LARGEV

SMART3D-X PRO

INTELLIGENT CBCT

CBCT · PAN · CEPH

e-brochure

EXTRAORDINARY IMAGE

CT — High Resolution 3.0 lp/mm

Just 1 Second Oneshot Scan for Stable Cephalometric Image.
Avoid Artifacts from Patient Motion

PAN — High Resolution 5.0 lp/mm

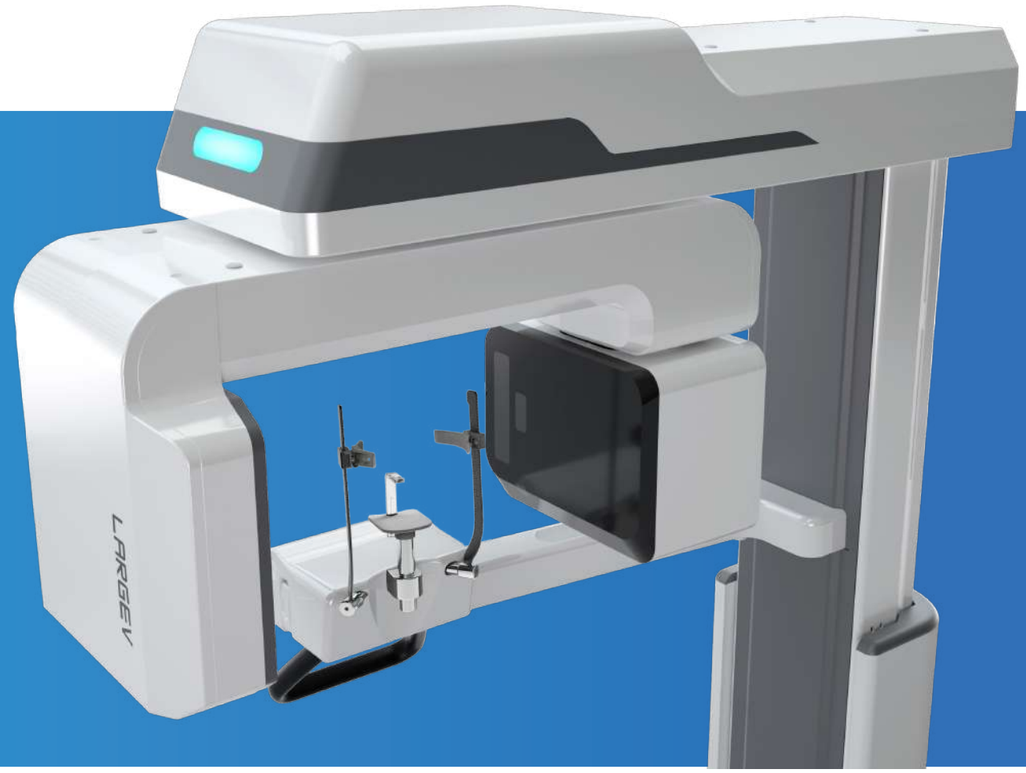
Two PANs Options(2D PAN & PAN Reconstructed from 3D Image Data)

CEPH — High Resolution 5.0 lp/mm

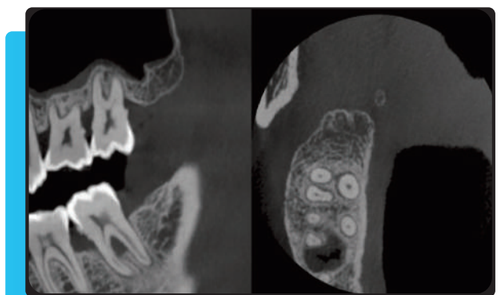
360° Scan and 800 Frame Images with Unique CT Algorithms

Voxel Size 0.04-0.3mm

QuartZ 4 Scan Platform, Supporting Flexible Scan Mode



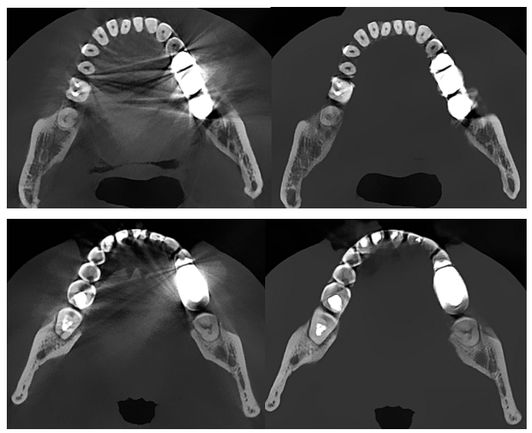
Enhanced Image by Small Focal Spot X-ray Tube



HD Detector Pixel Size Up to 95μm

Metal Artifact Correction

The DeepPure technology independently developed by LargeV can intelligently identify and remove complex metal artifact areas, effectively restoring the true details of the oral cavity. It's better at handling various types of artifacts such as irregularly shaped metal implants and dental crown metals, significantly improving the visualization effect of bones, soft tissues and other key structures in images, making clinical diagnosis more accurate and efficient.



EXTRAORDINARY IMAGE

Enrich the Optional FOVs Meet Various Clinical Requirements

18cm × 15cm
18cm × 12cm
18cm × 6cm
8cm × 8cm
5cm × 6cm
4cm × 4cm

Smart3D-X Pro Config.A1
(CBCT/PAN/CEPH)

16cm × 15cm
16cm × 12cm
16cm × 6cm
8cm × 8cm
5cm × 6cm
4cm × 4cm

Smart3D-X Pro Config.A2
(CBCT/PAN)

Smart3D-X Pro Config.A3
(CBCT/PAN/Oneshot CEPH)

Smart3D-X Pro Config.A1
(CBCT/PAN/CEPH)

Smart3D-X Pro Config.A2
(CBCT/PAN)

Smart3D-X Pro Config.A3
(CBCT/PAN/Oneshot CEPH)

SUPER POWER FUNCTIONS

The Compatible Globally Power Supply
Wide Voltage Range: AC 110~230V 50/60Hz

9 Positioning Lasers with Face-to-face Communication to Position Precisely

X-type Base Is Convenient for Wheelchair-bound Patients

Easy-to-target Scan Area

More Options:
2 in 1(CBCT+PAN)
3 in 1(CBCT+PAN+CEPH)

10"LED Touch Screen

Multilingual Support:
Simplified Chinese/Traditional Chinese/English/French/ Spanish/Russian/Polish/ Turkish/Portuguese

Storage Box Design

Voice Reminder

Carbon Fiber Cheek Clip & Stable Jaw Bracket To Create a Stable Shooting Support System

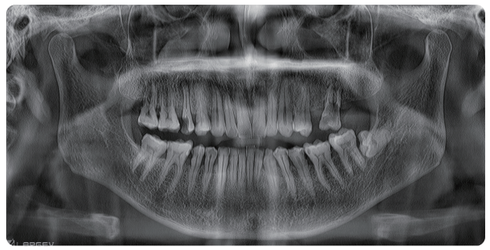
SD FS HD UHD

SD：Standard Scan
FS：Fast Scan (CT Scan Speed Reach up to 6s)
HD：High Definition Scan
UHD：Ultra-High Definition Scan

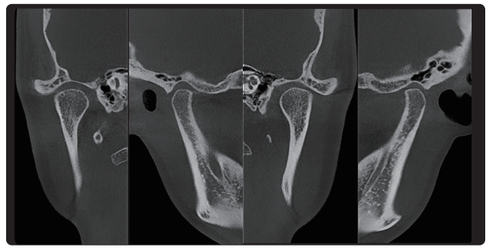
Sustainable Shooting without Cooling Down
Cooling System is Equipped to Break Through The Traditional Cooling Limitations and Ensure The Stable Operation Under High Temperature And Sustainable Shooting Scenes

PAN AND CEPH

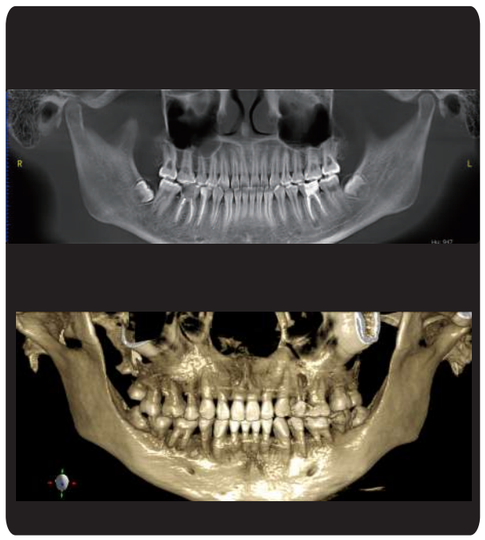
▶ Panoramic and TMJ Images



PAN

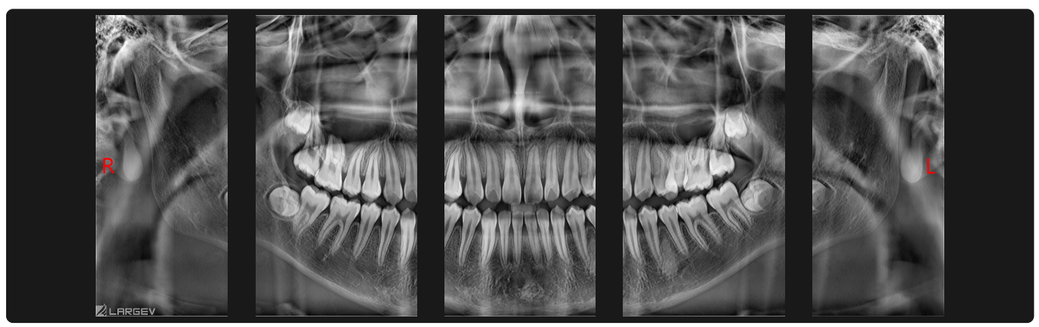


TMJ

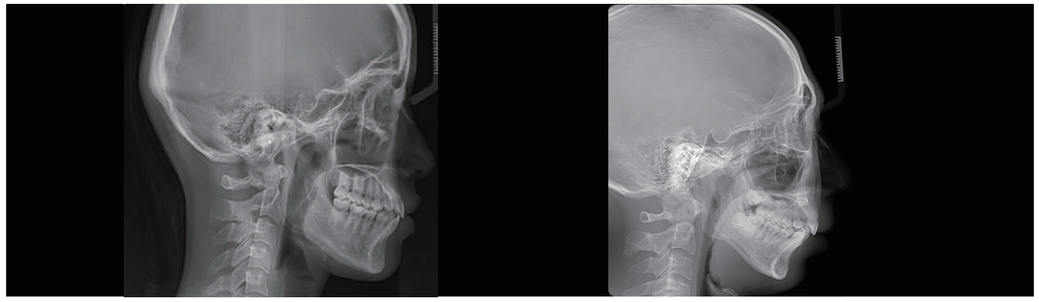


AI+PAN

Partial PAN Function Supports Shooting Any Area Combination, Exposing Only the Required Region to Reduce Radiation Dose.

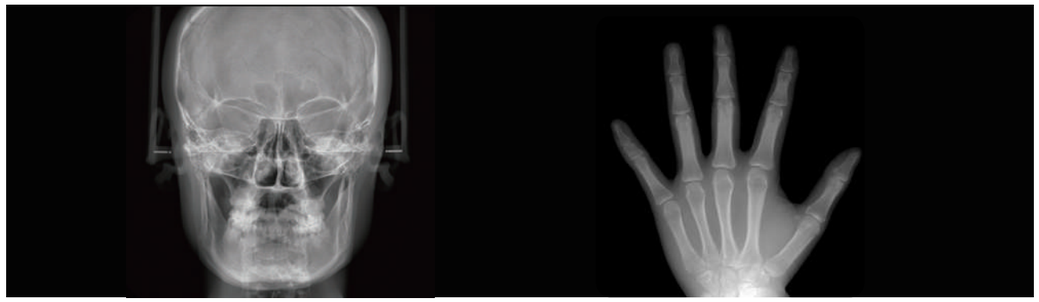


▶ Cephalometric PA/LAT and Carpus Images



CEPH LAT(full)

CEPH LAT(half)

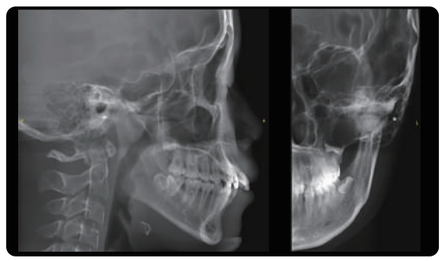


CEPH PA

Carpus Images

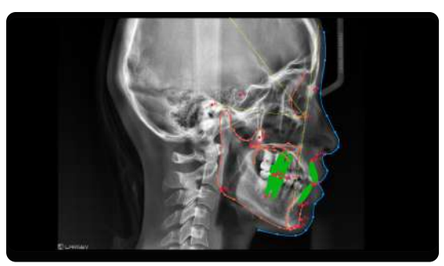
▶ Lateral Cephalometric Measurements

In comparison to traditional two-dimensional cephalometric radiographs, lateral cephalograms on CBCT can better reflect the true craniofacial morphology. With higher accuracy in landmark point identification and line distance measurement, it can avoid the distortion of patient measurement data caused by superimposition, image blurring and facial asymmetry of two-dimensional anatomical structures.



▶ AI + CEPH Measurement(Optional)

The neural network is trained by mega data, which automatically identifies orthodontic anatomical landmark points, draws anatomical structures and outputs measurement reports according to the selected measurement methods.



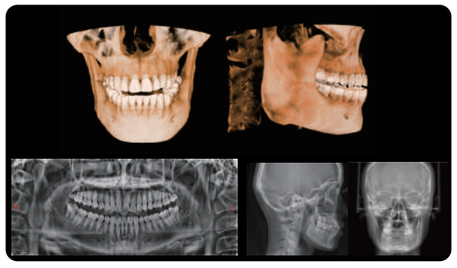
DENTAL RADIOLOGY SOFTWARE

SmartVPro

SCAN TO GET
MORE FUNCTION DISPLAYS

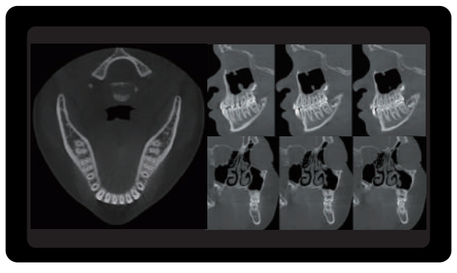
▶ Multiple Images

Support CT / PAN / CEPH.



▶ Multi-Planar Reconstruction (MPR)

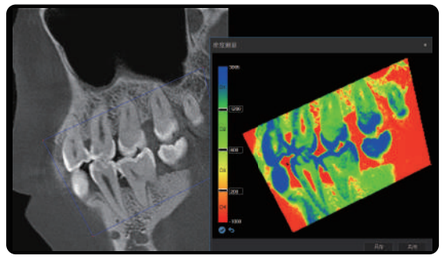
In SmartVPro software, doctors can simultaneously view axial, coronal, and sagittal images. The software also allows for customized slice positioning, enabling buccolingual and mesiodistal cross-sections at any desired location. This feature enhances diagnostic convenience by providing comprehensive imaging perspectives.



LARGEV

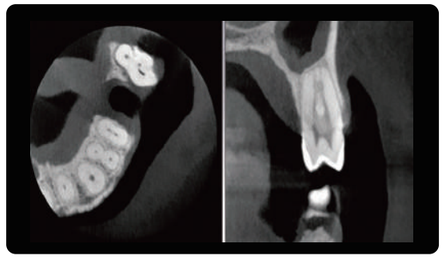
▶ Density Measurement

Visual assessment of bone quality, bringing greater convenience to dentists.



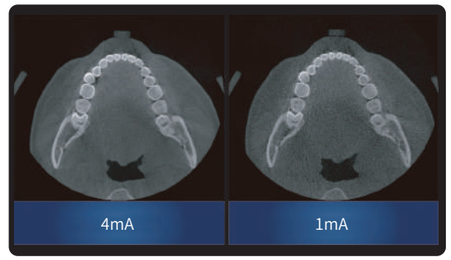
▶ 3D Fine Reconstruction

The smallest voxel size reaches 0.04 mm, which is more suitable for the diagnosis of dental pulp disease.



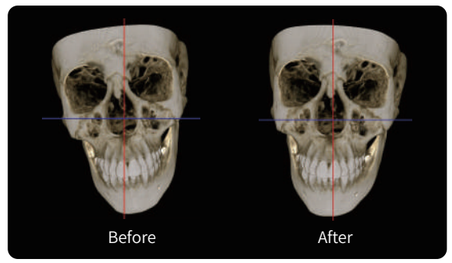
▶ AI + Low Dose

Boosted by the deep learning-based CT reconstruction algorithm, the Smart3D-X can now obtain more defined tomography while further reducing the radiation dose, continuing to raise the industry standard for low-dose control.



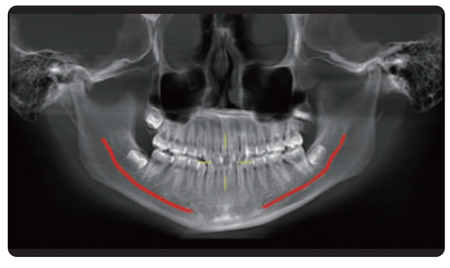
▶ AI + Automatic Head Position Correction

It enhances the accuracy and reliability of CT imaging, producing more precise lateral cephalometric images. It also ensures that scan results at different times can be compared and analyzed effectively.



▶ AI + Nerve

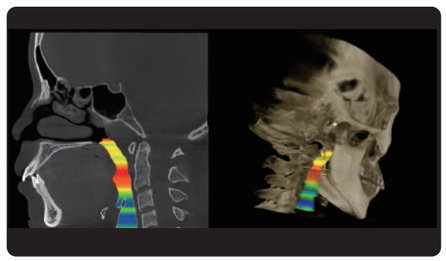
This function can locate the shape of the inferior alveolar nerve in 3D space, as well as the positional relationship between the relative alveolar bone wall, adjacent teeth, and implants, providing a reference for doctors, greatly improving work efficiency and reducing surgical risks.



ARTIFICIAL INTELLIGENCE

▶ AI + Airway Measurement

Quick segmentation of airway with two modes，automatic and manual, providing accurate imaging information for the discovery and diagnosis of airway diseases.

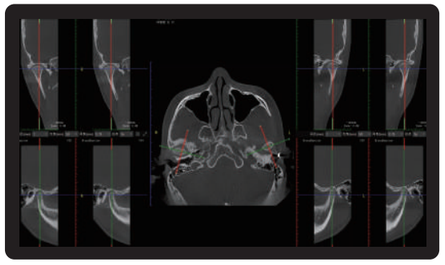


▶ AI + Predict Bone Age by Observing the Cervical Spine

With bone age analysis, the patient's growth and development level and maturity can be accurately evaluated. It can provide reference for the diagnosis of oral diseases and the selection of orthodontic treatment solution.

▶ AI + TMJ Automatic Positioning Diagnosis

The display mode of comparing the left and right temporomandibular joints, with the cross positioning line automatically located at the temporomandibular joint, facilitates the diagnosis and treatment of temporomandibular joint diseases by doctors.

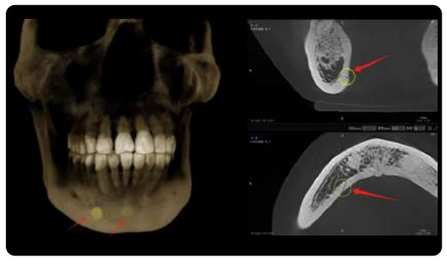


▶ AI + Maxillary Sinus Segmentation

This leading technology not only provides a high-precision 3D model of the superior maxillary sinus, but also helps doctors to distinguish the position and size, which contributes to customized surgical plans.

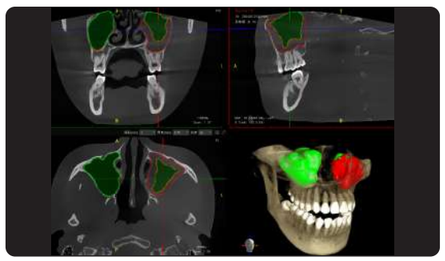
▶ AI + Lingual Canal Detection

This helps doctors accurately locate and identify the position and structure of lingual canals, understanding its anatomical features in the mandible. This is crucial in preventing unexpected bleeding during implant surgeries.



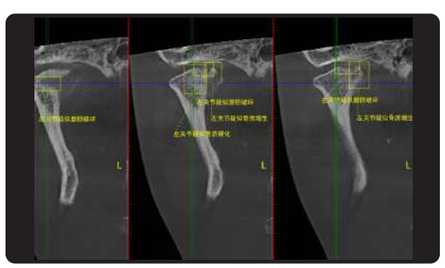
▶ AI + Maxillary Sinus Analysis

Maxillary sinus conditions are often linked to odontogenic infections and implant surgery risks. It enables clinicians to assess sinus health, detect early lesions, and quantify disease extent. It improves diagnostic efficiency and accuracy, providing strong support for treatment planning.



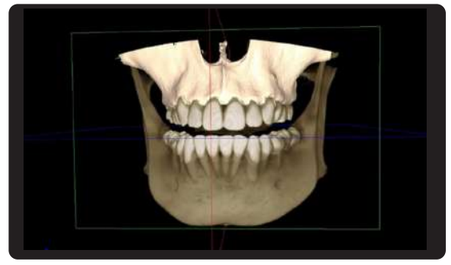
▶ AI + TMJ Analysis

It helps clinicians quickly identify abnormalities such as joint wear, hyperplasia, and sclerosis. By objectively quantifying lesion severity, it reduces missed or incorrect diagnoses, enhances efficiency, and offers valuable reference for orthodontics, implantology, and maxillofacial surgery.



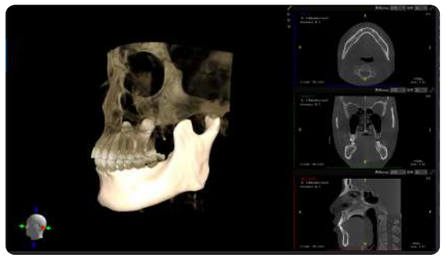
▶ AI + Maxillary Bone Segmentation

AI aids in assessing bone structure, identifying pathologies, and analyzing the alveolar bone for reliable insights into implant placement and bone graft volume estimation. This offers doctors a solid foundation for precise treatment planning.



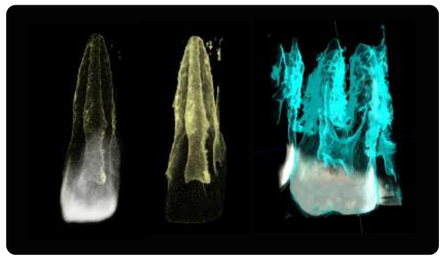
▶ AI + Mandible Segmentation

It accurately evaluates the morphology and position of jaw, as well as provide doctors with reliable anatomical structures.



▶ AI + Tooth Perspectives

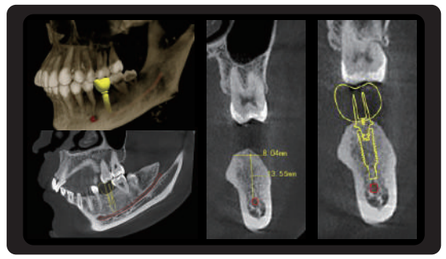
Tooth Perspectives: 3D reconstruction of a single tooth is carried out to clearly display the shape of the tooth, the form of the pulp cavity, and the 3D structure of the root canal and gums.



ARTIFICIAL INTELLIGENCE

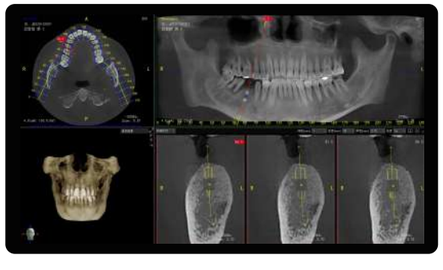
▶ Implant Simulation

It can evaluate the bone quality and bone quantity of the implant area, automatically outline the neural tube. Clarifying the relationship between the implant position and the adjacent anatomical structure to accurately select the implant position, the optimal length and diameter of the implant. It can improve the success rate, and avoid possible nerve or blood vessel damage.



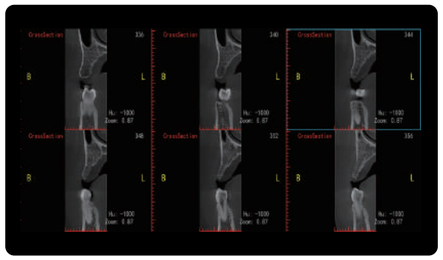
▶ AI + Oral Implant

LargeV AI Implant integrates advanced AI technology to automatically measure bone height, bone width, and the distance to adjacent teeth. It intelligently recommends suitable implant models and enables automatic implant placement. This helps doctors complete precise implant planning in a short time, significantly enhancing the accuracy and safety of implant surgeries, while providing patients with a more reliable digital implant solution.



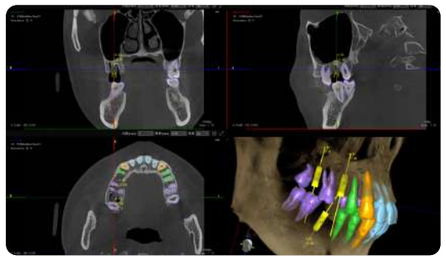
▶ Image Slice for Implanting

It permits the evaluation of the overall osteogenesis and facilitates the macroscopic observation of the bone condition around implants.



▶ AI + Multi-Implant Placement with One-Click

This feature is ideal for multiple teeth, partial, and full-mouth implants. It significantly reduces the time for doctors to design implant surgery plans. It enhances doctor-patient communication efficiency and increases the acceptance of treatment plans.



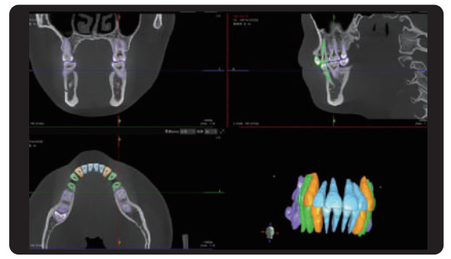
▶ AI + Automatic Implant Placement

By segmenting the patient's oral structure, AI algorithms determine the best position and angle for implant insertion. It controls the risk of implantation, minimizes planning time.

ARTIFICIAL INTELLIGENCE

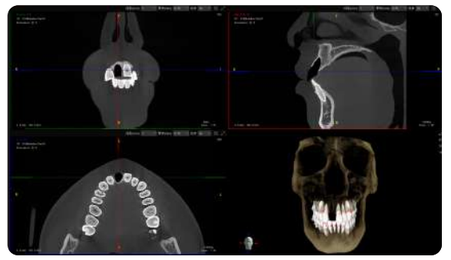
▶ AI + Teeth Segmentation

With this feature, doctors can more accurately understand the shape and position of the teeth, diagnose issues such as cavities, tooth deformities, and missing teeth, and provide patients with more precise treatment solutions.



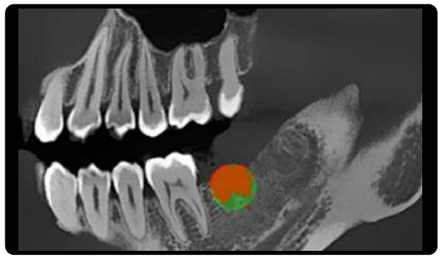
▶ AI + Simulated Tooth Extraction

As a tool for doctor-patient communication, AI simulated tooth extraction uses virtual scenarios to demonstrate the tooth extraction procedure and highlight important considerations. It helps patients to understand the treatment process.



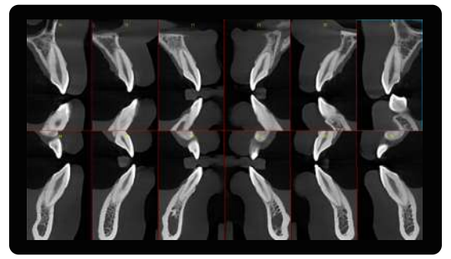
▶ AI + Bone Graft Volume Estimation

Accurate estimation of bone graft volume is critical in implant surgery. AI helps doctors calculate the precise amount of bone graft required, reducing the risk of surgical failure due to either insufficient or excessive graft material.



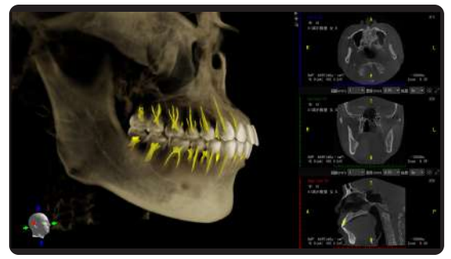
▶ AI + Root-Bone Relationship

AI technology provides diagnostic support and treatment guidance for fields like orthodontics, implantology, periodontics, and extraction. By analyzing the relationship between the bone and the teeth, it enhances treatment accuracy, improving success rates while minimizing complications during and after procedures.



▶ AI + Root Canal Segmentation

It assists doctors in quickly and accurately identifying the position, shape, and structure of root canals. This provides more precise diagnostic information and treatment planning, proving essential for root canal treatments, apical surgeries, and other dental procedures.



ORTHODONTIC SOFTWARE
(OPTIONAL)

CephPro3D

▶ Orthodontic Case Report

It integrates the basic information of the patients with oral and facial photos at different stages of treatment. Meanwhile, patients' eyes can be covered automatically, which protects their privacy. Case reports can be generated with one-click, which is convenient for doctors to manage orthodontic cases.

▶ Visual Presentation of Report with the Clear Measurement Effect

The report is generated with just one-click. It promotes communication between doctors and patients.

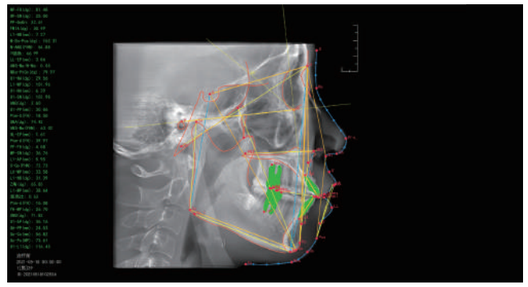
▶ VTO

CephPro3D superimposes patient's cephalic images with side photos. It can be fine-tuned through the anchor point to ensure that the image and photos are superimposed completely. Intuitive simulation of the orthodontic effect is generated by one-click.

LARGEV

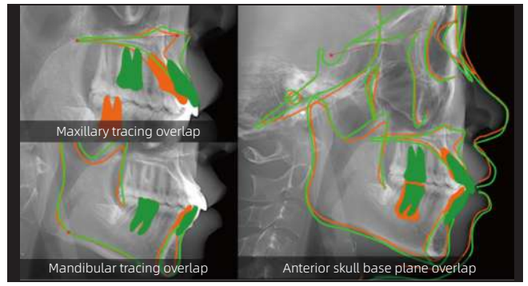
▶ Customizing Measurement Analysis Methods

There are 19 built-in cephalometric measurement methods, 135 measurement items, and 73 measurement points in the software. Doctors can choose the corresponding measurement method according to the diagnostic demands, and provide patients with professional cephalometric measurement reference.



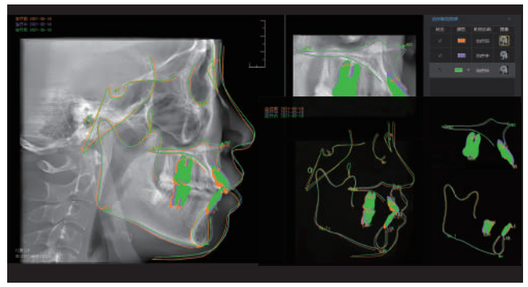
▶ Convenient Comparison

The software is equipped with an overlay interface, allowing simultaneous review of cephalometric and panoramic images, and treatment comparisons before and after orthodontic treatment for the same patient. The overlay process enables a review of the alignment with American Board of Orthodontic (ABO) standard.



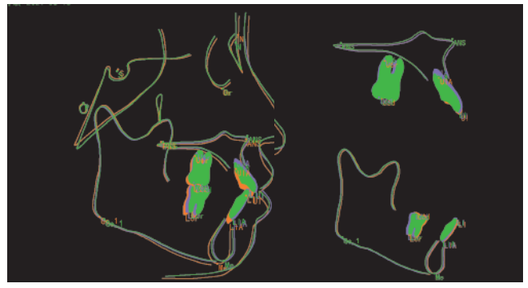
▶ Intelligent Tracking of Treatment Stage

The AI cephalometric measurement and manual drawing function can be combined with the patient's historical records to fine-tune the pre-treatment region curves. During and after treatment, the pre-treatment curves can be directly imported, and the tracing images can be easily adjusted, facilitating efficient and swift diagnosis for doctors.



▶ Intelligent Export

The system allows for direct export of cephalometric tracing images and overlay diagrams without background images, which can be easily shared by doctors in reports.



DENTAL IMAGING SYSTEM
(OPTIONAL)

global.fusionalign.com

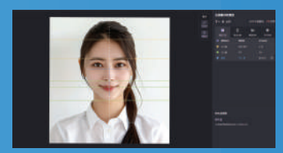
ddd@largev.com

FusionOne

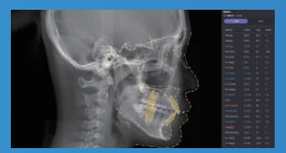
All for One, One for All，All-in-One Imaging Solution for Comprehensive Diagnosis & Data Management

▶ AI-Powered Multimodal Analysis

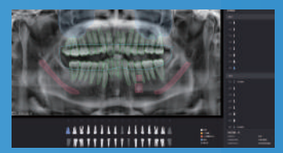
- Comprehensive 2D/3D analytical suite including



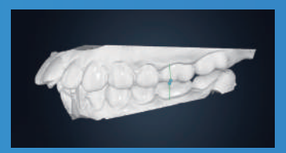
Analysis of Facial Photos



Analysis of Cephalometrics

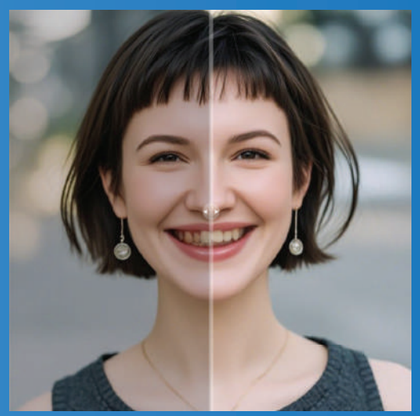


Analysis of Panoramic Images



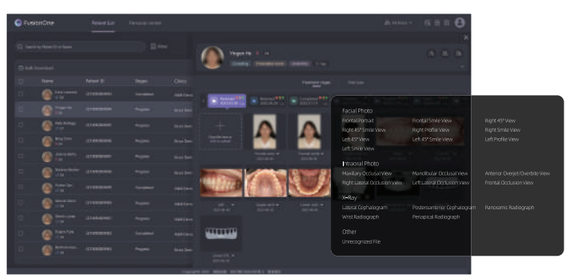
Analysis of 3D Digital Model

- Before/after treatment simulations boost clinical communication



▶ Highly Efficient Diagnosis

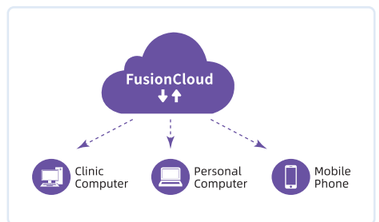
- One-click AI reports accelerate the diagnostic process
- Treatment progress tracking with periodic comparisons
- Visualized outcome simulation for patients, which helps them understand the treatment situation



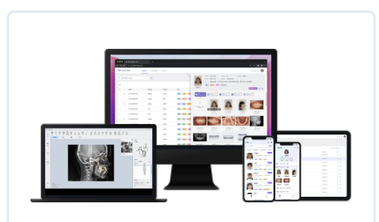
▶ Comprehensive Management

A unified platform covering all dental specialties and data types, with AI-powered categorization and digital case management systems.

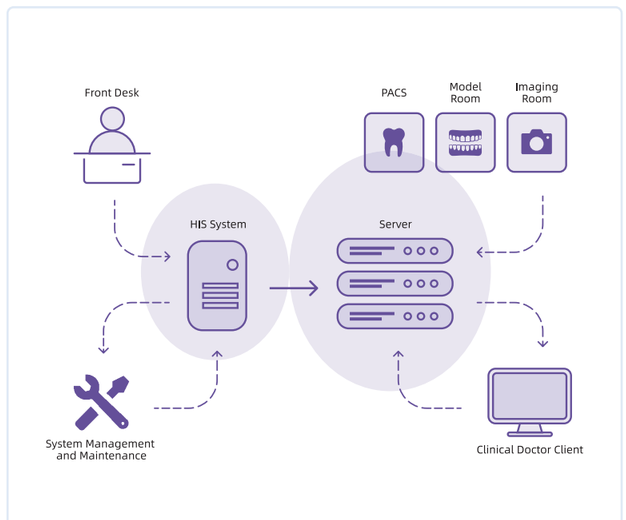
▶ Cloud Platform



Flexible deployment: Public/Private cloud solutions



Real-time cross-device sync breaks data silos



Custom configurations for diverse clinical needs

MILESTONE

2011

LargeV Instrument Corp., Ltd. was founded on March 11.

2012

HiRes3D, the first seated Chinese CBCT model, was approved to enter the market.

2013

Passed TüV ISO 13485 quality management system certification and CE certification. Achieved the title of "National High-tech Enterprise."

2015

Awarded the first level prize of "Technological Invention" by the Chinese Society for Stereology Science and Technology. The first Chinese CBCT debuted at the International Dental Show (IDS) in Cologne, Germany.

2016

The Multifunction Dental CBCT Smart3D was granted certification from NMPA.

2017

HiRes3D-Plus and HiRes3D-Max, professional dental CBCT models with super-large FOV were certified by NMPA.

2018

Awarded with "Edgy Technology Enterprise" by Beijing Pharmaceutical Profession Association and selected as "Zhongguancun Pioneering Technology Enterprise."

2019

SmartVPro, the first professional dental CBCT radiology software in China, was certified by NMPA. CephPro3D, the first dental cephalometric analysis software, was certified by NMPA.

2020

Zhejiang langshi Instrument Corp., Ltd. was put into operation.

2021

Smart3D-X won the German iF Design Award.

2022

Ultra3D, the world's first CBCT with dual-source and dual-detector was launched. Ultra3D has won the Red Dot Design Award.

2023

Customized Bracketless Aligner has been awarded the Medical Device Registration Certificate.
"The Joint R&D Engineering Center of Intelligent Orthodontics" formed with Beijing Stomatological Hospital, Capital Medical University was formally established.

2024

FusionScanner Digital Intraoral Scannar has obtained the Medical Device Registration Certificate.
CBCT products have achieved MDR Certificate under the European Medical Devices Regulation.

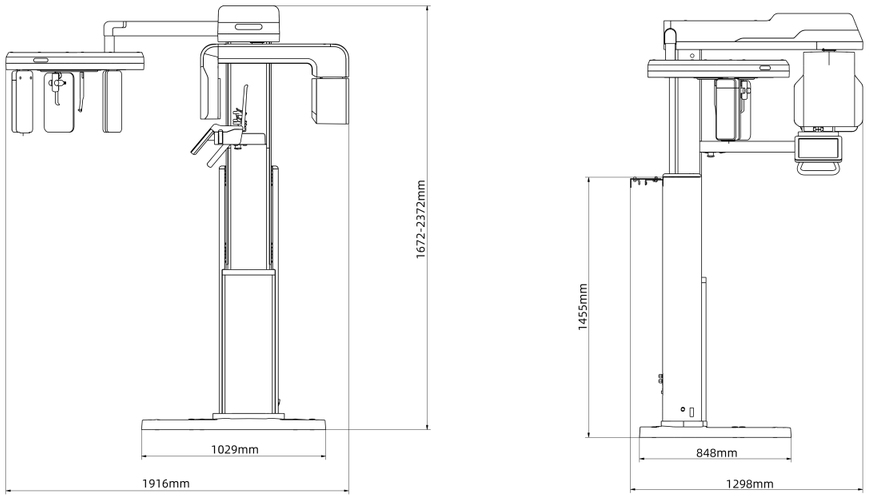
TECHNICAL SUPPORT

Service Hotline: +86 136 9350 0305 (WhatsApp)
Response: 24/7 service
Email: inquiries@largev.com

SPECIFICATIONS

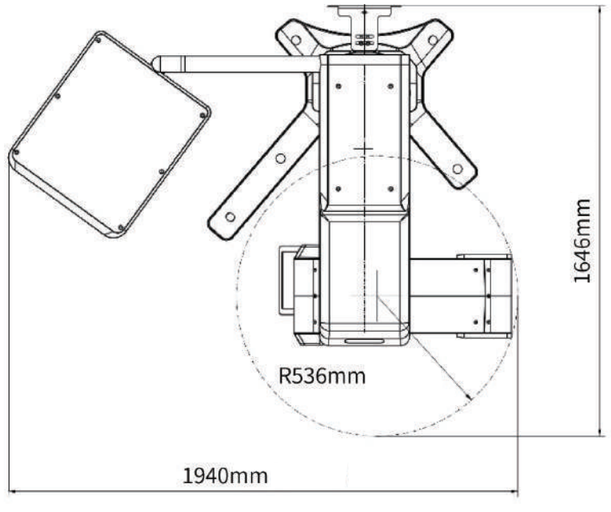
Device Model	Smart3D-X Pro		
	Config.A1 CBCT/PAN/CEPH	Config.A2 CBCT/PAN	Config.A3 CBCT/PAN/Oneshot CEPH
Field of View	• 18cm×15cm • 18cm×12cm • 18cm×6cm • 8cm×8cm • 5cm×6cm • 4cm×4cm	• 16cm×15cm • 16cm×12cm • 16cm×6cm • 8cm×8cm • 5cm×6cm • 4cm×4cm	
Detector Of CEPH	2301 (100μm)	/	Oneshot (124μm)
Tube Voltage	110-230V±10%，50/60Hz±1Hz		
Exposure Time	CT：6.0 s / 12.5 s / 18.5 s		
	PAN：8.1 s / 18.0 s		
	CEPH：7.5 s / 10.1 s / 11.8 s		
	Oneshot CEPH：1s		
Focal Spot Size	0.5 (IEC60336)		
Spatial Resolution	CT:3.0 lp/mm PAN/CEPH: 5.0 lp/mm		
Reconstruction Time	≤ 60 s		
Voxel Size	0.04-0.3 mm		
Weight	220 kg(485.02 lb)	187 kg(412 lb)	220 kg(485.02 lb)
Optional Languages	Simplified Chinese/Traditional Chinese/English/French/ Spanish/Russian/Polish/Turkish/Portuguese		

▶ Product Size Display（With Ceph）



▶ Product Size Display（Without Ceph）

▶ Shielding Room Diagram



LargeV Instrument Corp., Ltd. was founded in 2011 and committed to the development and industrialization of high-end medical devices. The core team of LargeV was graduated from Tsinghua University and has a solid foundation in the technical fields of computed tomography, radiation protection, and image processing. We insist on a customer-centric business philosophy and focus on innovation and excellence.
Our mission: Provide doctors and patients with superior products and services.
Our vision: Be the world's leading manufacturer of medical equipment.

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TikTok X VK

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CE MDR NMPA

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