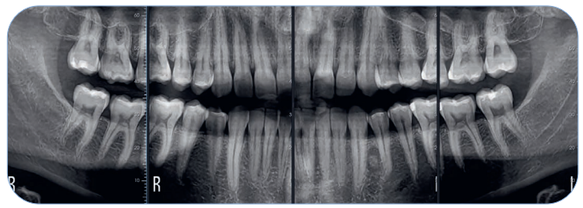
PAEDIATRIC PANORAMIC IMAGE

Both field of view and exposure are adapted to the paediatric patients' body size reducing exposure.



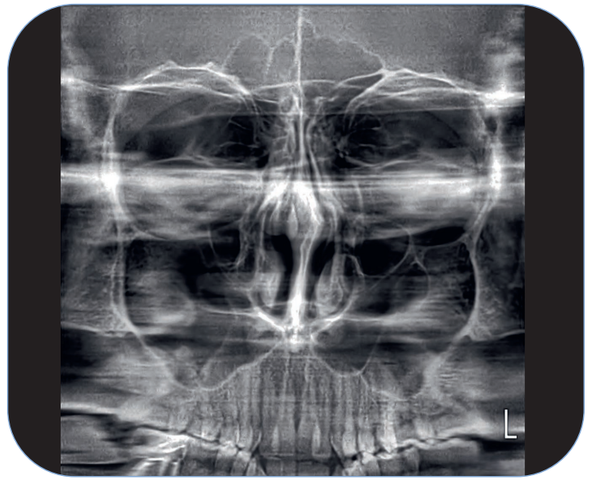
DENTITION

Provides clear, detailed images that are limited to the dentition area, in whole or in part: their orthogonality and definition are perfect for periodontal assessments.



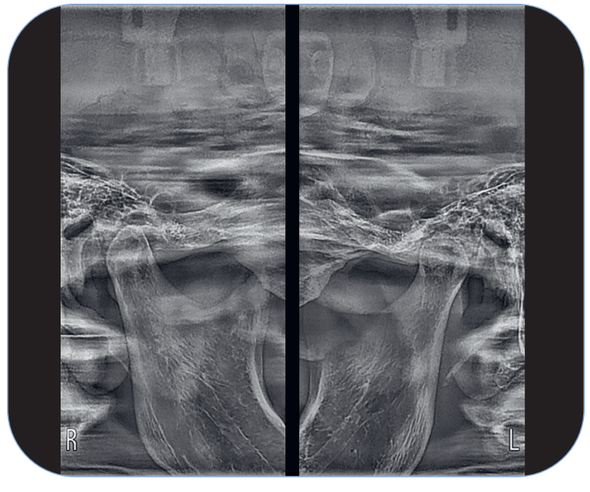
BITEWING

Optimised collimated interproximal projection with a low dose to investigate dental crowns, thanks to dedicated trijectories. An alternative to intraoral bitewings, with a less invasive, more comfortable procedure.



MAXILLARY SINUSES

Creates an image that allows dentists to assess the health of the maxillary sinuses. To be effected with dedicated sub-nasal support.



TEMPOROMANDIBULAR JOINTS

Generates lateral or postero-anterior projections, with mouth open or closed. To be effected with dedicated sub-nasal support.

ALL-ROUND FLEXIBILITY

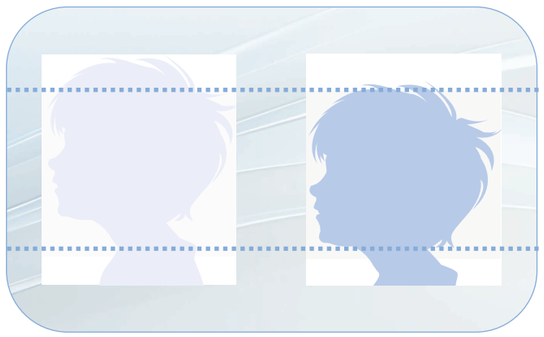
Thanks to the intrinsic modularity of X-RADiUS TRiO PLUS, the cephalometric arm can be included at the time of purchase or added later to CEPH Ready configurations. You can opt for integration on the right or left of the device, allowing greater versatility and flexibility during installation.

CEPHALOMETRIC ARM

Designed to ensure comfort and stability for all patients: the head support has a height-adjustable frontal support and length-adjustable side rods to adapt to the needs of adults and children.

REPOSITIONABLE 2D PAN-CEPH SENSOR

The repositionable 2D sensor makes it possible to perform panoramic and cephalometric examinations simply by moving the sensor from one housing to another (available on sensor-ready models).



TOP CEPH POSITIONING

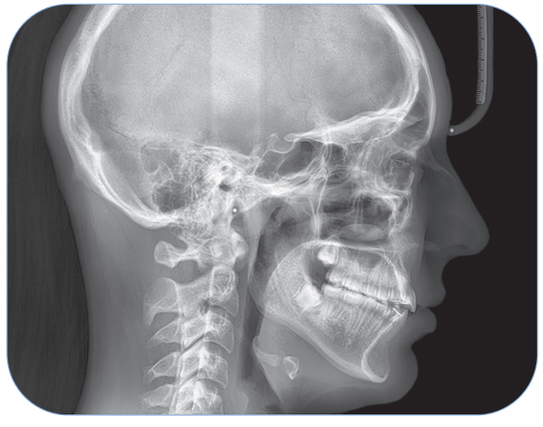
For paediatric patients, TOP CEPH positioning reduces thyroid exposure, prevents the sensor from coming into contact with the shoulders and allows, when possible, inclusion of the skullcap.

CARPUS SUPPORT

This accessory allows assessment of residual bone growth - especially useful with paediatric patients - via radiological analysis of the carpus.

CEPH SCANS AND FEATURES

Complete your dental practice's offering by adding cephalometric scans.

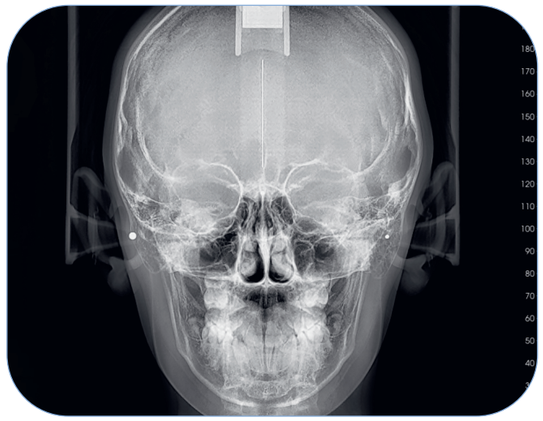


LATERAL SKULL TELERADIOGRAPHY (LL)

Allows highly detailed images of bone structures and soft tissues, providing essential data for cephalometric studies.

SUPREME TELERADIOGRAPHY

Antero-posterior/postero-anterior teleradiographic scans can now be performed with the direct conversion detector to reduce the dose. Supreme Ultra HD technology provides maximum resolution and a new fast scan mode at lower doses.



FRONTAL SKULL TELERADIOGRAPHY (AP-PA)

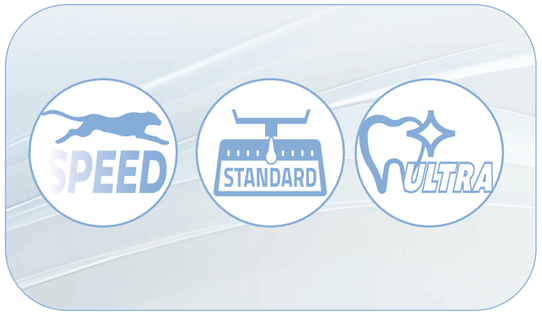
Using frontal projections, this helps users investigate the presence of any asymmetries or malocclusions for optimal completion of the required patient treatment.

CARPAL TELERADIOGRAPHY

In paediatric patients, its main purpose is evaluating the residual bone growth potential to better predict the development of maxillary and mandibular bones. Scanning can be performed with a dedicated support.

LIMITLESS PERFORMANCE

X- RADiUS TRiO PLUS provides a wide range of volumetric scans, each designed for specific needs Dedicated FOVs, special filters, optimised protocols and Scout View allow dentists to get the most from their equipment and enjoy ever-better performance.

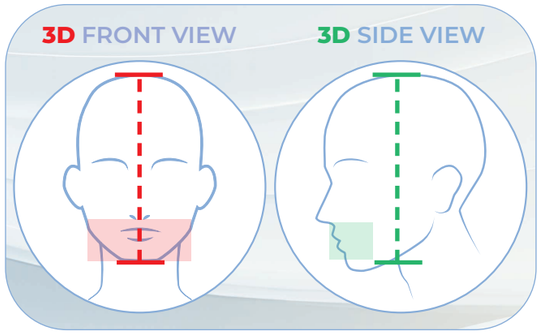


OPTIMISED 3D PROTOCOLS

Each FOV has three scan modes (Speed, Standard and Ultra) to suit different clinical needs. In this way, examinations can be performed in keeping with actual needs, for everything from surgical follow-ups to analysis of micro-structures.

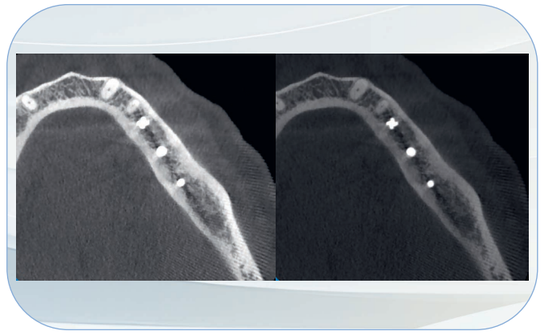
SPEED SCAN - SPEED PAN - SPEED CEPH PROTOCOLS

Available for 2D and 3D exams, these protocols have lower doses than routine scans. Ideal for obtaining precise images for post-op checks or identifying macro-structures such as impacted teeth or agenesis. Paediatric CEPH scans safeguard the thyroid and minimise the dose.



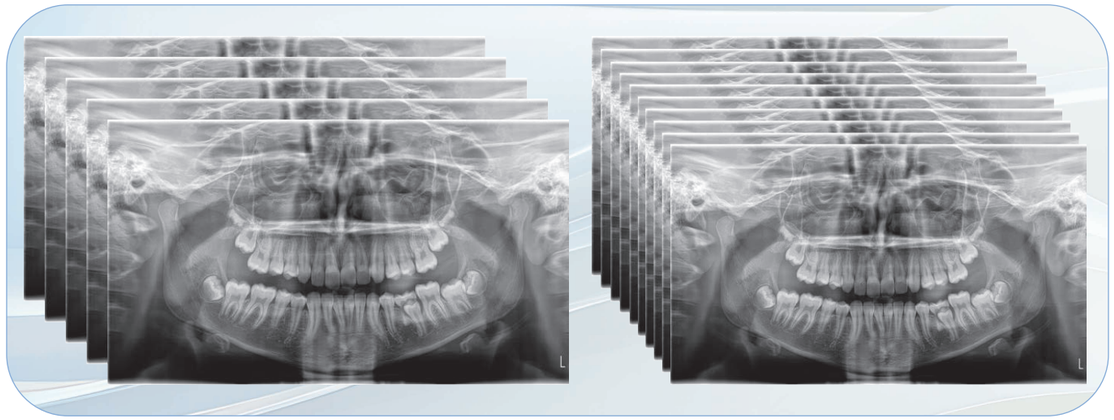
SCOUT VIEW

Lets users obtain two ultra-low-dose images - lateral and frontal - so they can align the scan area precisely directly from their workstation while the patient remains comfortably on the machine.



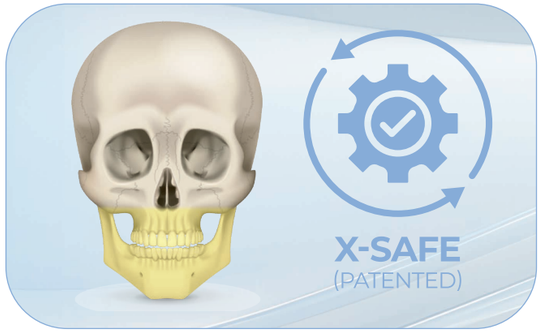
3D MAR (METAL ARTIFACT REDUCTION) FILTERS

These detect metal artifacts. Using software to generate an additional set of images, the filters minimise their impact and aid planning of specialised treatments that require segmentation of anatomical structures.



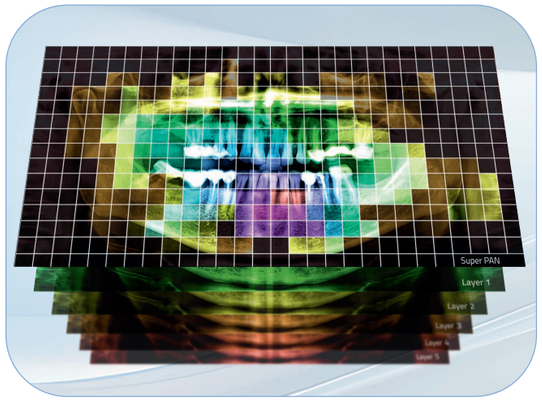
MULTIPAN VIEW

Provides a series of differently-focused orthopanoramic images from a single scan, an essential function for investigating complex morphologies. You can select the optimal image out of 5 images (PAN HD with STANDARD sensor) or 11 images (PAN UltraHD with DC^{III} sensor)



X-SAFE TECHNOLOGY

Automatically calibrates emissions to match the patient's morphology and build, delivering the lowest possible X-ray dose without affecting image sharpness or uniformity.



SUPERPAN FUNCTION

Creates a single panoramic image by stitching together the most in-focus portions of the MultiPAN view layers. This optimises resolution and contrast, aiding clinical diagnosis and helping define the treatment plan.

OUTSTANDING DIGITAL SUPPORT

Neowise imaging software is designed around you and your patients. It allows you to manage/process 2D and 3D images, letting you make accurate diagnoses and streamline communication with the patient. Simple and effective, with advanced diagnostic/planning tools and filters.

Optimised workflow
Automating processes such as image segmentation and classification will cut treatment time, making your practice more efficient.

Better dentist-patient communication
Advanced diagnostic tools make it easier to explain treatment plans to patients, improving their understanding and level of engagement.

User-friendly interface
Designed to improve the user experience and reduce learning times. Using the various functions has never been easier or more personalised.

Multi-image support
The software lets you view and compare 2D and 3D images simultaneously, making it easier to compare clinical information and improve diagnostic capacity.

Real-time 3D rendering
Advanced rendering algorithms allow real-time display and management of 3D images for consistently detailed diagnosis.

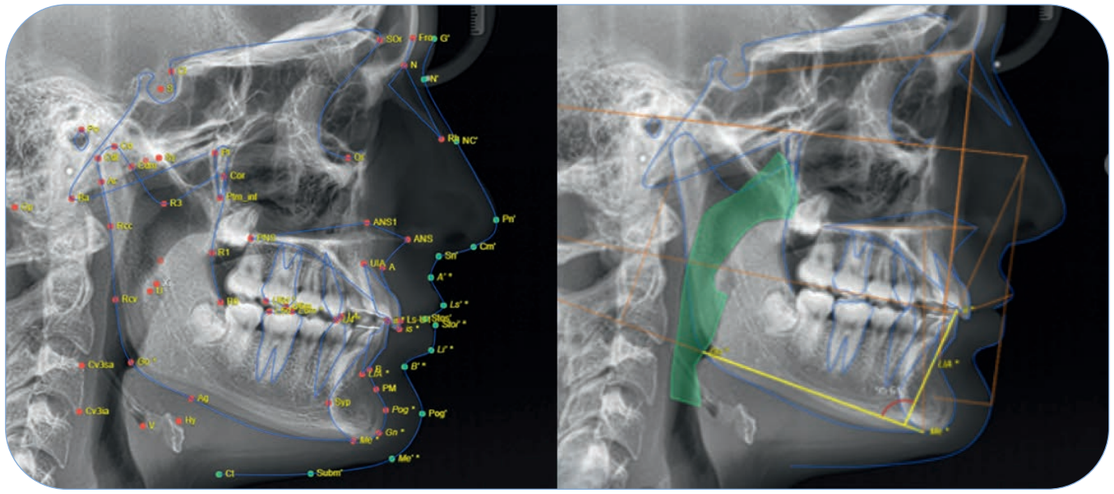
Simulations of analysis and clinical treatment
This function can be used to view the expected outcomes of practices such as implant positioning; for example, it allows assessment of the insertion angle and can predict aesthetic results with dental crowns.

Centralised image management
Access all patient scans quickly via a single interface to simplify consultation and streamline cooperation between teams from different departments.

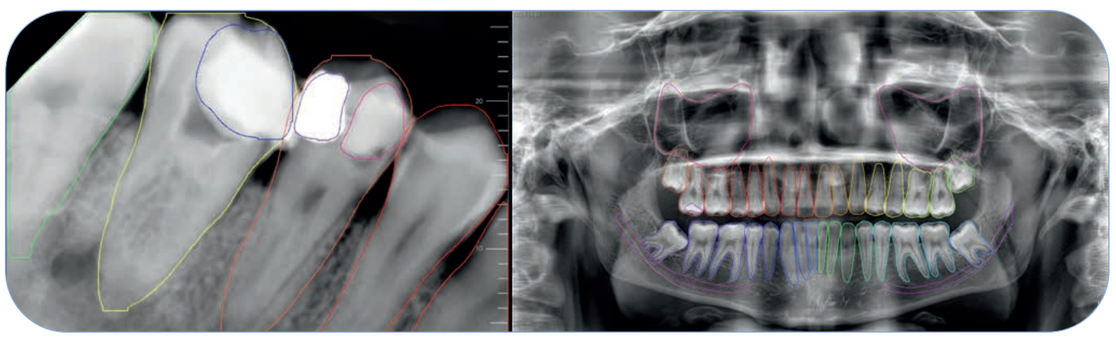
Guaranteed compatibility
Key communication protocols such as DICOM, RIS/PACS and TWAIN are supported, ensuring secure transmission and storage of medical images.

CUTTING-EDGE CLINICAL FEATURES

Neowise integrates automated AI-powered features that improve diagnoses, raise operational efficiency and make treatment more personalised for each patient, making your work more precise and finely targeted than ever.



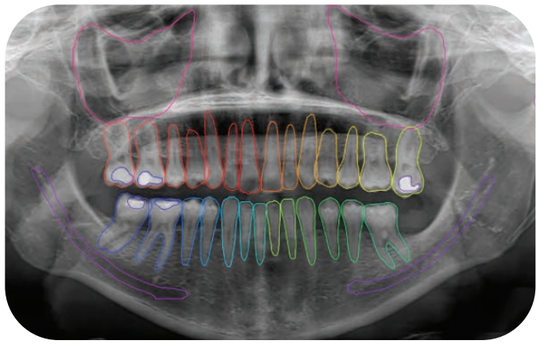
- Detection of panoramic curves on CBCT scans
- Identification of inferior alveolar nerve in volumetric scans
- Alignment of latero-lateral teleradiography with photo of patient
- Smile Design module to simulate aesthetic treatments in frontal sectors
- Alignment and combination of CBCT scans with optical impressions
- 2D and 3D Data Classification
- Segmentation of 3D anatomical structures
- Anatomical and pathological analysis for 2D intraoral and panoramic scans
- Detection of cephalometric points and creation of tracings
- Airway identification in cephalometry for the diagnosis of OSAS pathologies

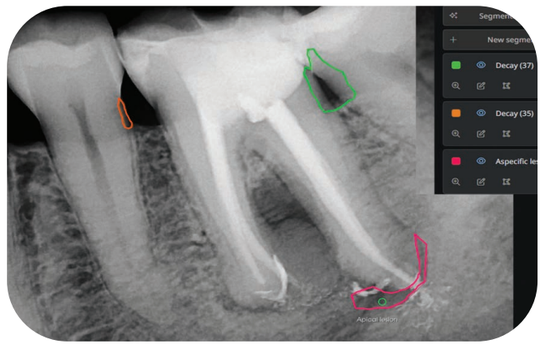


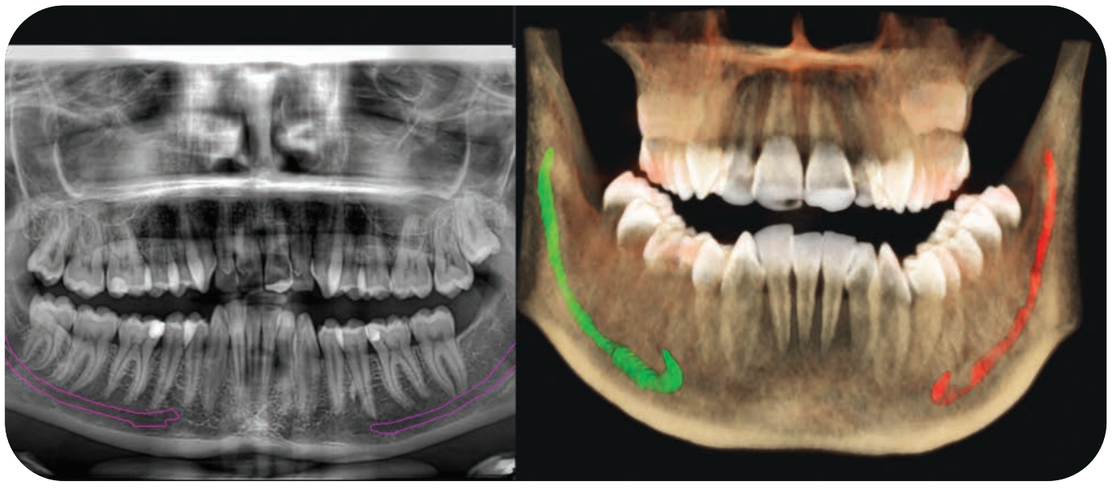
2D VIEWER

Ability to simultaneously view and compare multiple 2D and 3D images of any type compatible with the viewer. This streamlines comparison of clinical information and enhances diagnostic capacity.

Powerful AI tools, such as patented anatomical and pathological segmentation for both panoramic images and intraoral X-rays, provide valuable support for clinical analyses.



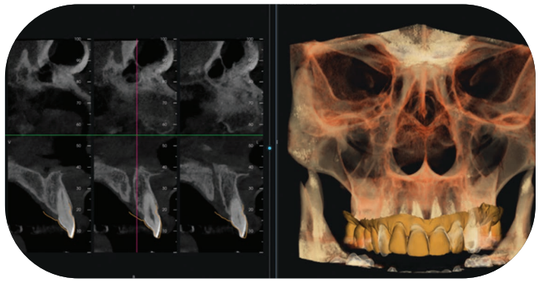


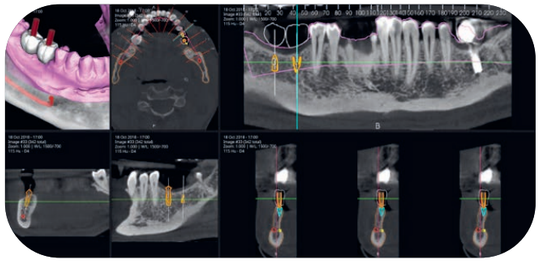


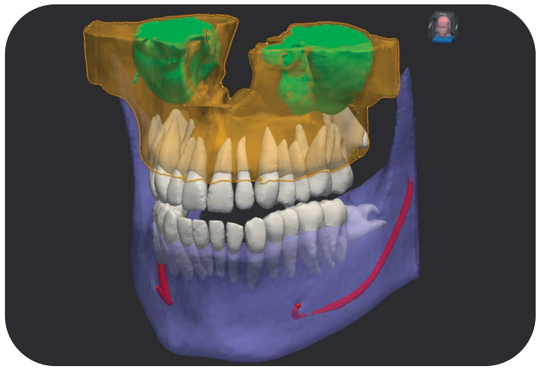
3D VIEWER

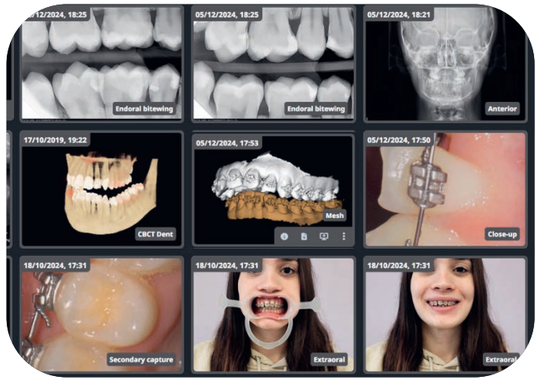
Advanced 3D display system that integrates CBCT, Somax Scan and intraoral scans, with specialised views for endodontics, implantology and temporomandibular joint analysis.

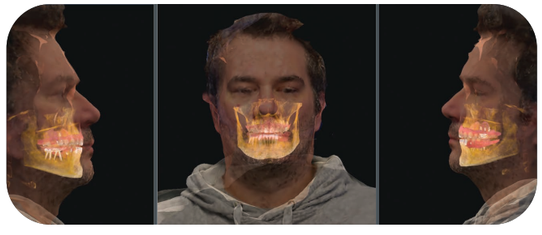
Segmentation tools to create models, trace root canals, place implants and simulate dental crowns.
An AI-powered practice optimises workflows, offering functions that allow tracing of the mandibular nerve and the panoramic arch, automatic matching of intraoral scan and CBCT and segmentation of anatomical elements in CBCT.

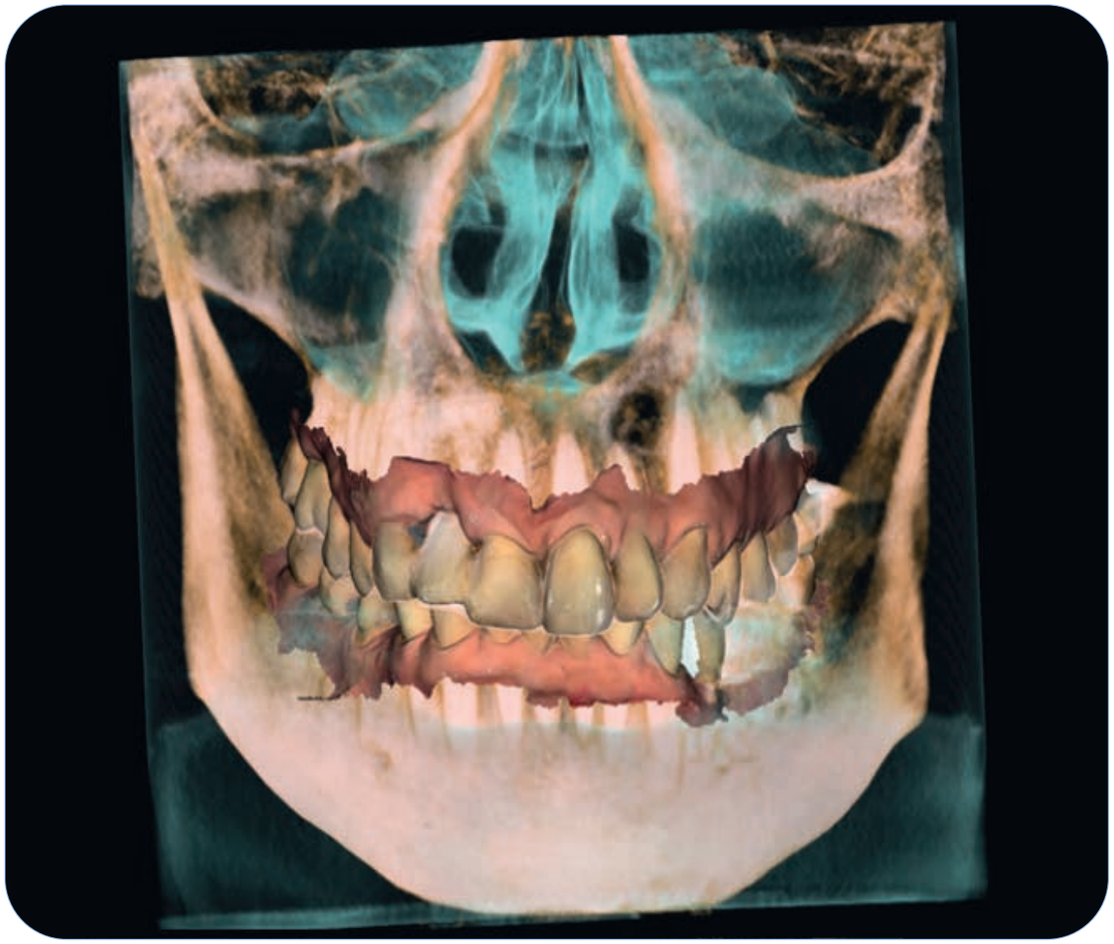


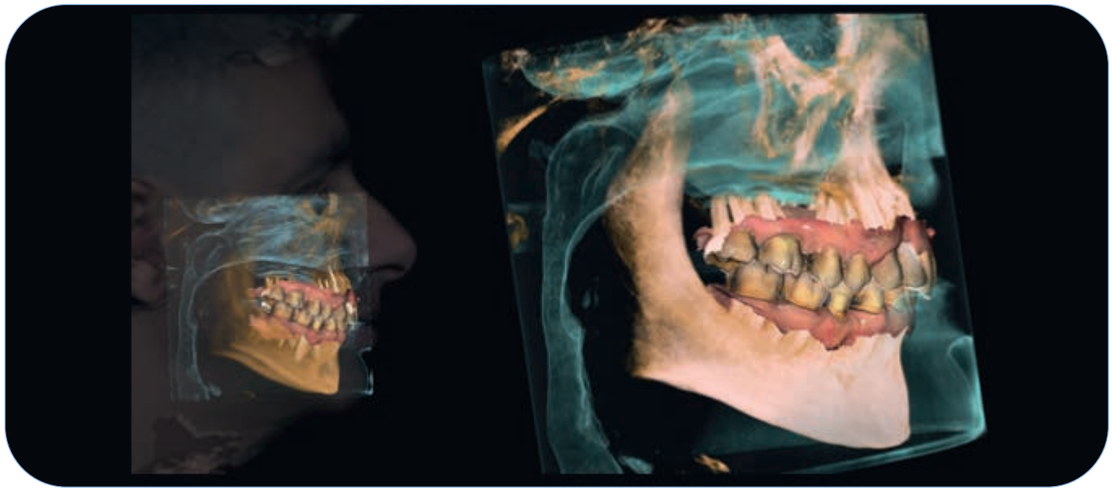












OPTIMISED WORKFLOWS

01

Data import
Automatically import examinations and images from iRYS and the other main dental imaging software tools.

02

Database management
Create patient records with the utmost ease and security to ensure clear, accessible consultation at all times.

03

User profiling
Customise permissions and functions according to the role and preferences of the various users in your practice.

04

Device configuration
View and configure all devices registered and enabled on your workstation according to your needs.

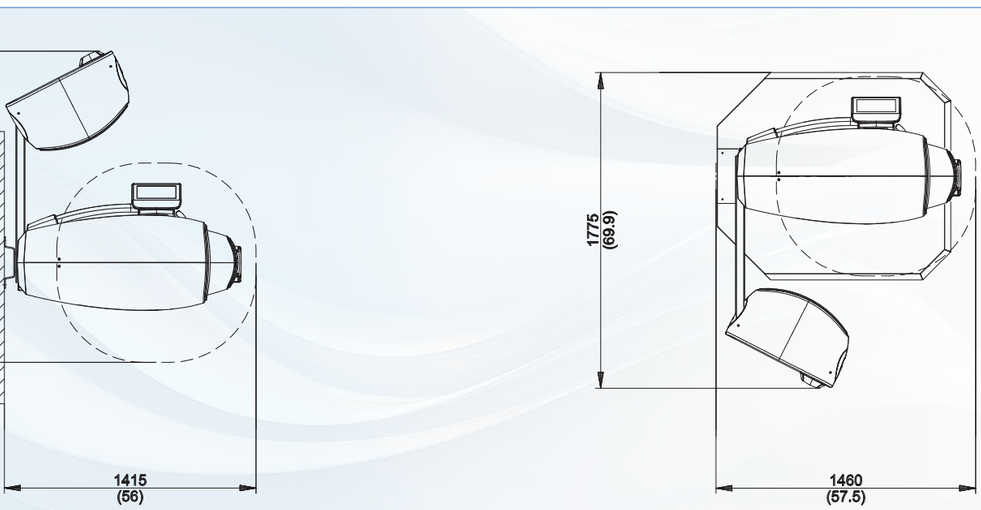
05

Image processing
Maximise the user experience thanks to the user-friendly tools menu and a range of views designed to match your clinical needs.

06

Treatment sharing
Create personalised patient health reports and illustrate the treatment plan clearly.

TECHNICAL SPECIFICATIONS



IMAGES	2D	3D
Type	PAN (Adult, Child), BITEWING, DENT, SIN (Cent, L, R), TMJ (Front, Lat), CEPH (Lateral, AP-PA, Carpus)	MODEL, DENT,SIN, TMJ, AIR, MAXILLO, EAR, SPINE (Cervical)
(Maximum) theoretical resolution on the patient plane	PAN: 5.6 lp/mm (pixel 79 µm) BW: 7.6 lp/mm (pixel 66 µm) CEPH: 5.7 lp/mm (pixel 88 µm)	CBCT: 7.4 lp/mm (voxel 68 µm)
Fields of view on patient (adult and child) (L) x (H) in cm	PAN STD: 23.2x12.0 cm PAN CHILD: 17.8x10.7 cm DENT (Full): 13.9x9.3 cm BITEWING: 17.3X6.4 cm CEPH LL (full skull): 25.5x19.6 cm	STANDARD Configuration (DENT, SIN, MODEL): 6x6; 8x6; 8x8; 10x6; 10x10; 11x8; 13x6; 13x10 PREMIUM Configuration (DENT,SIN, MODEL + TMJ, AIR, MAXILLO): 13x16, 15x6, 15x10, 15x16 ENDO PACK (STANDARD and PREMIUM configuration optional): 4x4, 5x4 TMJ PACK (STANDARD configuration optional): 15x6, 15x10 CERVICAL & EAR PACK (PREMIUM configuration optional): 7x6, 9x9, 9x16
Scan times (typical)	PAN: 13.9 s (Ortho); 11.8 s (Standard); 6.0 s (Quick); 5.0 s (Sin R/L) CEPH LL: Long 9.02s (Standard); Long 5.14 s (Quick)	Super HD: 24s Standard: 14.4s QuickScan: 6.4s

INSTALLATION	
Weight (kg)	2D basic machine: 152 kg 3D basic machine: 155 kg CEPH arm with sensor: 20 kg

X-RAY GENERATOR	
Generator type	Constant potential DC[III]
Anode voltage and current	60-90 kV; 2-16 mA
Focal spot	0.5 mm (IEC 60336)

POWER SUPPLY	
Voltage and frequency	115 – 240 V Single-phase 50 / 60 Hz
Maximum current absorbed in working conditions	20A at 115V; 12A at 240V
Current absorption in standby mode	1A at 115V, 0.5A at 240V
Adjustment method	Automatic voltage/frequency adaptation

DETECTOR	2D PAN & CEPH	3D/PAN
Detector type	CMOS (CsI) or Direct Conversion (DC[III])	IGZO

ERGONOMICS	
Patient positioning	Suggestion from virtual control panel - Servo-assisted alignment, 3 laser guides (Class 1 - IEC 60825--1) - 3D Scout View - Positioning cameras (optional)

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