



Intelligence Drives Precision

CS 9600 FAMILY



Smarter and Better Than Ever

With its new Scan Ceph module and innovations—such as positioning powered by AI—the world's most intelligent CBCT system is now even smarter and more versatile than ever.

As one of the most user-friendly CBCT scanners on the market, the CS 9600 delivers outstanding precision at every exam, for every user. Designed for a broad range of dental, maxillofacial, orthodontic and ENT applications, the CS 9600 is the perfect solution for demanding professionals who need a new level of precision.

With the enhanced CS 9600 CBCT scanner, extraoral imaging has never been so intelligent.



The CS 9600 is the next generation of CBCT systems, featuring perfect, never-before-achieved 2D and 3D image quality and the game-changing metal artifact reduction feature.

Dr. Beat R. Kurt, D.D.S.

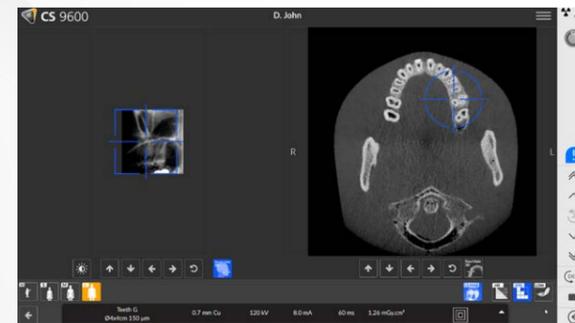


Get It Right the First Time.

The CS 9600's advanced technologies guide users to the consistent results practitioners need. Features, such as a Live Positioning Assistant, video cameras and Artificial Intelligence (AI), deliver more accurate scans on the first try, with consistent results over time.



LIVE POSITIONING ASSISTANT poz. 1.9.
Patients are positioned using cameras, while live patient views are displayed on the touch-screen for easy and exact positioning.



SMART TECHNOLOGIES! poz. 1.10.
SmartAuto Pan¹ and SmartAuto 3D¹ analyze the patient morphology to automatically calculate the right exposure settings and trajectory, or to precisely define the field-of-view position.



EXAM SET-UP



PATIENT POSITIONING

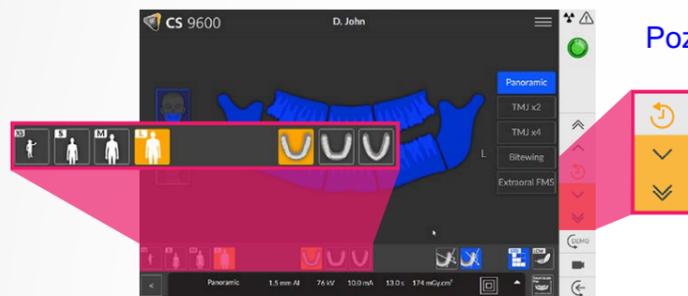


IMAGE QUALITY CONTROL

USER-FRIENDLY SMARTPAD
An intuitive SmartPad and clear interface guide the user through the exam, simplifying image capture.

User Friendly. Patient Friendly.

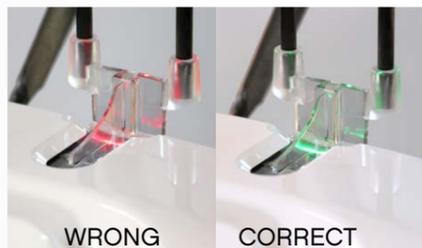
The technology behind our innovative scanning technology is quite complex. But using that technology to capture high-quality, accurate scans is not. In fact, we designed the CS 9600 to be the most patient-friendly, user-friendly scanner on the market, from the hardware to the software to the accessories on the unit.



Poz. 1.11.

SINGLE-TOUCH REPEATABILITY

Access the scanning parameters of a returning patient with the touch of a button, streamlining your workflow and helping you get comparable images over time.



INTERACTIVE POSITIONING ACCESSORIES

These tools automatically alert the operator when the wrong accessory is used and quickly recommend the appropriate one.



poz. 1.6. **INTEGRATED PATIENT CHAIR**

The only system with an integrated retractable seat that allows users to comfortably scan patients when higher stability is required.



*Cannot be used for cephalometric procedures



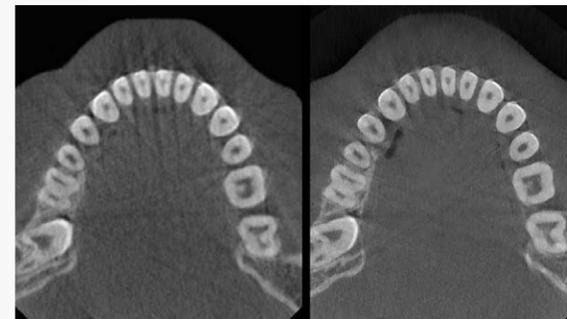
CS FACE SCAN poz. 1.8.8. d)

Help patients better understand treatment plans with realistic 3D facial images and surface scans automatically superimposed on CBCT images and 3D models.



CS MAR TECHNOLOGY poz. 1.8.8. e)

Metal Artifact Reduction that reduces artifacts caused by restorations, implants and fillings, and provides comparative tools to help confirm diagnoses and reduce the risk of misinterpretation.



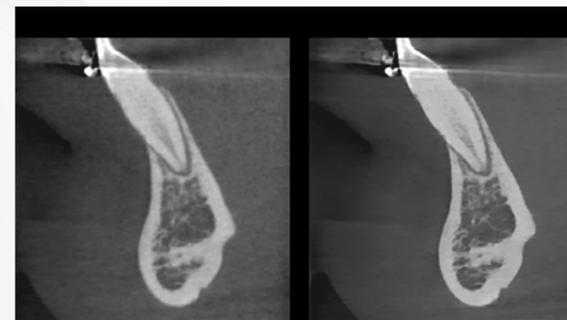
STELLAR TECHNOLOGY Poz. 1.1.

By cutting out unnecessary low-energy photons, this technology combines intelligent filtration with 120 kV X-ray tube¹ to reduce beam hardening artifacts and improve contrast without increasing dose.



VERY HIGH RESOLUTION SCANS Poz. 1.8.6.

75 microns resolution scans are perfect for endodontic needs. The CS 9600 even provides the ability to capture full mouth images at the highest resolution.



ADVANCED NOISE REDUCTION

This algorithm reduces image noise while preserving clinical details for improved perception of cortical bone edge, ligament space, soft tissues and small details.



LOW-DOSE 2D AND 3D SCANS

Low-dose mode allows you to follow the "as low as reasonably achievable" (ALARA) principle for both 2D and 3D imaging and delivers 3D images at a significantly lower dose than 2D panoramic imaging.

A New Level of Sharpness

Data-driven features help clinicians achieve a new level of diagnostic excellence. Combining smart design with advanced algorithms and artificial intelligence (AI), the CS 9600 minimizes the risk of positioning mistakes to deliver ultra-sharp and reproducible panoramic images.



AI-Powered Positioning poz. 1.9

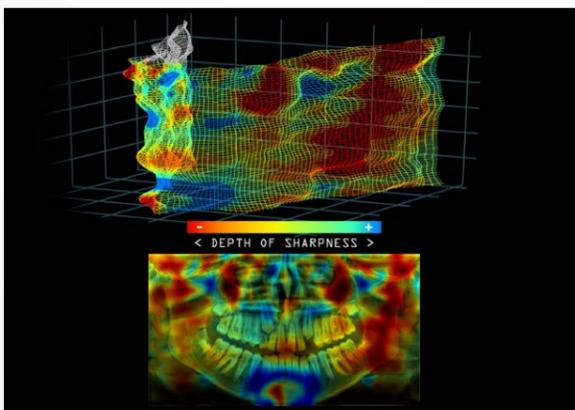


AI-POWERED POSITIONING

Using Artificial Intelligence, the CS 9600 automatically detects the Frankfort plane to reduce the most common positioning mistakes and obtain consistent results more easily.



Tomosharp Technology



CRYSTAL-CLEAR PANORAMIC IMAGES

When acquiring a panoramic image, new Tomosharp technology recognizes the area where the anatomy is the sharpest and reconstructs the best possible panoramic image automatically. The result? Crystal-clear images are captured systematically.



From Cephalometric Image to Tracing in Record Time

Go from cephalometric image to tracings in mere seconds using our state-of-the-art Scan Ceph module, image processing and automatic tracing features¹.



FASTER SCANS, LOWER RADIATION DOSE

Ultra-fast scans—as low as 3 seconds—reduce the risk of motion blur and exposure time. Combined with advanced orthodontic filters, the CS 9600 delivers impressive image clarity and visualization of hard and soft tissue for faster analysis.

FULL RANGE OF IMAGE FORMATS AND PROGRAMS

Featuring all common projections and multiple image formats (26 cm x 24 cm¹ to 18 cm x 18 cm), the Scan Ceph module is an ideal choice for all your orthodontic and oral surgery needs.

TRUE AUTOMATIC TRACINGS

Carestream Dental's automatic tracing feature allows you to fully trace images in just 10 seconds—saving you up to 9 minutes per analysis and improving patient education.

Software That Creates Opportunity

Accurate, high-quality scans are crucial for the diagnosis and treatment of your patients. That's why we created intelligent software and digital solutions that not only help you see more, but do more. The CS 9600 features the industry's leading dental imaging and 3D technology, complemented by an optional suite of implant, orthodontic, restoration and airway analysis software that help you take your practice to the next level.

Diagnosis

CS Imaging

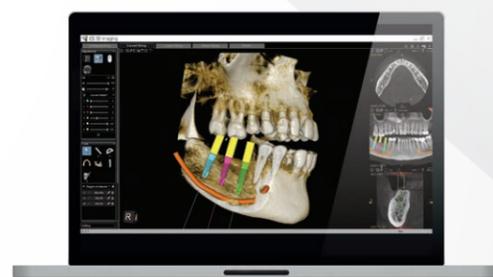
CS Imaging version 8 software is the hub of your imaging platform, providing one-stop access to all your 2D images, 3D images and CAD/CAM data, without switching between programs. Whether capturing data, reviewing images or sharing them with your network or patients, CS Imaging connects all Carestream Dental technologies into one single platform—the first step to an effective digital workflow.



Poz. 1.8.8. c)

CS 3D Imaging poz. 1.8.8. a)

One of the industry's easiest-to-use 3D imaging software, CS 3D Imaging's features and modules improve your diagnostic and treatment planning capabilities in every specialty. **From implant planning to endodontics—as well as oral surgery to orthodontics—CS 3D Imaging Software gives you everything you need to make the most out of your CBCT system. Plus, CS 3D Imaging software enables you to choose from an extensive implant library of more than 70 international manufacturers to meet your needs.**



Merging the intraoral scan with a face scan and CBCT scan in the same image gives doctors the perfect foundation for prosthetic-driven implant planning.

Dr. Medic Henriette Lerner, D.D.S.

poz. 1.8.8.

Treatment Planning

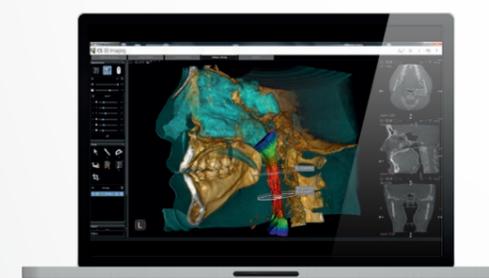
Integrates seamlessly with Blue Sky Bio and SWISSMEDA SMOP



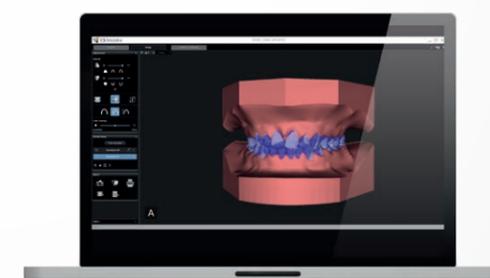
Poz. 1.8.8. c) PROSTHETIC-DRIVEN IMPLANT PLANNING
This module allows you to combine Carestream Dental's CBCT and digital impression data and add virtual crowns and implants to create a more comprehensive treatment plan that can be transferred in a single click to third-party providers to create surgical templates.



CAD/CAM RESTORATIONS Poz. 1.8.7. h)
Access state-of-the-art intuitive restorative design via exocad ChairsideCAD software, which is completely integrated into the CS Solutions platform for optimal patient experience.



Poz. 1.8.8 b) AIRWAY ANALYSIS
Combined with low-dose CBCT exams, the CS Airway module allows doctors to easily segment the airway in just a few clicks to visualize airway constrictions and communicate areas of concern to the patient.



ORTHODONTICS—CS MODEL+
CS Model+ allows you to evaluate your digital models and create virtual orthodontic setups in minutes. Advanced options like superimposition and patient monitoring allow you to track your patient's progress over time.

Clinical Indications For Every Specialty.

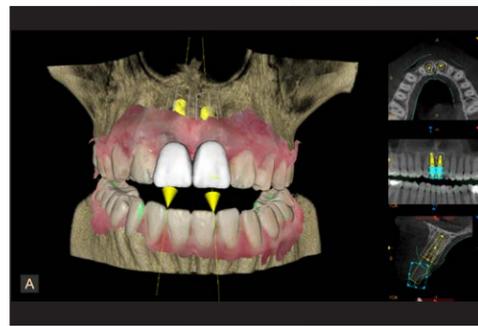
Professionals from every dental specialty, radiology and ENT helped create the CS 9600—and it shows. By considering your needs, we've created a family of scanners that every practice can benefit from. And because they're easily scalable, these scanners can evolve as your practice evolves.



Implants poz. 1.8.8.



Evaluate bone quantity and quality, and localize anatomical obstacles.



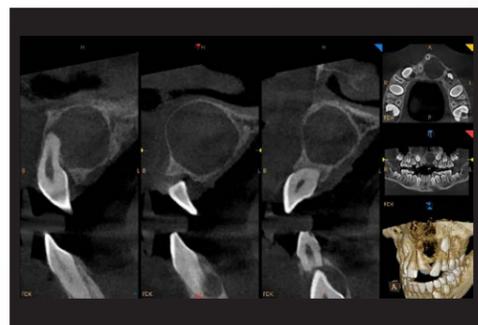
Plan implants with confidence using virtual crowns and comprehensive implant library.



Oral Surgery poz. 1.8.8.



Identify relationships between impacted teeth and vital anatomical structures.



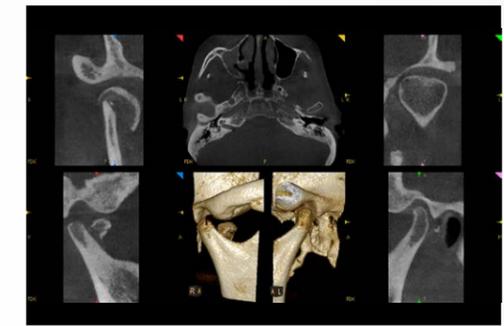
Visualize cysts and define surgical protocol for removal.



Oral and Maxillofacial Surgery poz. 1.8.8.



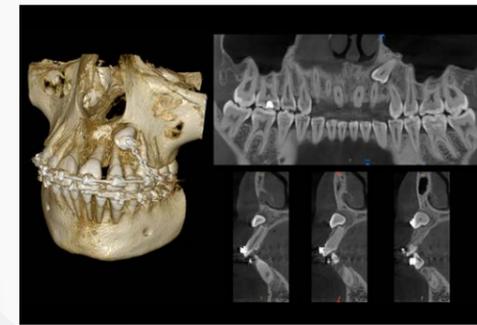
Make pre-operative and post-operative assessments.



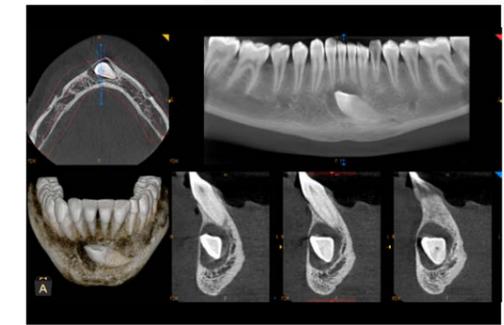
Assess TMJ dysfunction and fractures.



Orthodontics poz. 1.8.8.



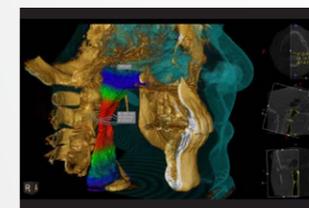
Follow orthodontic traction and communicate effectively with oral surgeon.



Evaluate impacted teeth and define the least invasive treatment.

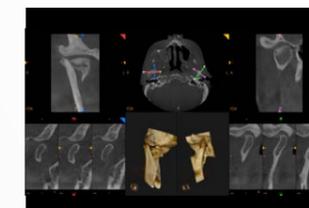
poz. 1.8.8.

AIRWAY ANALYSIS



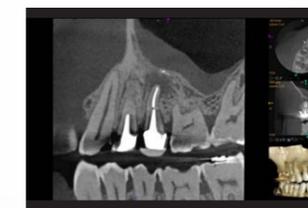
poz. 1.8.8.

TMJ ANALYSIS



poz. 1.8.8.

ENDODONTICS



poz. 1.8.8.

PERIODONTICS



We now have a system that is truly capable of adapting to the different workflows we have. It has clearly taken CBCT imaging to the next level.

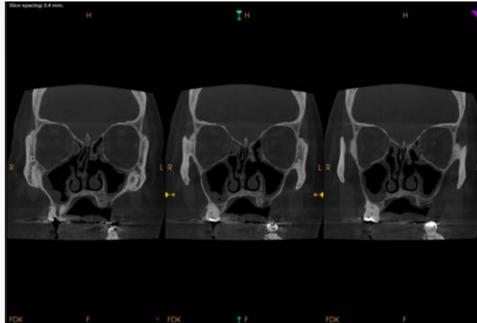
Dr Antoine Diss, D.D.S.

Even More Applications

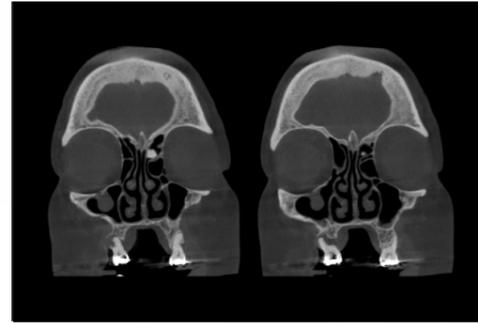


ENT poz. 1.8.8.

PARANASAL SINUS

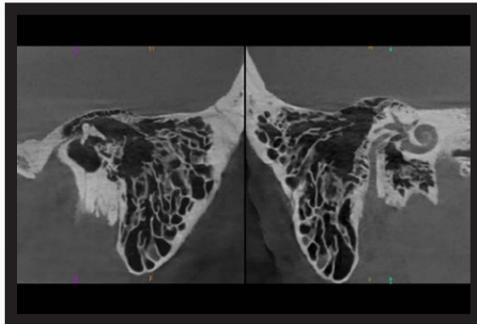


Ethmoidal sinusitis (16 cm x 17 cm).



Osteoma originating from septa of ethmoid air cells.

TEMPORAL BONES



Diagnosis of inner ear disorders (0.075 mm resolution).



Bilateral temporal bone image showing cholesteatoma in the left ear.



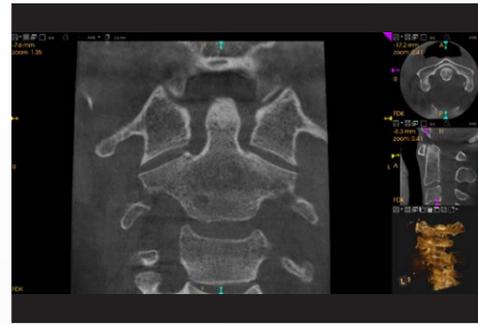
Orthopedics poz. 1.8.8.

WRIST¹



Diagnosis of micro-fracture, trauma and pathological changes in bone and joint structure.

C-SPINE JOINT¹



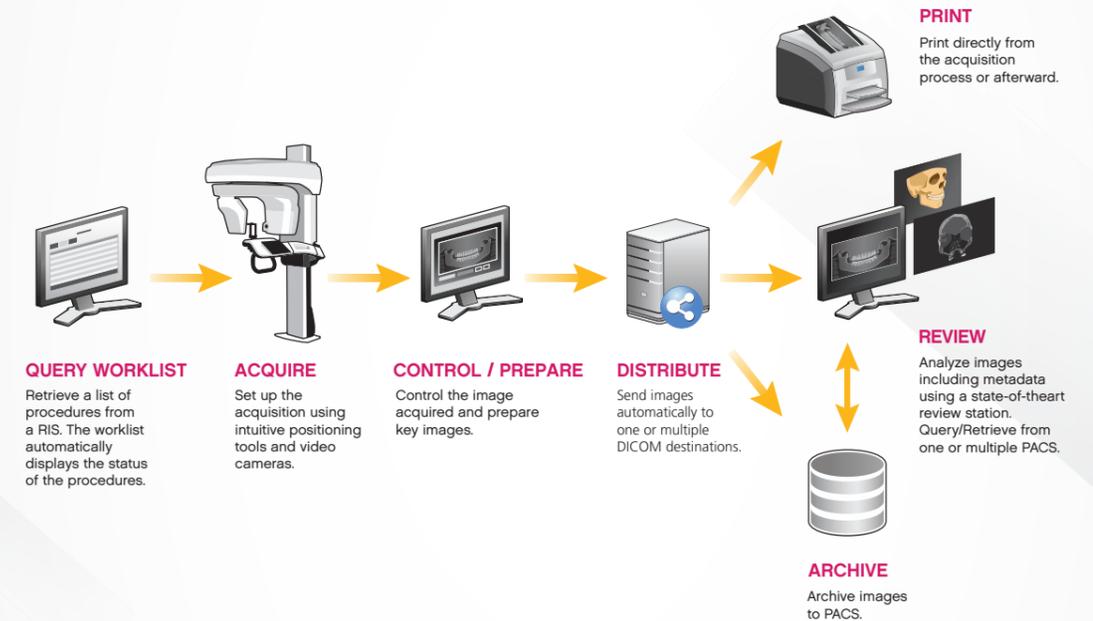
Diagnosis of trauma, arthrosis or facial dysmorphism evaluation.

A Versatile Solution for Radiologists

Combining a broad range of indications, a familiar DICOM workflow and review workstation, the CS 9600 is an ideal solution for radiology professionals and other practitioners working in a DICOM environment.

Familiar, Time-saving DICOM Workflow

Unlike other dental CBCT systems, the CS 9600 allows technologists and radiologists to acquire and review CBCT images similar to the way they do with other modalities.



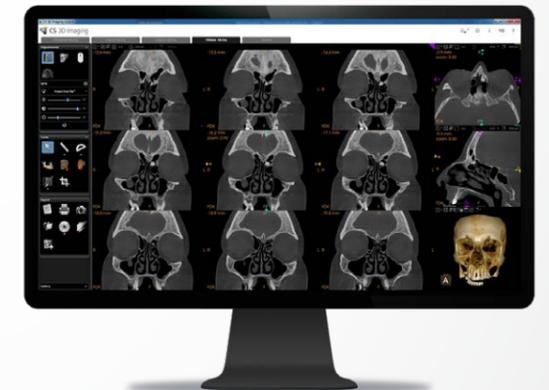
Poz. 2.3.

STATE-OF-THE-ART 2D/3D REVIEW STATION

CS Imaging suite combined with CS DICOM provides a powerful 2D/3D review station that features advanced viewing functions for dental, maxillofacial and ENT needs. All images, stored on the local repository and on PACS, are accessible from a single image gallery, which makes image search and transfer faster.

A DICOM-COMPLIANT SOLUTION

The system's DICOM conformance ensures the unit works with RIS, PACS and printing systems.



Designed For Every Specialty. Built Just For You.

In developing the new CS 9600 family, we considered the needs of all of our customers. That's why we created three different field of view editions and offer so many licensed options. We truly want you to be able to configure your CS 9600 scanner to meet your specific treatment planning and diagnostic needs. **Configure yours today at carestreamdental.com/9600Config**



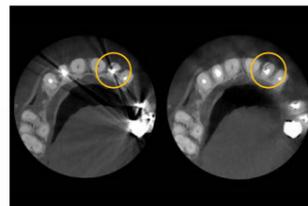
Flexibility With Up To 14 Fields of View Available

	4 cm x 4 cm 5 cm x 5 cm 6 cm x 6 cm	5 cm x 8 cm	8 cm x 5 cm 10 cm x 5 cm 12 cm x 5 cm	8 cm x 8 cm 10 cm x 10 cm	12 cm x 10 cm	16 cm x 6 cm	16 cm x 10 cm	16 cm x 12 cm	16 cm x 17 cm
 <p>CS 9600 12x10 Edition 10 FOVs Available: 4 cm x 4 cm to 12 cm x 10 cm Specialty: General Dentistry, Implants, Periodontics, Prosthodontics, Oral Surgery</p> <p>UPGRADEABLE</p>	✓	✓	✓	✓	✓	Upgradeable	Upgradeable	Upgradeable	Upgradeable
 <p>CS 9600 16x10 Edition 12 FOVs Available: 4 cm x 4 cm to 16 cm x 10 cm Specialty: Implants, Oral and Maxillofacial Surgery, Periodontics, Prosthodontics</p> <p>UPGRADEABLE</p>	✓	✓	✓	✓	✓	✓	✓	Upgradeable	Upgradeable
 <p>CS 9600 16x17 Edition 14 FOVs Available: 4 cm x 4 cm to 16 cm x 17 cm Specialty: Oral and Maxillofacial Surgery, Orthodontics, Radiology, ENT</p>	✓	✓	✓	✓	✓	✓	✓	✓	✓

poz. 1.8.5.

FOV upgrades are implemented through a software upgrade—no hardware change is necessary.

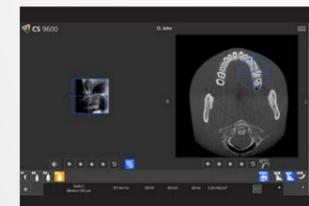
Versatile Imaging Options



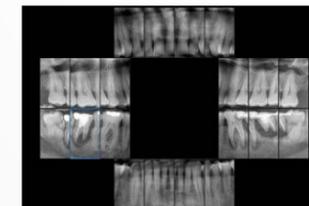
CS MAR¹
Automatically reduces metal artifacts and lets users compare images live with and without filter for more confident diagnoses.



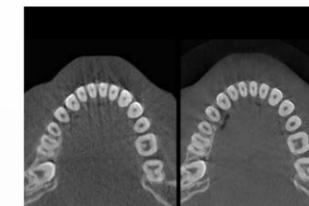
CS FACE SCAN¹ Poz. 1.8.8. d)
Creates realistic 3D facial images and superimposes surface scans on CBCT images and 3D models, helping patients better understand treatment plans.



SMARTAUTO PACKAGE¹
SmartAuto Pan and SmartAuto 3D features provide a new level of workflow automation and exam precision.



EXTRAORAL FMS¹
Generates full-mouth series images from a 2D panoramic exam, ideal for when intraoral X-rays cannot be performed.



120 KV¹ Poz. 1.1.
By upgrading from the standard 90 kV model, you can dramatically increase image quality and reduce artifacts without increasing dose.



CEPHALOMETRIC IMAGING¹
The CS 9600 family is cephalometric ready from day one, so you can capture and analyze precise cephalometric images quickly and accurately. Poz. 1.5.

Keep Your High-Performance Scanner in Top Form.



CS Advantage is our premium service program, providing a full array of service, support and warranty options for your purchase. Enroll at the same time you purchase your Carestream Dental product to ensure the best performance, starting on the very first day.

CS Advantage:



Extends the terms of the standard warranty that comes with your system and increases the length of the coverage to best suits your needs.



Provides immediate access to the latest updates available for your software.



Covers training and support service for continuing education, as well as ongoing support for the best possible equipment and software experience.



Exclusive remote monitoring technology that continuously screens the CS 9600 system and makes it easy to detect and resolve system errors, prevent downtime and maximize system availability. CS UpStream¹ is available as an add-on to the CS Advantage program.



Learn more about the CS 9600 family
at [carestreamdental.com](https://www.carestreamdental.com)

¹Option
EXOCAD is a trademark of exocad GmbH. Blue Sky Bio is a registered trademark of Blue Sky Bio, LLC. Smop is a trademark of Swissmeda AG.

CS 9600



Safety, Regulatory and Technical Specifications User Guide

3

Technical Specifications

Factory

TROPHY
4, rue F. Pelloutier, Croissy-Beaubourg
77435 Marne la Vallée Cedex 2, France

Manufacturer



Carestream Dental LLC
1765 The Exchange,
Atlanta, GA USA 30339

Model

CS 9600

CS 9600 Technical Specifications

Table 2 CS 9600 Technical Specifications

Components	X-ray Generator
Tube voltage	60 – 90 kV 60 – 120 kV (optional) Poz. 1.1.
Tube current	2 - 15 mA Poz. 1.2.
Frequency	140 kHz Poz. 1.3.
Tube focal spot (IEC 60336)	0.3 or 0.7 mm Poz. 1.4.
Total filtration	> 2.5 mm eq. Al

Panoramic Modality Poz. 1.7.

Sensor technology	CMOS Poz. 1.7.1.
Image field	6.4 x 140 mm (for adult patient size) 6.4 x 120 mm (for child patient size) Poz. 1.7.3. 120 x 140 mm (for sinus one-shot exam)
Gray scale	16384 - 14 bits Poz. 1.7.2.
Magnification	1.

Panoramic Modality	
Radiological exams	Full panoramic Segmented panoramic Bitewing Maxillary sinus Lateral TMJ x 2 Lateral TMJ x 4 Sinus AP / PA / Lateral Orthogonal panoramic Poz. 1.7.4.
Exposure time	0.5 to 13 s
Exposure mode	4 patient sizes (child, small adult, medium adult, large adult) 3 dental arch morphology (normal, square, sharp) Poz. 1.7.5.

Panoramic modality is not available in Australia when the device is installed only with the 3D modality.

3D Modality Poz. 1.8.	
Technology	Dental Volumetric Reconstruction (DVR)
Sensor technology	CMOS Poz. 1.8.1.
Volume Field Of View (FOV) diameter x height (cm)	4 x 4 Poz. 1.8.4. 5 x 5 5 x 8 6 x 6 8 x 5 8 x 8 10 x 5 ¹ Poz. 1.8.5. 10 x 10 ^{*1} 12 x 5 ¹ 12 x 10 ^{*1} 16 x 6 ¹ 16 x 10 ^{*1} 16 x 12 ¹ 16 x 17 ^{*1} Poz. 1.8.3. *with tip of the volume
Radiological exams	Tooth / Teeth Full, upper or lower jaw TMJ Face ENT Upper cervical spine Wrist
Gray scale	16384 - 14 bits Poz. 1.8.2.
Magnification	1.4
Voxel Size	75 µm minimum Poz. 1.8.6.
Exposure time	5.5 to 40 s (2 x 20 s)
Scan mode	Continuous

¹ In Ontario (Canada), the use by dentists, of FOVs that are over 8x8 is subject to conditions.

CS 9600



Saugos, taisyklių ir techninių specifikacijų naudotojo vadovas

3

Techninės specifikacijos

Gamykla

TROPHY

4, rue F. Pelloutier, Croissy-Beaubourg

77435 Marne la Vallée Cedex 2, Prancūzija

Gamintojas



Carestream Dental LLC
1765 The Exchange,
Atlanta, GA USA 30339

Modelis

CS 9600

CS 9600 techninės specifikacijos

2 lent. CS 9600 techninės specifikacijos

Komponentai	Rentgeno spinduliuotės generatorius
Vamzdžio įtampa	60–90 kV poz. 1.1. 60–120 kV (pasirenkamas)
Vamzdžio srovė	2–15 mA poz. 1.2.
Dažnis	140 kHz poz. 1.3
Vamzdžio židinio taškas (IEC 60336)	0,3 arba 0,7 mm poz. 1.4
Bendrasis filtravimas	>2,5 mm ekv. Al
Panoraminius modalumas Poz. 1.7.	
Jutiklių technologija	CMOS poz. 1.7.1
Vaizdo laukas	6,4 x 140 mm (suaugusiojo dydžio pacientams) poz. 1.7.3. 6,4 x 120 mm (vaiko dydžio pacientams) 120 x 140 mm (sinusiniams vieno nuskaitymo tyrimams)
Pilkumo tonų skalė	16384 – 14 bitų poz. 1.7.2.
Mastelio keitimas	1,28

Panoramini modalumas	
Radiologiniai tyrimai	<p>Visiškai panoraminis poz. 1.7.4.</p> <p>Segmentuotas panoraminis</p> <p>Sakandis</p> <p>Žandinis sinusas</p> <p>LATERALINIS SMILKININIS ŽANDIKAULIO SĄNARYS X 2</p> <p>LATERALINIS SMILKININIS ŽANDIKAULIO SĄNARYS X 4</p> <p>Sinusinis AP / PA / šoninis</p> <p>Statmenas panoraminis</p>
Ekspozicijos trukmė	0,5–13 s
Ekspozicijos režimas	<p>4 pacientų dydžiai (vaikas, smulkus suaugusysis, vidutinis suaugusysis, stambus suaugusysis) Poz. 1.7.5.</p> <p>3 dantų lanko morfologijos (normalus, kvadratinis, ryškus)</p>

Panoramini modalumas negalimas Australijai skirtose versijose, jei įrenginyje yra įdiegtas tik 3D modalumas.

3D modalumas Poz. 1.8.	
Technologija	Dantų tūrinis atkūrimas (DVR)
Jutiklių technologija	CMOS poz. 1.8.1.
Tūrio regos lauko (FOV) skersmuo x aukštis (cm) poz. 1.8.5.	<p>4 x 4 poz. 1.8.4.</p> <p>5 x 5</p> <p>5 x 8</p> <p>6 x 6</p> <p>8 x 5</p> <p>8 x 8 Poz. 1.8.5.</p> <p>10 x 5¹</p> <p>10 x 10*¹</p> <p>12 x 5¹</p> <p>12 x 10*¹</p> <p>16 x 6¹</p> <p>16 x 10*¹</p> <p>16 x 12¹</p> <p>16 x 17 *¹ poz. 1.8.3.</p>
	*su tūrio viršūnę
Radiologiniai tyrimai	<p>Dantis / dantys</p> <p>Pilnas, viršutinis ir apatinis žandikaulis</p> <p>Žandikaulio sąnarys poz. 1.8.7</p> <p>Veidas</p> <p>LOR</p> <p>Viršutinė kaklinė stuburo dalis</p> <p>Riešas</p>
Pilkumo tonų skalė	16384 – 14 bitų poz. 1.8.2.
Mastelio keitimas	1,4
Tūrinio vaizdo elemento dydis	Mažiausiai 75 μm poz. 1.8.6.
Ekspozicijos trukmė	5,5–40 s (2 x 20 s)
Nuskaitymo režimas	Nepertraukiamas

¹ Ontarijuje (Kanadoje) didesnio nei 8 x 8 rodinio lauko naudojimas odontologams priklauso nuo sąlygų.

CS 9600



User Guide

Notice

Congratulations on purchasing this unit of the CS 9600. Thank you for your confidence in our products and we will do all in our power to ensure your complete satisfaction.

The User Guide for the CS 9600 includes information on all panoramic and 3D features. We recommend that you thoroughly familiarize yourself with this Guide in order to make the most effective use of your system.

CS 9600 is an extraoral system intended to produce two-dimensional and three-dimensional digital X-ray images of the dento-maxillofacial, ENT (Ear, Nose and Throat), cervical spine and wrist regions at the direction of healthcare professionals as diagnostic support for pediatric and adult patients.



WARNING: We recommend that you consult the “Safety, Regulatory and the Technical Specification User Guide” (SMA17) before using the CS 9600.

Do not use cone beam imaging for routine or screening examinations. Consider using other diagnostic tools. You must justify that the imaging method that you use to examine each patient demonstrates that the benefit outweighs the risks.

The US Federal law restricts this device to sale by or on the order of a physician.

The information contained in this Guide may be subject to modification without notice, justification or notification to the persons concerned.

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This document is originally written in English.

Manual Name: *CS 9600 User Guide*

Part Number: SMA16

Revision Number: 03

Print Date: 2018-12

The CS 9600 complies with Directive 93/42/EEC relating to medical devices.



0086

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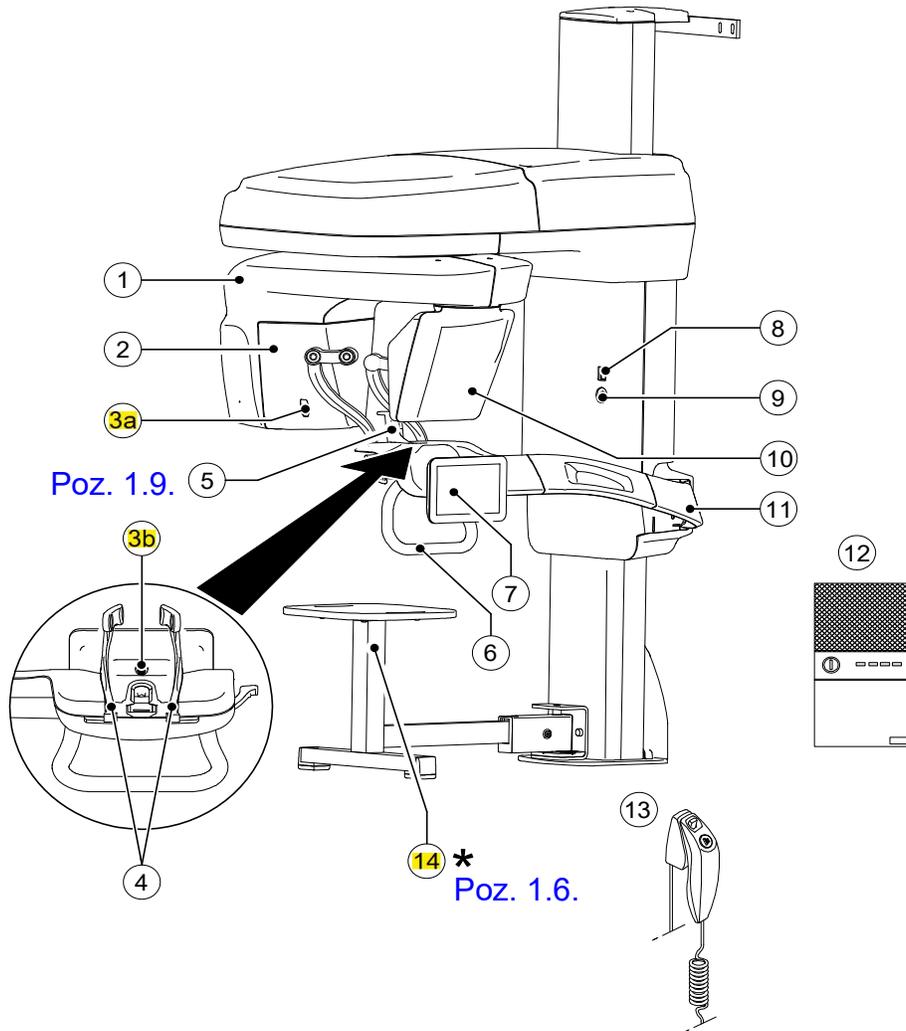
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2 CS 9600 General Overview

General Functional Components

Figure 1 CS 9600 Functional Components



- | | | | |
|-----------|--|-----------|------------------------------------|
| 1 | Unit rotative arm | 8 | ON/OFF button |
| 2 | X-ray source assembly | 9 | Emergency stop knob |
| 3a | Poz. 1.9. | 10 | Panoramic/3D digital sensor |
| 3b | Positioning and monitoring camera | 11 | Unit fixed arm |
| 4 | Temple supports | 12 | CS 9600 workstation |
| 5 | Chin rest base | 13 | X-ray remote control |
| 6 | Hand Grips | 14 | * Stool (optional) Poz. 1.6 |
| 7 | Touchscreen control panel | | |

Touchscreen Control Panel

The control panel is an alphanumeric, digital soft-touch console. It allows you to interact directly with the unit to carry out panoramic and 3D functions. Most of its interface is similar to the workstation interface that displays operating parameters and error messages.

Figure 3 **CS 9600 2D Touchscreen Control Panel**

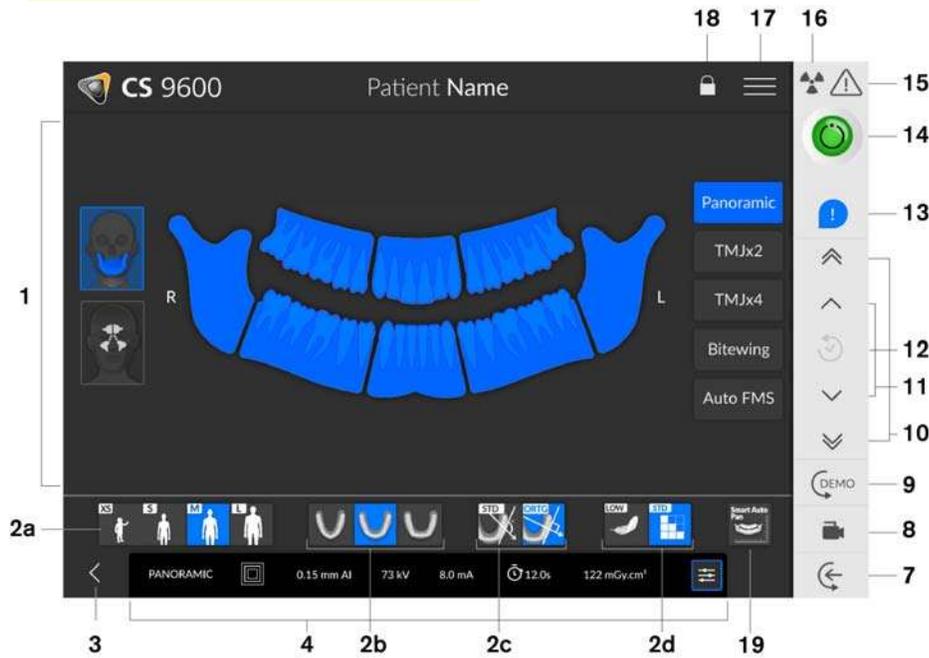
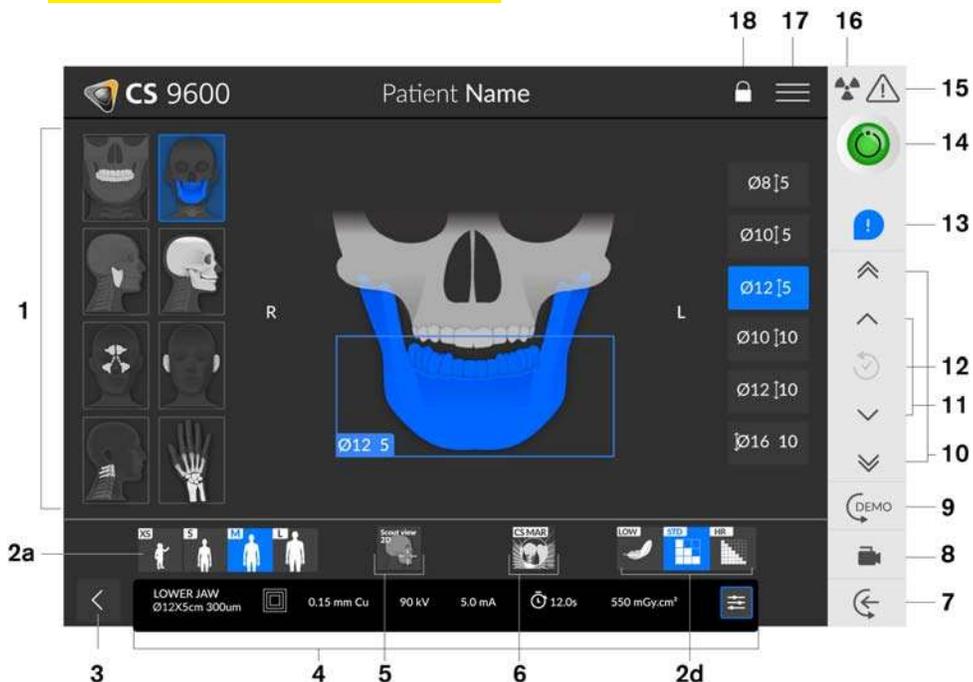


Figure 4 **CS 9600 3D Touchscreen Control Panel**



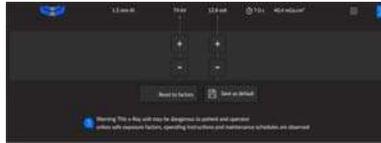
Important: R indicates that it corresponds to the right side of the patient who is facing the operator.

- 1 **Program pane and Preview screen:** Displays the choice of programs and enables you to choose different radiological exams according to the unit edition that you have.
- Selected parameter display:** Displays the current acquisition parameter settings:
- 2a **Patient type:** Child, Adult (small, medium, large).
- 2b **Dental arch morphology:** Normal, square, or sharp shaped.
- 2c **Type of trajectory:** Standard or orthogonal options.
- 2d **Imaging mode:** Imaging mode that you can select before doing an exam (standard or low dose for 2D), (standard, low dose, or High Resolution for 3D).



Important: See the *CS 9600 Safety, Regulatory and Technical Specifications User Guide (SMA17)* for information on radiation protection and recommendations when you select a patient type, especially the pediatric patient.

- 3 **Exits the acquisition interface**
- 4 **Exposure parameter panel:** Enables you to choose and save exposure parameters for the radiological image acquisition.



Poz. 1.10

- 5 **Scout view 2D:** Displays the sagittal slice view of the acquired image.
- SmartAuto 3D (optional):**
 - Displays the sagittal and axial slice view of the acquired image.
 - Recommends the patient parameters.
 - Saves the acquisition options that you select and display those options in orange.
 - If you change the recommended parameters, it will be indicated in underlined orange and the new parameters that you select will be in blue.

To select it, you must first acquire a Scout view 2D image. Then re-click  to deselect

Scout view 2D before  appears.

Poz. 1.8.8. e)

- 6 **CS Metal Artifact Reduction (CS MAR) Filter (optional):** Filter to avoid image distortions caused by metal from objects such as prosthesis, screws or dental fillings.



Note: It is recommended that you compare MAR-processed images with the original, unprocessed images.

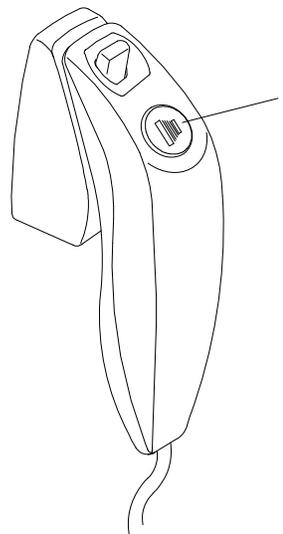
- 7 **Patient entry:** Positions the unit in the patient entry mode.
- Poz. 1.9. 8 **Live positioning camera:** Enables the cameras for live positioning assistance.
- 9 **Demo:** Enables you to demonstrate the acquisition procedures to a patient without the X-ray.
- 10 **Fast Height Adjustment button:** For fast adjustment of the height of the unit to the height of the patient.
- 11 **Slow Height Adjustment button:** For slow adjustment of the height of the unit to the height of the patient especially for the final adjustment.
- 12 **Patient data history:** If a patient has previously been examined, the unit will detect it and this icon will turn orange.

- 13 **Accessory notification:** Will appear on the interface if you do not use a positioning accessory that corresponds to an acquisition.
 - 14 **Ready indicator:**
 - Black indicates the unit is not ready to start acquisition.
 - Orange indicates the unit preparing for acquisition.
 - Green indicates the unit is ready to start acquisition.
 - 15 **Warning:** Indicates that you must consult the accompanying document.
 - 16 **Ionizing radiation:**
 - Warns you about radiation dangers.
 - Blue indicates the X-ray is enabled.
 - Grey indicates the X-ray is not enabled.
 - 17 **Menu:** Provides access to the following sub-menus: General Settings, DICOM Settings, Reset to factory, Patient history, Shutdown / Restart, About.
 - 18 **Screen lock:** Locks the screen. Double-click to unlock.
 - 19 **SmartAuto Pan (optional):**
 - A 2D function that will scan the patient and recommend the patient parameters.
 - Saves the acquisition options that you select and displays those options in orange.
 - If you change the SmartAuto Pan results, it will be indicated in underlined orange and the new parameters that you select will be in blue.
- Poz. 1.10.
- Poz. 1.11

X-ray Remote Control

The X-ray remote control enables you to launch a radiological image acquisition via the exposure button from outside the X-ray room. You must press and hold the exposure button until the end of acquisition. Premature release of the exposure button interrupts the acquisition.

Figure 5 X-ray Remote Control



- 1 **Exposure button:** launches image acquisition.

7

Acquiring 3D Teeth Images

Poz. 1.8.7. a)

Acquiring 3D Teeth Images for the Adult and Pediatric Patient

Before acquiring an image, check that you have:

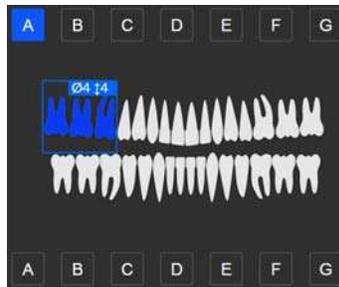
- Reset the unit rotative arm to the start position for the patient to enter the unit.
- Accessed the **Acquisition Interface**.
For information on accessing the **Acquisition Interface**, see “[Accessing the Acquisition Interface](#)” .

Setting the Acquisition Parameters

To set the acquisition parameters, follow these steps:

1. Select  as the program and the required FoV.

2. Select the area of interest that you intend to examine by clicking the alphabetical labels:



Note: The area of interest that you select will turn blue.

3. In the **3D Acquisition** interface, select the patient type:



- Child
- Adult: Small, Medium, Large



Important: See the *CS 9600 Safety, Regulatory and Technical Specifications User Guide (SMA17)* for information on radiation protection and recommendations when you select a patient type, especially the pediatric patient.

4. If the default parameter setting is not adapted to your patient type, click  on the parameter display panel to open it and to select the appropriate parameters. To save the new parameter settings, click  .

8

Acquiring 3D Jaw Images

Poz. 1.8.7. b), c)

Acquiring a 3D Image of the Full, Upper and Lower Jaw for the Adult and Pediatric Patient

Before acquiring an image, check that you have:

- Reset the unit rotative arm to the start position for the patient to enter the unit.
- Accessed the **Acquisition Interface**.
For information on accessing the **Acquisition Interface**, see “[Accessing the Acquisition Interface](#)”.

Setting the Acquisition Parameters

1. Select  as the program and the required FoV.
2. Click on one of the following area of interest that you intend to examine:

-  Full jaw (both upper and lower jaw) exam
-  Upper jaw exam
-  Lower jaw exam



Note: The area of interest that you select will turn blue.

3. In the **3D Acquisition** interface, select the patient type:



- Child
- Adult: Small, Medium, Large



Important: See the *CS 9600 Safety, Regulatory and Technical Specifications User Guide (SMA17)* for information on radiation protection and recommendations when you select a patient type, especially the pediatric patient.

4. If the default parameter setting is not adapted to your patient type, click  on the parameter display panel to open it and to select the appropriate parameters. To save the new parameter settings, click .

9

Acquiring 3D TMJ and Maxillo Facial Images Poz. 1.8.7. d)

Acquiring 3D TMJ Images for the Adult and Pediatric Patient

Before acquiring an image, check that you have:

- Reset the unit rotative arm to the start position for the patient to enter the unit.
- Accessed the **Acquisition Interface**.
For information on accessing the **Acquisition Interface**, see “[Accessing the Acquisition Interface](#)” .

Setting the Acquisition Parameters

To set the acquisition parameters, follow these steps:

1. Select  as the program and the required FoV.
2. Select the area of interest that you intend to examine:
 -  Bilateral TMJ
 -  Left TMJ
 -  Right TMJ



Note: The area of interest that you select will turn blue.

3. In the **3D Acquisition** interface, select the patient type:



- Child
- Adult: Small, Medium, Large



Important: See the *CS 9600 Safety, Regulatory and Technical Specifications User Guide (SMA17)* for information on radiation protection and recommendations when you select a patient type, especially the pediatric patient.



Note: This chapter deals with ENT radiological exams.

Acquiring 3D Sinus Images for the Adult and Pediatric Patient

Before acquiring an image, check that you have:

- Reset the unit rotative arm to the start position for the patient to enter the unit.
- Accessed the **Acquisition Interface**.
For information on accessing the **Acquisition Interface**, see “[Accessing the Acquisition Interface](#)” .

Setting the Acquisition Parameters

To set the acquisition parameters, follow these steps:

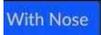


1. Select  as the program and the required FoV.
2. Select the area of interest that you intend to examine:



Note: The area of interest that you select will turn blue.

If you want to include the patient nose into the area of interest that you intend to examine, click

 .

3. In the **3D Acquisition** interface, select the patient type:



- Child
- Adult: Small, Medium, Large

11

Acquiring 3D Upper Cervical Spine

Images

Poz. 1.8.7. f)

Acquiring 3D Cervical Spine Images for the Adult and Pediatric Patient

Before acquiring an image, check that you have:

- Reset the unit rotative arm to the start position for the patient to enter the unit.
- Accessed the **Acquisition Interface**.
For information on accessing the **Acquisition Interface**, see “[Accessing the Acquisition Interface](#)”.

Setting the Acquisition Parameters

To set the acquisition parameters, follow these steps:

1. Select  as the program.

2. In the **3D Acquisition** interface, select the patient type:



- Child
- Adult: Small, Medium, Large



Important: See the *CS 9600 Safety, Regulatory and Technical Specifications User Guide (SMA17)* for information on radiation protection and recommendations when you select a patient type, especially the pediatric patient.

3. If the default parameter setting is not adapted to your patient type, click  on the parameter display panel to open it and to select the appropriate parameters. To save the new parameter settings, click .

12 Acquiring 3D Wrist Images

Poz. 1.8.7.

Acquiring 3D Wrist Images for the Adult and Pediatric Patient

Before acquiring an image, check that you have:

- Reset the unit rotative arm to the start position for the patient to enter the unit.
- Accessed the **Acquisition Interface**.
For information on accessing the **Acquisition Interface**, see “[Accessing the Acquisition Interface](#)”.

Setting the Acquisition Parameters

To set the acquisition parameters, follow these steps:

1. Select  as the program.
2. Click on one of the following programs and select the area of interest that you intend to examine:

-  Left wrist exam
-  Right wrist exam

3. In the **3D Acquisition** interface, select the patient type:



- Child
- Adult: Small, Medium, Large



Important: See the *CS 9600 Safety, Regulatory and Technical Specifications User Guide (SMA17)* for information on radiation protection and recommendations when you select a patient type, especially the pediatric patient.

4. If the default parameter setting is not adapted to your patient type, click  on the parameter display panel to open it and to select the appropriate parameters. To save the new parameter settings, click .

13

Acquiring 3D Face Scan Images

Poz. 1.8.8. d)

(CS Face Scan Option)

Poz. 1.8.7 g)

Acquiring 3D Face Scan Images for the Adult and Pediatric Patient

Before acquiring an image, check that you have:

- Reset the unit rotative arm to the start position for the patient to enter the unit.
- Accessed either the CS Imaging window (Dental environment) or the Image Acquisition window (DICOM environment).

To acquire a 3D face scan image, follow these steps:

1. On the Main toolbar of the CS Imaging window or the Image Acquisition window, click .

The **3D Face Scan Acquisition** interface appears and displays a brief pop-up illustration window to remind you that:

- The patient must remove and place all metal objects in the jewellery tray.
- The patient hair must be tucked behind the ears.
- You must remove the temple supports.

Preparing and Positioning the Adult and Pediatric Patient

2. Position the 3D face scan support (make sure that it clicks fully into place).



Important:  Will appear on the interface. When you click on it, the 3D face scan support will appear in green. The incorrect accessory will appear in red.

3. On the Touch Screen Control Panel:

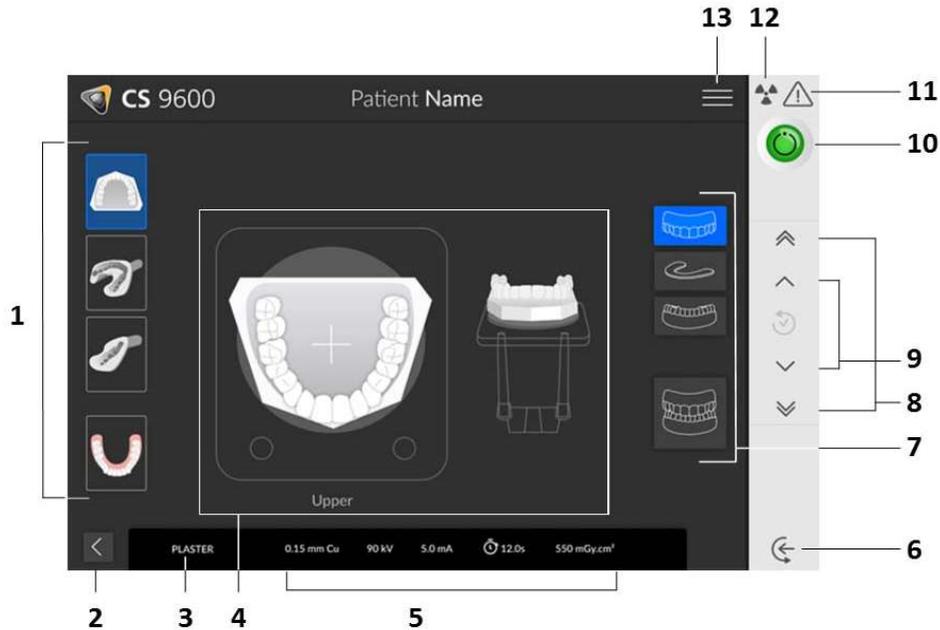
- Click . The rotative arm rotates to a 90 degree angle. Remove the temple supports.
- Click  to position the unit to the patient entry mode. Ask the patient to enter the unit.
- Press and hold  to adjust the unit to the height of the patient.

14 Acquiring 3D Object Images

Poz. 1.8.8. c)

General Overview

Figure 14 3D Object Acquisition Interface Overview



1 Acquisition modes: Plaster, impression, triple tray impression, and appliance modes. Poz. 1.8.7 h)

2 Exit button

3 Current acquisition mode

4 Illustration screen: Guides you on how to position an object before an acquisition.

5 Exposure parameter display

6 Object entry mode: Positions the unit in the object entry mode.

7 **Acquisition object options:** Provides the various combination of acquisition objects (lower jaw, bite index, upper jaw, or full jaw).

8 **Fast Height Adjustment button:** For fast adjustment of the height of the unit to the height of the object.

9 **Slow Height Adjustment button:** For slow adjustment of the height of the unit to the height of the object especially for the final adjustment.

Ready indicator:

- 10 • Black indicates the unit is not ready to start acquisition.
- Orange indicates the unit preparing for acquisition.
- Green indicates the unit is ready to start acquisition.

11 **Warning:** Indicates that you must consult the accompanying document.

15 Maintenance



Note: We at Carestream Dental LLC are committed to the constant improvement of the products that we manufacture. To benefit from our product updates or upgrades, we recommend that you:

- Contact your representative at least once a year and ask for updates or upgrades.
- Sign-up for a maintenance contract through your representative.



Important: For information on cleaning and disinfecting, see the *CS 9600 Safety, Regulatory and Technical Specifications User Guide (SMA17)*.

Maintenance activities

Perform the following maintenance activities on your CS 9600 unit.

Monthly

Wipe the outer covers of the unit with a soft and dry cloth.

To maintain optimum image quality, the image quality must be controlled once a month.

Annually

We recommend a general inspection of the unit carried out by an authorized service technician.

Controlling the Image Quality

To control the image quality, follow these steps:

1. Access the **Acquisition** interface. See “[Accessing the Acquisition Interface](#)”.

2. Click  on the **Main Menu** page and select  **Equipment Tools**.

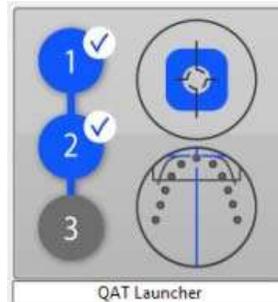
The **Equipment Tools** Login window is displayed.



The screenshot shows a login window titled "Enter login and password". It features a user profile icon on the left. To the right, there is a "Login" dropdown menu with "user" selected and a "Password" text input field. Below these fields is a "Login" button.

3. Enter the Login and click .

The **QAT Launcher** window is displayed.



4. Click the **QAT Launcher** window and follow the on-screen instructions.

16 Contact Information

Manufacturer's Address



Carestream Dental LLC
1765 The Exchange,
Atlanta, GA USA 30339

Authorized Representatives

Authorized Representative in the European Community

EC	REP
----	-----

TROPHY

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Authorized Representative in Brazil

CARESTREAM DENTAL BRASIL EIRELI

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São Paulo - Brazil
Cep (Zip Code): 12238-577

CS 9600



Naudotojo vadovas

Pastaba

Sveikiname įsigijus įrenginį CS 9600. Dėkojame už pasitikėjimą mūsų gaminiais ir pažadame padaryti viską, kad būtumėte visiškai patenkinti.

CS 9600 naudotojo vadove pateikiama informacija apie visas panoramines ir 3D funkcijas. Rekomenduojame kruopščiai susipažinti su šiuo vadovu, kad kuo efektyviau galėtumėte naudotis sistema.

CS 9600 yra ekstraoralinė sistema, skirta dvimačiams bei trimačiams skaitmeniniams dantų ir žandikaulio, LOR (ausų, nosies ir gerklės) kaklinės stuburo ir riešo sričių rentgeno vaizdams gauti. Šie vaizdai pasitarnauja sveikatos priežiūros specialistams kaip diagnostikos pagalbos priemonė gydant vaikus ir suaugusiuosius.



ĮSPĖJIMAS Rekomenduojame prieš naudojant CS 9600 perskaityti saugos, kontrolės ir techninių specifikacijų naudotojo vadovą (SMA17_It).

Nenaudokite kūginio spinduliuotės pluošto vaizdų gavimo įprastiniams arba patikros tyrimams. Apsvarstykite galimybę naudoti kitus diagnostikos įrankius. Turite būti įsitikinę, kad kiekvieno paciento tyrimui naudojamo vaizdų gavimo metodo nauda atsveria riziką.

Pagal federalinę JAV teisę šį prietaisą gali parduoti tik gydytojas arba tai galima daryti tik gydytojo nurodymu.

Informacija, esanti šiame vadove, gali būti pakeista be susijusių asmenų įspėjimo, patvirtinimo arba pranešimo.

Nė viena šio vadovo dalis negali būti atkurama be aiškaus „Carestream Dental LLC“ leidimo.

Pirminis dokumentas parašytas anglų kalba.

Vadovo pavadinimas: *CS 9600 naudotojo vadovas*

Dalies numeris: SMA16_It

Versijos numeris: 03

Spausdinimo data: 2018-12

CS 9600 atitinka medicinos prietaisų direktyvą 93/42/EEB.



0086

Turinys

Skyrius 1 Apie šį vadovą	Sutartiniai ženklai, pateikti šiame vadove 7
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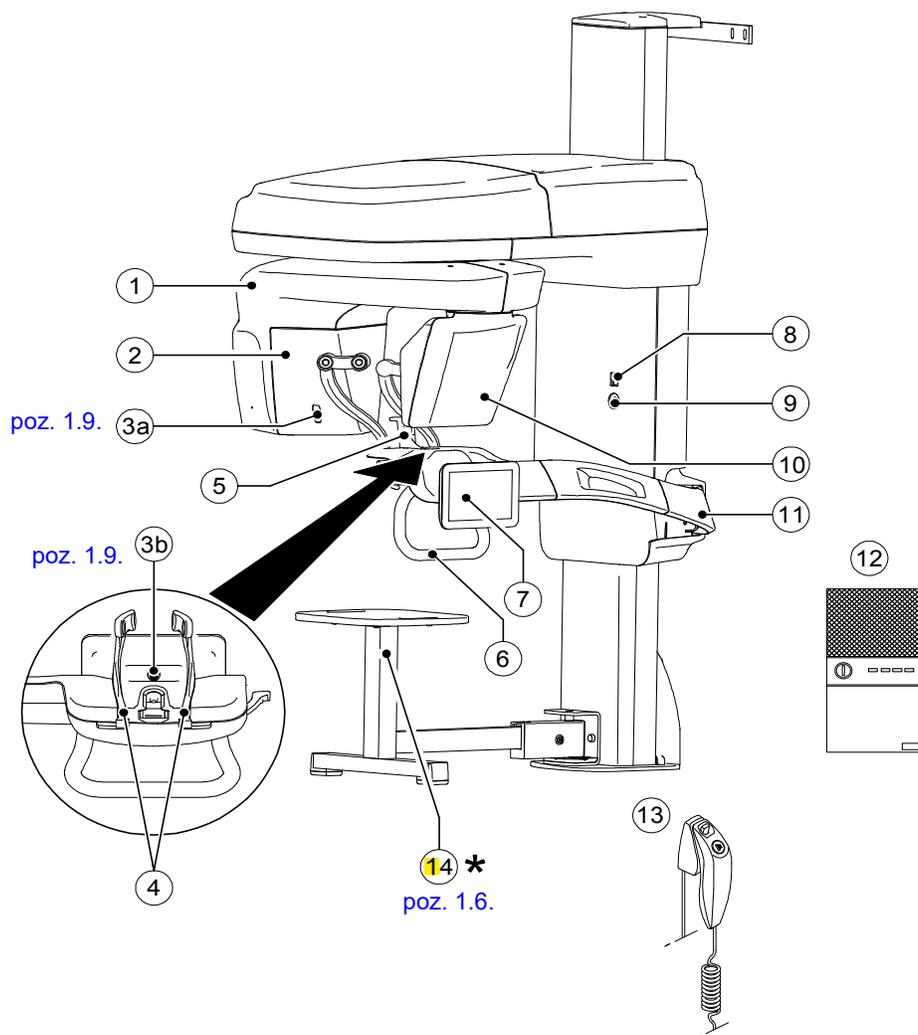
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2 CS 9600 bendroji apžvalga

Bendrieji funkciniai komponentai

1 pav. CS 9600 funkciniai komponentai

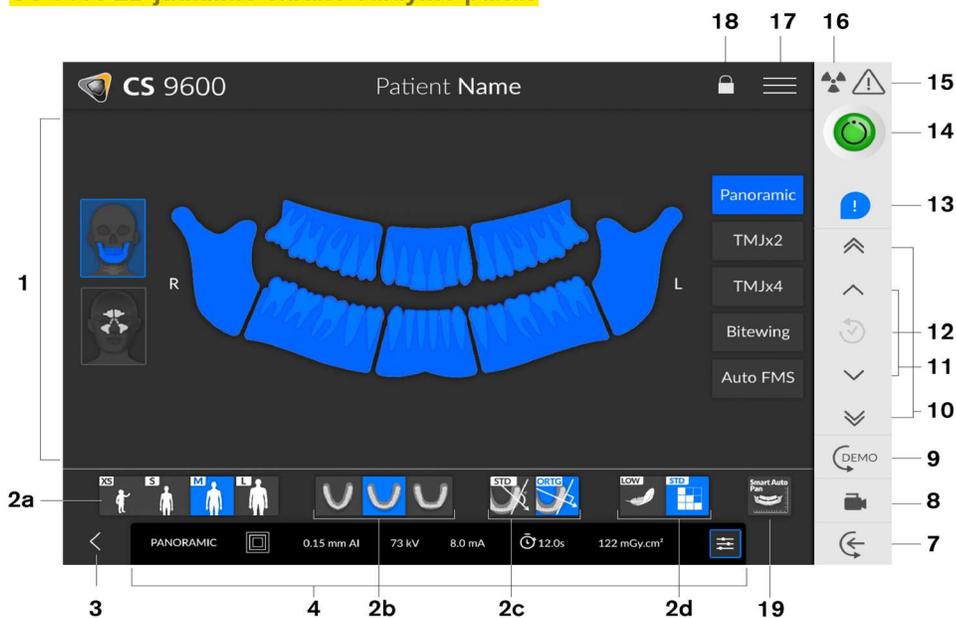


- | | | | |
|----|--|----|--|
| 1 | Besisukantis įrenginio svertas | 8 | Mygtukas ON/OFF (įjungti/išjungti) |
| 2 | Rentgeno spindulių šaltinio blokas | 9 | Avarinio stabdymo rankenėlė |
| 3a | Kameros padėties nustatymas ir kontroliavimas | 10 | Panoramasis / 3D skaitmeninis jutiklis |
| 3b | Kameros padėties nustatymas ir kontroliavimas | 11 | Fiksuota įrenginio rankena |
| 4 | Smilkinių atramos | 12 | CS 9600 darbo vieta |
| 5 | Smakro atrama | 13 | Nuotolinis rentgeno spindulių valdymo pultas |
| 6 | Rankenos | 14 | * Sėdynė (pasirinktinai) |
| 7 | Jutiklinio ekrano valdymo skydelis | | |

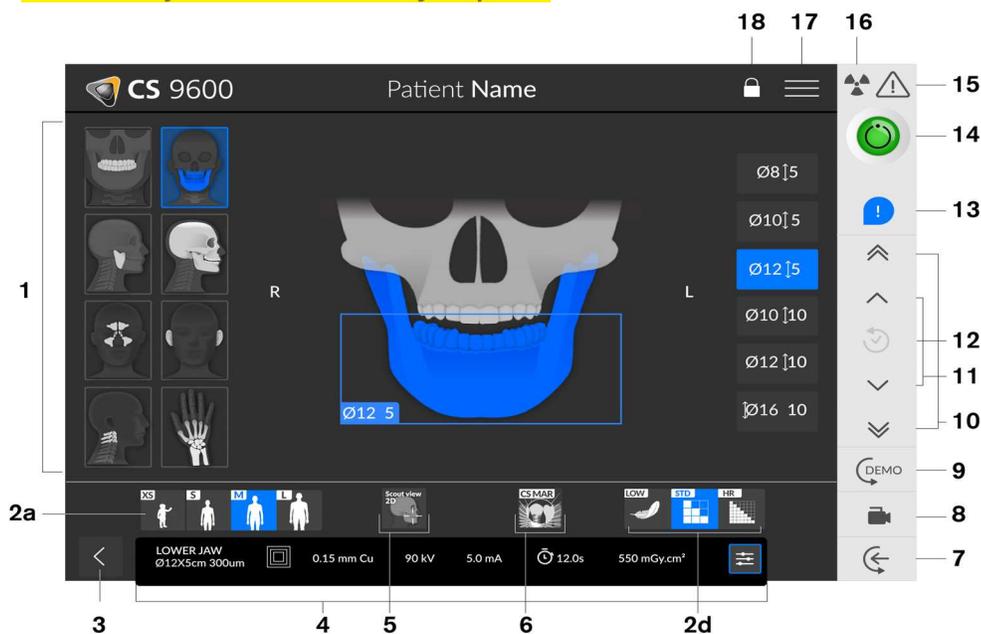
Jutiklinio ekrano valdymo skydelis

Valdymo skydelis yra raidinė-skaitinė, skaitmeninė minkšta konsolė. Tai leidžia tiesiogiai sąveikauti su įrenginiu norint atlikti panoramines ir 3D funkcijas. Didžioji dalis jo sąsajos yra panaši į darbo vietos sąsają, kurioje rodomi veikimo parametrai ir klaidų pranešimai.

3 pav. **CS 9600 2D jutiklinio ekrano valdymo pultas**



4 pav. **CS 9600 3D jutiklinio ekrano valdymo pultas**



Svarbu. R rodo, kad ji sutampa su dešiniąja paciento, esančio priešais operatorių, puse.

- 1 **Programos juosta ir peržiūros ekranas:** Rodo programų pasirinkimą ir leidžia pasirinkti skirtingus radiologinius tyrimus, atsižvelgiant į turimo įrenginio versiją.
- Pasirinktų parametrų rodymas:** rodomi esamų vaizdų gavimo parametrų nustatymai:
- 2a **Paciento tipas:** vaikas, suaugęs (mažas, vidutinis, didelis).
- 2b **Dantų lanko morfologija:** Paprasta, kvadratinė arba aštrios formos.
- 2c **Trajektorijos tipas:** Standartinės ar lygiagrečiai statmenos parinktys.
- 2d **Vaizdavimo režimas:** vaizdavimo režimas, kurį galite pasirinkti prieš atlikdami tyrimą (standartinis arba mažos dozės, skirtas 2D), (standartinis, mažos dozės arba didelės skiriamosios gebos, skirtas 3D).



Svarbu. Dėl informacijos apie apsaugą nuo radiacijos ir rekomendacijas pasirenkant paciento, ypač vaiko, tipą žr. CS 9600 saugos, kontrolės ir techninių specifikacijų naudotojo vadovą (SMA17_it).

- 3 **Išėjimas iš vaizdų gavimo sąsajos**
- 4 **Apšvitos parametrų skydelis:** leidžiama pasirinkti ir išsaugoti radiologinio vaizdo gavimo apšvitos parametrus.



- poz. 1.10. 5 **2D stebėjimo peržiūra:** rodoma gauto vaizdo strėlinio pjūvio peržiūra. „SmartAuto 3D“ (pasirinktinai):

- Rodoma gauto vaizdo strėlinio ir ašinio pjūvio peržiūra.
- Rekomenduojami paciento parametrai.
- Išsaugomos gavimo parinktys, kurias pasirinkote, ir jos rodomos oranžine spalva.
- Jei pakeisite rekomenduojamus parametrus, tai bus pabraukta oranžine spalva, o nauji pasirinktiniai parametrai bus mėlyni.

Norėdami jį pasirinkti, pirmiausia turite gauti 2D stebėjimo vaizdą. Tada spustelėkite

dar kartą,  kad panaikintumėte 2D stebėjimo peržiūros pasirinkimą prieš

pasirodant .

- poz. 1.8.8. 6 e) **CS metalo artefakto mažinimo (CS MAR) filtras (pasirinktinai):** Filtruokite, kad išvengtumėte vaizdo iškreipimų, kuriuos sukelia metalai iš objektų, pvz., protezai, varžtai ar dantų užpildai.



Pastaba. Rekomenduojama, kad palygintumėte MAR apdorotus vaizdus su originaliais, neapdorotais vaizdais.

- 7 **Paciento atvykimas:** Nustato įrenginio padėtį paciento atvykimo režime.
- poz. 1.9. 8 **Tiesioginė padėties nustatymo kamera:** Įjungia kameras, kad galėtų tiesiogiai padėti nustatyti poziciją.
- 9 **Demonstracinė versija:** Leidžia pademonstruoti pacientui vaizdų gavimo procedūras be rentgeno spindulių.
- 10 **Greito aukščio reguliavimo mygtukas:** Norint greitai reguliuoti įrenginio aukštį iki paciento aukščio.

- 11 **Lėto aukščio reguliavimo mygtukas:** Norint lėtai reguliuoti įrenginio aukštį iki paciento aukščio, ypač prieš galutinai sureguliuojant.
- 12 **Paciento duomenų istorija:** Jei pacientas anksčiau buvo ištirtas, įrenginys jį aptiks ir ši piktograma taps oranžinė.
- 13 **Priedo pranešimas:** bus rodomas sąsajoje, jei nenaudosite padėties nustatymo priedo, atitinkančio vaizdų gavimą.
- 14 **Pasiruošimo indikatorius:**
- Juoda spalva rodo, kad įrenginys nėra paruoštas pradėti vaizdų gavimą.
 - Oranžinė spalva rodo, kad įrenginys ruošiamas vaizdams gauti.
 - Žalia spalva rodo, kad įrenginys paruoštas pradėti vaizdų gavimą.
- 15 **Įspėjimas:** nurodo, kad privalote perskaityti lydimąjį dokumentą.
- 16 **Jonizuojantis švitinimas:**
- Įspėja apie radiacijos keliamus pavojus.
 - Mėlyna rodo, kad rentgeno spinduliai įjungti.
 - Pilka rodo, kad rentgeno spinduliai neįjungti.
- 17 **Meniu:** suteikia prie submeniu „General Settings“ (bendrieji nustatymai), „DICOM Settings“ (DICOM nustatymai), „Reset to factory“ (gamyklinių parametrų nustatymas iš naujo), „Patient history“ (paciento istorija), „Shutdown / Restart“ (išjungimas / paleidimas iš naujo), „About“ (apie).
- 18 **Ekrano užraktas:** Užrakina ekraną. Dukart spustelėkite norėdami atrakinti.
- poz. 1.10. 19 **„SmartAuto Pan“ (pasirinktinis):**
poz. 1.11
- 2D funkcija, kuri nuskaitytą pacientą ir rekomenduoja paciento parametrus.
 - Išsaugomos gavimo parinktys, kurias pasirinkote, ir jos rodomos oranžine spalva.
 - Jei pakeisite funkcijos „SmartAuto Pan“ (išmanus automatinis panoraminio vaizdo nustatymas) rezultatus, ji bus pabraukta oranžine spalva, o naujai pasirinkti parametrai bus rodomi mėlynai.

7 3D dantų vaizdų gavimas

poz. 1.8.7.

Suaugusiųjų ir vaikų 3D dantų vaizdų gavimas

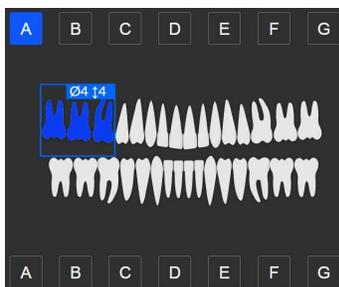
Prieš gaudami vaizdą, patikrinkite, ar:

- perstatėte besisukantį įrenginio svertą į pradinę padėtį, kad pacientas įeitų į įrenginį;
- prisijungėte prie **Acquisition Interface** (vaizdų gavimo sąsaja).
Informaciją, kaip pasiekti sąsają **Acquisition Interface** (vaizdų gavimo sąsaja) žr. „Prieiga prie vaizdų gavimo sąsajos“.

Vaizdų gavimo parametrų nustatymas

Norėdami nustatyti vaizdo gavimo parametrus, atlikite nurodytus veiksmus:

1. Pasirinkite  kaip programą ir reikalaujamą FoV.
2. Dominančią sritį, kurią ketinate tirti, pasirinkite spustelėję pagal abėcėlę surikiuotas etiketes:



Pastaba. Jūsų pasirinkta sritis bus mėlynos spalvos.

3. Sąsajoje **3D Acquisition** (3D vaizdų gavimas) pasirinkite paciento tipą.



- Vaikas
- suaugusysis: „Small“ (smulkus), „Medium“ (vidutinis) arba „Large“ (stambus).



Svarbu. Dėl informacijos apie apsaugą nuo radiacijos ir rekomendacijas pasirenkant paciento, ypač vaiko, tipą žr. **CS 9600 saugos, kontrolės ir techninių specifikacijų naudotojo vadovą (SMA17_It)**.

4. Jei numatytasis parametro nustatymas nėra pritaikytas paciento tipui, parametro rodinio skydelyje spustelėkite , kad jį atidarytumėte ir pasirinktumėte tinkamus parametrus.

Norėdami išsaugoti naujus parametrų nustatymus, spustelėkite  Save as default .

Suaugusiųjų ir vaikų viso, viršutinio ir apatinio žandikaulio 3D vaizdų gavimas

Prieš gaudami vaizdą, patikrinkite, ar:

- perstatėte besisukantį įrenginio svertą į pradinę padėtį, kad pacientas įeitų į įrenginį;
- prisijungėte prie **Acquisition Interface** (vaizdų gavimo sąsaja).
Informaciją, kaip pasiekti sąsają **Acquisition Interface** (vaizdų gavimo sąsaja) žr. „Prieiga prie vaizdų gavimo sąsajos“.

Vaizdų gavimo parametrų nustatymas

1. Pasirinkite  kaip programą ir reikalaujamą FoV.
2. Spustelėkite vieną iš šių dominančių sričių, kurią ketinate tirti:

-  viso žandikaulio (viršutinio ir apatinio) tyrimas;
-  viršutinio žandikaulio tyrimas;
-  apatinio žandikaulio tyrimas.



Pastaba. Jūsų pasirinkta sritis bus mėlynos spalvos.

3. Sąsajoje **3D Acquisition** (3D vaizdų gavimas) pasirinkite paciento tipą.

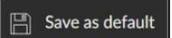


- Vaikas
- suaugusysis: „Small“ (smulkus), „Medium“ (vidutinis) arba „Large“ (stambus).



Svarbu. Dėl informacijos apie apsaugą nuo radiacijos ir rekomendacijas pasirenkant paciento, ypač vaiko, tipą žr. *CS 9600 saugos, kontrolės ir techninių specifikacijų naudotojo vadovą (SMA17_It)*.

4. Jei numatytasis parametro nustatymas nėra pritaikytas paciento tipui, parametro rodinio skydelyje spustelėkite , kad jį atidarytumėte ir pasirinktumėte tinkamus parametrus.

Norėdami išsaugoti naujus parametrų nustatymus, spustelėkite .

9

3D TMJ ir viršutinio žandikaulio ir veido vaizdų gavimas poz. 1.8.7.

Suaugusiųjų ir vaikų 3D TMJ vaizdų gavimas

Prieš gaudami vaizdą, patikrinkite, ar:

- perstatėte besisukantį įrenginio svertą į pradinę padėtį, kad pacientas įeitų į įrenginį;
- prisijungėte prie **Acquisition Interface** (vaizdų gavimo sąsaja).
Informaciją, kaip pasiekti sąsają **Acquisition Interface** (vaizdų gavimo sąsaja) žr. „Prieiga prie vaizdų gavimo sąsajos“.

Vaizdų gavimo parametrų nustatymas

Norėdami nustatyti vaizdo gavimo parametrus, atlikite nurodytus veiksmus:

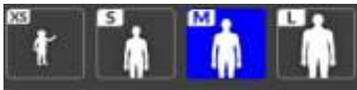
1. Pasirinkite  kaip programą ir reikalaujamą FoV.
2. Pasirinkite dominančią sritį, kurią ketinate tirti:

-  Abipusis TMJ
-  Kairysis TMJ
-  Dešinysis TMJ



Pastaba. Jūsų pasirinkta sritis bus mėlynos spalvos.

3. Sąsajoje **3D Acquisition** (3D vaizdų gavimas) pasirinkite paciento tipą.



- Vaikas
- suaugusysis: „Small“ (smulkus), „Medium“ (vidutinis) arba „Large“ (stambus).



Svarbu. Dėl informacijos apie apsaugą nuo radiacijos ir rekomendacijas pasirenkant paciento, ypač vaiko, tipą žr. **CS 9600 saugos, kontrolės ir techninių specifikacijų naudotojo vadovą (SMA17_It).**



Pastaba. Šiame skyriuje aptariami LOR radiologiniai tyrimai.

Suaugusiųjų ir vaikų sinusų 3D vaizdų gavimas

Prieš gaudami vaizdą, patikrinkite, ar:

- perstatėte besisukantį įrenginio svertą į pradinę padėtį, kad pacientas įeitų į įrenginį;
- prisijungėte prie **Acquisition Interface** (vaizdų gavimo sąsaja).
Informaciją, kaip pasiekti sąsają **Acquisition Interface** (vaizdų gavimo sąsaja) žr. „Prieiga prie vaizdų gavimo sąsajos“.

Vaizdų gavimo parametrų nustatymas

Norėdami nustatyti vaizdo gavimo parametrus, atlikite nurodytus veiksmus:



1. Pasirinkite kaip programą ir reikalaujamą FoV.
2. Pasirinkite dominančią sritį, kurią ketinate tirti:



Pastaba. Jūsų pasirinkta sritis bus mėlynos spalvos.

Jei norite įtraukti paciento nosį į dominančią sritį, kurią ketinate tirti, spustelėkite **With Nose**.

3. Sąsajoje **3D Acquisition** (3D vaizdų gavimas) pasirinkite paciento tipą.



- Vaikas
- suaugusysis: „Small“ (smulkus), „Medium“ (vidutinis) arba „Large“ (stambus).

11

3D viršutinės kaklinės stuburo dalies vaizdų gavimas poz. 1.8.7.

Suaugusiųjų ir vaikų 3D kaklinės stuburo dalies vaizdų gavimas

Prieš gaudami vaizdą, patikrinkite, ar:

- perstatėte besisukantį įrenginio svertą į pradinę padėtį, kad pacientas įeitų į įrenginį;
- prisijungėte prie **Acquisition Interface** (vaizdų gavimo sąsaja).
Informaciją, kaip pasiekti sąsają **Acquisition Interface** (vaizdų gavimo sąsaja) žr. „Prieiga prie vaizdų gavimo sąsajos“.

Vaizdų gavimo parametrų nustatymas

Norėdami nustatyti vaizdo gavimo parametrus, atlikite nurodytus veiksmus:

1. Pasirinkite  kaip programą.

2. Sąsajoje **3D Acquisition** (3D vaizdų gavimas) pasirinkite paciento tipą.



- Vaikas
- suaugusysis: „Small“ (smulkus), „Medium“ (vidutinis) arba „Large“ (stambus).



Svarbu. Dėl informacijos apie apsaugą nuo radiacijos ir rekomendacijas pasirenkant paciento, ypač vaiko, tipą žr. CS 9600 saugos, kontrolės ir techninių specifikacijų naudotojo vadovą (SMA17_It).

3. Jei numatytasis parametro nustatymas nėra pritaikytas paciento tipui, parametro rodinio skydelyje spustelėkite , kad jį atidarytumėte ir pasirinktumėte tinkamus parametrus.

Norėdami išsaugoti naujus parametrų nustatymus, spustelėkite  Save as default .

Suaugusiųjų ir vaikų 3D riešo vaizdų gavimas

Prieš gaudami vaizdą, patikrinkite, ar:

- perstatėte besisukantį įrenginio svertą į pradinę padėtį, kad pacientas įeitų į įrenginį;
- prisijungėte prie **Acquisition Interface** (vaizdų gavimo sąsaja).
Informaciją, kaip pasiekti sąsają **Acquisition Interface** (vaizdų gavimo sąsaja) žr. „[Prieiga prie vaizdų gavimo sąsajos](#)“.

Vaizdų gavimo parametrų nustatymas

Norėdami nustatyti vaizdo gavimo parametrus, atlikite nurodytus veiksmus:

1. Pasirinkite  kaip programą.
2. Spustelėkite vieną iš toliau nurodytų programų ir pasirinkite dominančią sritį, kurią norite tirti:

-  Kairiojo riešo tyrimas
-  Dešiniojo riešo tyrimas

3. Sąsajoje **3D Acquisition** (3D vaizdų gavimas) pasirinkite paciento tipą.



- Vaikas
- suaugusysis: „Small“ (smulkus), „Medium“ (vidutinis) arba „Large“ (stambus).



Svarbu. Dėl informacijos apie apsaugą nuo radiacijos ir rekomendacijas pasirenkant paciento, ypač vaiko, tipą žr. CS 9600 saugos, kontrolės ir techninių specifikacijų naudotojo vadovą (SMA17_It).

4. Jei numatytasis parametro nustatymas nėra pritaikytas paciento tipui, parametro rodinio skydelyje spustelėkite , kad jį atidarytumėte ir pasirinktumėte tinkamus parametrus.

Norėdami išsaugoti naujus parametrų nustatymus, spustelėkite .

13

3D veido skenerio vaizdų gavimas (CS veido skenavimo parinktį)

poz. 1.8.8.
d)

Suaugusiųjų ir vaikų 3D veido skenerio vaizdų gavimas

Prieš gaudami vaizdą, patikrinkite, ar:

- perstatėte besisukantį įrenginio svertą į pradinę padėtį, kad pacientas įeitų į įrenginį;
- pasiekiama per „CS Imaging“ langą (odontologijos aplinka) arba vaizdų gavimo langą (DICOM aplinka).

Norėdami gauti 3D veido skenerio vaizdą, atlikite toliau nurodytus veiksmus.

1. „CS Imaging“ lango pagrindinėje įrankių juostoje arba vaizdų gavimo lange spustelėkite



Rodoma sąsaja **3D Face Scan Acquisition** (3D veido skenerio vaizdų gavimas) ir trumpai parodoma išskylančioji iliustracija, kuris jums primins, kad:

- pacientas turi nusiimti ir visus metalinius daiktus ir padėti ant papuošalų dėklo.
- Paciento plaukai turi būti užkišti už ausų.
- Turite pašalinti smilkinių atramas.

Suaugusiojo ir vaiko paruošimas ir pozicionavimas

2. Įstatykite 3D veido skenerio atramą į vietą (įsitinkite, kad ji tinkamai užsifiksavo reikiamoje vietoje).



Svarbu.  **Bus parodoma sąsaja.**
Kai ją spustelėsite, 3D veido skenerio atrama bus rodoma žalia spalva.
Netinkamas priedas bus rodomas raudona spalva.

3. Jutiklinio ekrano valdymo skydelyje:

- spustelėkite . Besisukantis įrenginio svertas sukasi 90 laipsnių kampą. Nuimkite smilkinių atramas.

- Spustelėkite , kad nustatytumėte įrenginio padėtį paciento įėjimo režimu. Paprašykite paciento įeiti į įrenginį.

- Paspauskite ir palaikykite paspaudę , kad įrenginį sureguliuotumėte pagal paciento ūgį.

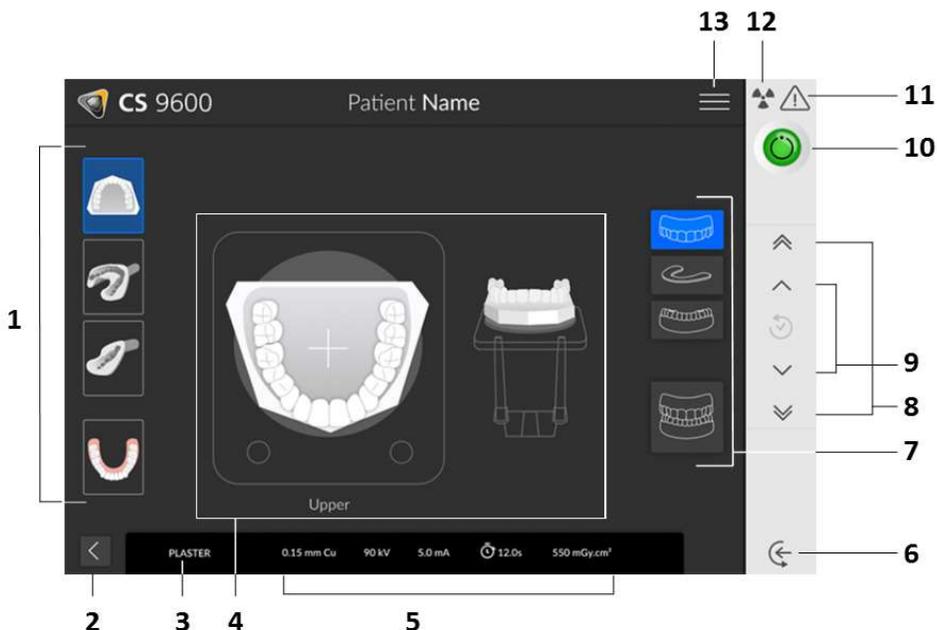
14

3D objekto vaizdų gavimas

poz. 1.8.8.
c)

Bendroji apžvalga

14 pav. 3D objekto vaizdų gavimo sąsajos apžvalga



- 1 **Vaizdų gavimo režimai:** Gipsas, atspaudas, trigubas atspaudinis šaukštas ir įtaisų režimai. [Poz. 1.8.7 h\)](#)
- 2 Išėjimo mygtukas.
- 3 Dabartinio vaizdų gavimo režimas.
- 4 Iliustracijos ekranas: Nurodymai, kaip padėti objektą prieš gaunant vaizdą.
- 5 Spinduliuotės paleidimo parametų ekranas.
- 6 Objekto įvedimo režimas: Nustato įrenginio padėtį objekto įvedimo režimu.
- 7 **Objekto vaizdo gavimo parinktys:** Pateikia įvairius vaizdų gavimo objektų derinius (apatinis žandikaulis, kandamasis šablonas, viršutinis žandikaulis ar visas žandikaulis).
- 8 Greito aukščio reguliavimo mygtukas: skirtas greitai reguliuoti įrenginio aukštį iki objekto aukščio.
- 9 Lėto aukščio reguliavimo mygtukas: skirtas lėtai reguliuoti įrenginio aukštį iki objekto aukščio, ypač prieš galutinai sureguliuojant.
- 10 **Pasiruošimo indikatorius:**
 - Juoda spalva rodo, kad įrenginys nėra paruoštas pradėti vaizdų gavimo.
 - Oranžinė spalva rodo, kad įrenginys ruošiamas vaizdams gauti.
 - Žalia spalva rodo, kad įrenginys paruoštas pradėti vaizdų gavimą.
- 11 Įspėjimas! nurodo, kad privalote perskaityti lydimąjį dokumentą.

15 Priežiūra



Pastaba. Mes, „Carestream Dental LLC“, esame įsipareigoję nuolat tobulinti savo gaminamus gaminius. Norėdami pasinaudoti mūsų produktų naujinimais ar naujovinimais, rekomenduojame:

- bent kartą per metus susisiekti su savo atstovu ir paprašyti atnaujinimų ar naujovinimų;
- atstovui padedant sudaryti priežiūros sutartį.



Svarbu. Norėdami sužinoti apie valymą ir dezinfekavimą, žr. *CS 9600 saugos, kontrolės ir techninių specifikacijų naudotojo vadovą (SMA17_It)*.

Priežiūros veiksmai

Reguliariai atlikite toliau nurodytus įrenginio CS 9600 priežiūros veiksmus.

Kas mėnesį

Minkšta ir sausa šluoste nuvalykite išorinius įrenginio paviršius.

Norint išlaikyti optimalią vaizdo kokybę, jos kontrolė turi būti atliekama kartą per mėnesį.

Kasmet

Rekomenduojame, kad įgaliotas techninės priežiūros specialistas atliktų bendrą įrenginio patikrą.

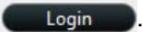
Vaizdo kokybės kontrolė

Norėdami atlikti vaizdo kokybės kontrolę, atlikite toliau nurodytus veiksmus.

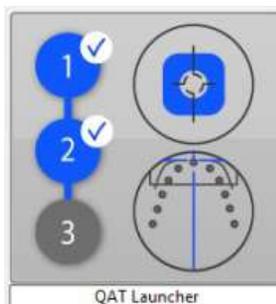
1. Suteikiama prieiga prie sąsajos **Acquisition** (vaizdų gavimas). Žr. „Prieiga prie vaizdų gavimo sąsajos“.
2. Spustelėkite , pateikiamą **pagrindiniame meniu**, ir pasirinkite  **Equipment Tools**.

Bus rodomas langas **Equipment Tools** (įrangos įrankiai).



3. Įveskite prisijungimo duomenis ir spustelėkite .

Bus rodomas langas **QAT Launcher** (QAT vykdyklė).



4. Spustelėkite **QAT Launcher** (QAT vykdyklė) langą ir vykdykite ekrane pateiktas instrukcijas.

CS Imaging

Poz. 2



Naudotojo vadovas

2 Apžvalga

poz. 2.1.

„**CS Imaging**“ – tai skaitmeninio vaizdo apdorojimo programinė įranga, sukurta „Microsoft Windows“ operacinei sistemai. Ji skirta naudoti dirbant su „**Carestream**“ dantų skaitmeninio vaizdo apdorojimo įrenginiais, įskaitant šiuos įrenginius:

- **Intraoralinės sistemos: skaitmeninis jutiklis ir kompiuterinė rentgenografija (CR)**
- **Ekstraoralinės sistemos: panoraminiai, cefalometriniai ir 3D vaizdai** poz. 2.1. b)
- Intraoraliniai skaitmeniniai vaizdo įrašymo įrenginiai
- Intraoraliniai skaitytuvai

Naudodamiesi šia programine įranga sveikatos priežiūros specialistai gali atlikti toliau nurodytus veiksmus.

- **Sukurti pacientų duomenų bazę.** Poz. 2.1. a), b)
- **Paciento rinkmenoje saugoti 2D vaizdus, 3D tūrius, tinklinius objektus ir net „Microsoft Office“ dokumentus.**
- **Naudotis rodoma pagrindine trimačių tūrinių vaizdų ir tinklinių objektų peržiūra bendravimo tikslais.**
- **Rodyti ir spausdinti 2D vaizdus.**
- Reguluoti 2D vaizdų kontrastą ir ryškumą ir atlikti indikatorinius matavimus (išmatuoti atstumą, ilgį, kampą). Žr. „**Vaizdų pagerinimas siekiant lengviau nustatyti diagnozę**“.

CS Imaging gali pasiekti vaizdus, gautus naudojant toliau nurodytą „CS Imaging“ programinę įrangą.

- KDIS 6.x
- DIS 6.x
- TW 5.x
- **CS Imaging 7.x ir 8.x versija**

Pasirenkamas vienodas visų pirmiau gautų vaizdų failo formatas, apdorojimo nustatymas, komentarai, dantų numeravimas, brėžiniai ir anotacijos.

CS Imaging galite naudoti atskirai arba su DPMS.

Prieš naudojant „CS Imaging“

- Susipažinkite su pagrindinėmis programinės įrangos funkcijomis.
 - „Paciento duomenų naršyklės ir prietaisų skydo apžvalga“
 - „Vaizdų peržiūros darbo srities apžvalga“
 - „Režimo „Darkroom“ apžvalga“
 - „Paciento duomenų naršyklės ir prietaisų skydo darbo eiga“

- „Vaizdo gavimas naudojant vaizdų gavimo įrankių juostą“
- „Įrankių juostų naudojimas dirbant „Vaizdų peržiūros darbo srityje“ arba režimu „Darkroom““
- „Darbas su vaizdais“
- „Vaizdų importavimas ir eksportavimas“
- Programinės įrangos konfigūravimas
 - „CS Imaging“ parinkčių nustatymas“
 - „Duomenų atsarginės kopijos kūrimas“

Trimačių tūrinių vaizdų peržiūra poz. 2.1. b)

Naudodami „CS Imaging“ galite peržiūrėti „CS 3D Imaging“ sukurtus tūrinius vaizdus, kuriuose yra:

- Vienas ar keli trimačiai ašinio pjūvio rodinio tūriniai vaizdai, kuriuos galite peržvelgti.
- Vienas ar daugiau 3D gautų vaizdų, kuriuos galite pasukti, taip pat šios iš anksto nustatytos padėtytys:



„Sagittal“ (strėlinė)



„Coronal“ (žiedinė)



„Axial“ (ašinė)



Perspektyva

- Išskleisti pjūviai, kuriuos galite naršyti.
- Momentinės ekrano kopijos
- Pseudo panoraminiai vaizdai
- Pseudo cefalometriniai vaizdai



Pastaba. Negalite naudoti įrankių juostų **Brėžiniai ir anotacijos** ir **Image** (vaizdas), o naudodamiesi įrankių juosta **Share** (bendrinti) galite importuoti ir eksportuoti tūrinius vaizdus. Žr. „Bendrinimo įrankių juostos naudojimas“.

Norėdami peržiūrėti trimačius tūrinius vaizdus naudodami **CS Imaging**, programoje **CS Imaging** atverkite paciento įrašą. Trimačiai tūriniai vaizdai rodomi kaip vaizdai paciento **Paciento istorija** ir **Vaizdų galerija**.

Norėdami sužinoti, kaip kurti trimačius tūrinius vaizdus, žr. „CS 3D Imaging“ naudojimo vadovą.

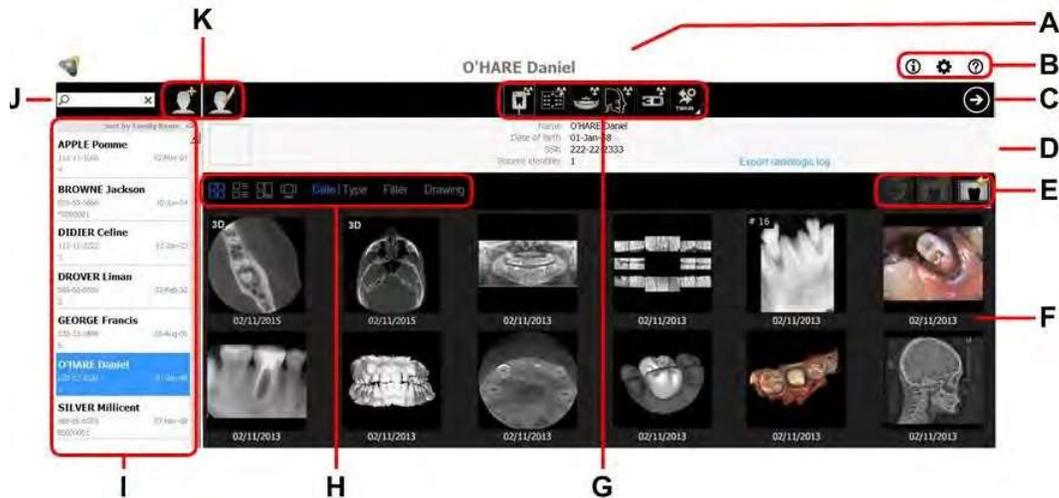
3D tinklinių objektų peržiūra

Galite matyti tinklus, kurių sudėtyje yra, pavyzdžiui:

- Trimačių intraoralinių skaitytuvų vaizdai (**CS 3500**, „**3600 Family**“)
- Tinklelių modeliai, gauti naudojantis 3D object acquisition režimu
- Tinklelių modeliai, gauti naudojantis **CS Model**, **CS Model+** arba **CS Restore**

Naudodami pelę galite pasukti arba priartinti tinklinius objektus.

Paciento duomenų naršyklės ir prietaisų skydo apžvalga



Paciento duomenų naršyklė rodoma programą **CS Imaging** paleidus autonominiu režimu. Tokiu būdu pateikiamos visos pacientų duomenų tvarkymo funkcijos.

Kai programą **CS Imaging** atveriate naudodami DPMS, rodoma **Prietaisų skydas**. Rodinys atitinka **Paciento duomenų naršyklė**, tačiau nematote šių funkcijų: **I, J, K**.

A	Pavadinimo juosta	Rodomas pasirinkto paciento vardas.
B	Sistemos piktogramos	Naudodamiesi šiomis piktogramomis galite pasiekti dalis About (apie) CS Imaging , Preferences (nuostatos) ir CS Imaging User Guide („CS Imaging“ naudotojo vadovas). Pastaba. Galite pasirinkti naudojimo vadovo kalbą „ Bendrosios parinktys “.
C	Vaizdų peržiūros darbo sritis piktograma	Spustelėkite norėdami atverti Vaizdų peržiūros darbo sritis . Žr. „ Vaizdų peržiūros darbo srities naudojimas “.
D	Paciento kortelė	Rodoma informacija apie pasirinktą pacientą. Pastaba. Jei programą CS Imaging paprastai atveriate naudodami DPMS, redaguoti šią informaciją galite įjungdami programą CS Imaging autonominiu režimu. Žr. „ Darbas su paciento duomenimis autonominiu režimu “.
E	Vaizdo tvarkymo įrankiai	Apima importavimo, eksportavimo ir spausdinimo mygtukus.
F	Paciento istorija	Rodomos gautų vaizdų miniatiūros ir kiti pasirinkto paciento objektai. Žr. „ Vaizdų ir kitų objektų peržiūra paciento istorijoje “.

Vaizdo gavimas naudojant vaizdų gavimo įrankių juostą



ĮSPĖJIMAS. Prieš gaudami vaizdą įsitikinkite, kad pasirinkote tinkamą pacientą.



Svarbu. Negalite tvarkyti savo įrenginio duomenų gavimo nustatymų naudodami „CS Imaging“ programinę įrangą. Informacijos apie įrenginio naudojimą rasite naudojimo vadove.

Vaizdo gavimas įrankių juostoje yra piktogramų, skirtų jūsų kompiuteryje įdiegtai duomenų gavimo programinei įrangai atverti.

Kai kuriais atvejais atitinkamos piktogramos yra sugrupuotos į piktogramų grupę. Kai piktogramoms atverti naudojamas tas pats spartusis klavišas, paspaudus bendrai naudojamą spartųjį klavišą aktyvinama paskutinė pažymėta grupės piktograma. Pavyzdžiui, paspaudus **F2** suaktyvinama piktograma **RVG vaizdo gavimas** arba **RVG vaizdo gavimas FMS**, priklausomai nuo to, kuri piktogramų grupės piktograma buvo naudojama paskutinė. Žr. „[Spartieji piktogramų grupių klavišai](#)“.



Patarimas. Laikykite pelės žymeklį virš piktogramos norėdami rodyti patarimą.

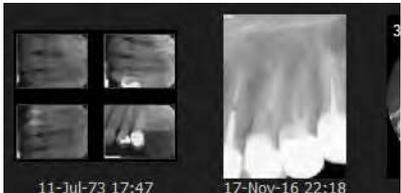
	RVG vaizdo gavimas (F2)*		Vaizdo gavimas iš TWAIN šaltinio (F7)*
	RVG FMS vaizdo gavimas (F2)*		TWAIN šaltinio pasirinkimas (F7)*
	Panoraminių vaizdo gavimas (F3)		Trimačio vaizdo gavimas (F8) Poz. 2.1. c)
	Cefalometrinio vaizdo gavimas (F4)		3D objektų nuskaitymo vaizdo gavimas Poz. 2.1. e)
	Intraoralinio fotoaparatu užfiksuoto vaizdo gavimas (F5)		3D VL vaizdo gavimas
	CR vaizdo gavimas (F6)*		CR FMS vaizdo gavimas (F6)*
			Veido nuskaitymo vaizdo gavimas Poz. 2.1. e)

Poz. 2.1. b)

* Šie spartieji klavišai taikomi bet kuriai šiuo metu pasirinktai piktogramų grupės piktogramai.

3 Paciento duomenų naršyklės ir prietaisų skydo naudojimas

Paciento duomenų naršyklės ir prietaisų skydo darbo eiga

1		<p>Kompiuterio darbalaukyje dukart spustelėkite programinės įrangos nuorodos piktogramą.</p> <p>Rodoma Paciento duomenų naršyklė. Programa CS Imaging naudojama autonominiu režimu.</p> <p>Programą taip pat galite atverti naudodamiesi „Windows“ meniu „Start“ (pradžią).</p> <p>Žr. „Programos „CS Imaging“ naudojimas, kai sistema DPMS nepasiekiamas“.</p>
2		<p>Spustelėkite norėdami nustatyti programos CS Imaging parinktis. Žr. „„CS Imaging“ parinkčių nustatymas“.</p>
3		<p>Naudodamiesi laukeliu Patient Search (paciento paieška) sąrašas Pacientų sąrašas raskite pacientą. Ši parinktis taikoma tik tiems, kurie programine įranga naudojami autonominiu režimu. Žr. „Paciento paieška pacientų sąrašas“.</p>
4		<p>Spustelėkite norėdami sukurti ar redaguoti Paciento kortelė. Žr.</p> <ul style="list-style-type: none"> • „Paciento kortelės kūrimas“ • „Paciento kortelės keitimas“ <p>Šios parinktis taikomos tik tiems, kurie programine įranga naudojami autonominiu režimu.</p>
5		<p>Spustelėkite norėdami gauti naujų objektų (vaizdų, 3D tūrinių vaizdų ir t. t. priklausomai nuo to, kokie prijungti duomenų gavimo prietaisai). Žr. „Vaizdo gavimas naudojant vaizdų gavimo įrankių juostą“.</p>
6		<p>Naudodami Paciento istorija peržiūrėkite vaizdų miniatiūras. Žr. „Vaizdų ir kitų objektų peržiūra paciento istorijoje“.</p> <p>Dukart spustelėję miniatiūrą dirbdami Vaizdų peržiūros darbo sritis galite atverti vaizdą.</p>
7		<p>Spustelėkite norėdami importuoti arba eksportuoti objektus. Žr. „Vaizdų importavimas ir eksportavimas“.</p>
8		<p>Spustelėkite norėdami atverti Vaizdų peržiūros darbo sritis. Dalį Vaizdų peržiūros darbo sritis taip pat galite atverti dukart spustelėdami vaizdo miniatiūrą arba paciento vardą.</p>

Paciento duomenų naršyklės ir prietaisų skydo piktogramos

Kai kuriais atvejais atitinkamos piktogramos yra sugrupuotos į piktogramų grupę. Žr. „Piktogramų grupių naudojimas“.

Naudodami **Paciento duomenų naršyklę** ir **Prietaisų skydas** galite rasti toliau nurodytas piktogramas.

Sistemos piktogramos		Spustelėkite, jei norite peržiūrėti informaciją apie CS Imaging .
		Spustelėkite norėdami sukongūruoti programos CS Imaging parinktis. Žr. „„CS Imaging“ parinkčių nustatymas“.
		Spustelėkite norėdami atverti CS Imaging naudojimo vadovą . Pastaba. Naudodamiesi „Bendrosios parinkty“ galite pasirinkti naudojimo vadovo kalbą.
Vaizdo gavimas piktogramos	Spustelėkite norėdami gauti vaizdą. Rodomos piktogramos priklauso nuo naudojamų duomenų gavimo prietaisų. Žr. „Vaizdo gavimas naudojant vaizdų gavimo įrankių juostą“.	
Piktograma Open (atverti) Vaizdų peržiūros darbo sritis		Spustelėkite norėdami atverti Vaizdų peržiūros darbo sritis , kurioje rodomi Paciento istorija pasirinkti vaizdai. Žr. „Vaizdų peržiūros darbo srities apžvalga“.
Paciento kortelė piktogramos Pastaba. Šių piktogramų dirbant Prietaisų skydas naudoti negalima.		Spustelėkite norėdami sukurti Paciento kortelę . Žr. „Paciento kortelės kūrimas“.
		Spustelėkite norėdami keisti Paciento kortelę . Žr. „Paciento kortelės keitimas“.
Piktogramų grupė Export (Eksportuoti)  Norėdami išplėsti piktogramų grupę, spustelėkite mažą baltą trikampį.		Spustelėkite norėdami įrašyti pasirinktus vaizdus kitoje vietoje. Žr. „Vaizdų eksportavimas į aplanką arba el. paštą“.
		Spustelėkite norėdami siųsti pasirinktus vaizdus į vieną ar daugiau el. pašto adresų. Žr. „Vaizdų eksportavimas į aplanką arba el. paštą“.
		Spustelėkite norėdami siųsti pasirinktus vaizdus į CS Connect . Pastaba. Šia piktograma galima naudotis tik įdiegus programą CS Connect .
		Spustelėkite norėdami spausdinti pasirinktus vaizdus. Žr. „Vaizdų spausdinimas“.
		Spustelėkite norėdami eksportuoti pasirinktus vaizdus į DICOMDIR aplanką. Žr. „Eksportuoti į DICOMDIR“.
		Spustelėkite norėdami eksportuoti pasirinktus vaizdus į DICOMDIR aplanką. Žr. „Eksportuoti į DICOMDIR“.
Piktogramų grupė Import (Importuoti)  Norėdami išplėsti piktogramų grupę, spustelėkite mažą baltą trikampį.		Spustelėkite norėdami importuoti vaizdus iš aplanko. Žr. „Vaizdų importavimas“.
		Spustelėkite norėdami importuoti vaizdus iš DICOMDIR aplanko. Žr. „DICOM vaizdų importavimas“.

Poz. 2.3

Paciento naršyklėje ir prietaisų skyde esančios perdangos

Gali būti rodomos šios nuotraukos:

	 rodo galvos nuotrauką su galvos trasavimu.
	Kaip matote  kairiajame nuotraukos kampe, tai yra 3D objektas.
	 viršutiniame kairiajame kampe yra danties numeris. (Pastaba: pagal numatytuosius nustatymus bus rodomas tik pirmas dantis, jei yra daugiau dantų).
	Simbolis  viršutiniame kairiajame kampe reiškia, kad tai yra 3D MAR rekonstrukcija.

Programos „CS Imaging“ naudojimas, kai sistema DPMS nepasiekiamą

Kai naudojantis dantų pacientų valdymo sistemos (DPMS) negalite paleisti, vis tiek galite paleisti **CS Imaging 8** autonominiu režimu.

Kai programą **CS Imaging** atveriate naudodami DPMS, rodoma **Prietaisų skydas**. Kai programą **CS Imaging** atveriate naudodami autonominį režimą, rodoma **Paciento duomenų naršyklė**. **Paciento duomenų naršyklė** panaši į **Prietaisų skydas**, išskyrus tai, kad taip pat turite prieigą prie sąrašo **Pacientų sąrašas**, kuriame nurodyti galimi pacientai, **Pacientų sąrašas** filtro ir kitų pacientų valdymo funkcijų.

Sąrašo **Pacientų sąrašas** spustelėję pacientus galite pasiekti jų vaizdus duomenų bazėje ir gauti pasirinkto paciento vaizdus.



Svarbu. Pacientų sąrašas rodomi tik pacientai, sukurti naudojant „CS Imaging 8“ autonominiu režimu.

Galite naudotis visomis įprastomis programos **CS Imaging** funkcijomis, o gauti nauji vaizdai išsaugomi pacientų kataloge.

Norėdami atverti programą **CS Imaging**, kai sistema DPMS nepasiekiamą, arba kompiuteriuose, kuriuose DPMS neįdiegta, atlikite vieną iš toliau nurodytų veiksmų.

- Kompiuterio ekrane spustelėkite .
- Įjunkite meniu **Pradžia**.

Bendrinimo įrankių juostos naudojimas

Įrankių juostoje **Share** (Bendrinimas) () pateikiamos funkcijos, kurias galima pritaikyti vaizdams. Klaviatūros spartieji klavišai nurodomi skliausteliais „()“.

Kai kuriais atvejais atitinkamos piktogramos yra sugrupuotos į piktogramų grupę. Žr. „Piktogramų grupių naudojimas“.

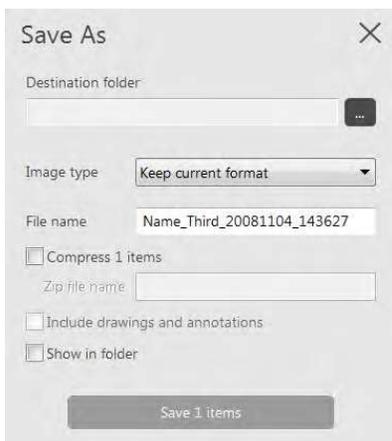


Patarimas. Laikykite pelės žymeklį virš piktogramos norėdami rodyti patarimą.

<p>Piktograma Slide show (Skaidrių rodymas)</p>	 Spustelėkite norėdami rodyti vaizdus viso ekrano skaidrių rodinyje. Žr. „Vaizdų peržiūra skaidrių rodymo režimu“.
<p>Piktogramų grupė Print (Spausdinti)  Poz. 2.1. g)</p> <p>Pastaba. Baltas trikampis nurodo piktogramų grupę. Žr. „Vaizdų spausdinimas“.</p>	<p>Piktograma Print (Spausdinti) (Ctrl+P) Spustelėkite norėdami spausdinti vaizdus.</p> <p> Piktograma Print snapshot (Spausdinti momentinę ekrano kopiją) Spustelėkite norėdami Vaizdų peržiūros darbo sritis spausdinti visų vaizdų momentinę ekrano kopiją.</p>
<p>Piktograma Send by email (Siųsti el. paštu)</p>	 Spustelėkite norėdami siųsti vaizdus į vieną ar daugiau el. pašto adresų. Žr. „Vaizdų eksportavimas naudojant vilkimą“.
<p>Poz. 2.1. f) Piktogramų grupė Export (Eksportuoti)  Pastaba. Baltas trikampis nurodo piktogramų grupę.</p>	<p> Piktograma Save As (Įrašyti kaip) Spustelėkite norėdami įrašyti vaizdus kitoje kompiuterio vietoje. Žr. „Vaizdų įrašymas dirbant „Vaizdų peržiūros darbo srityje“ arba režimu „Darkroom““.</p> <p> Piktograma Send to CS Connect (siųsti į „CS Connect“) Spustelėkite norėdami siųsti vaizdus į CS Connect.</p> <p> Piktograma Export to DICOMDIR (Eksportuoti į DICOMDIR) Spustelėkite norėdami eksportuoti vaizdus į DICOMDIR aplanką.</p>
<p>Piktogramų grupė Import (Importuoti)  Pastaba. Baltas trikampis nurodo piktogramų grupę.</p>	<p> Piktograma Import from folder (Importuoti iš aplanko) Spustelėkite norėdami importuoti vaizdus iš aplanko.</p> <p> Piktograma Import from DICOMDIR (Importuoti iš DICOMDIR) Spustelėkite norėdami importuoti vaizdus iš DICOMDIR aplanko.</p>

- Veikiant **Vaizdų peržiūros darbo sritis** arba „Darkroom“ režimu, įrankių juostoje  **Share** (bendrinti):

- Norėdami siųsti vaizdą el. paštu, spustelėkite . Bus rodomas eksportavimo el. pašto langas.
- Norėdami išsaugoti vaizdą aplanke, pasirinkite . Lango **Save As** (išsaugoti kaip), **Destination Folder** (paskirties aplankas), spustelėkite , kad galėtumėte naršyti aplanką.



3 Pasirinkite iš šių išskleidžiamųjų sąrašų pagal **formato tipą**:

- **Vaizdo tipas**

Palikti dabartinį formatą	CS Imaging failo formatas, visa apdorota informacija išsaugota. Svarbu. Šiuo formatu įrašyti failai gali būti naudojami tik CS Imaging 8 versijoje. Jei ketinate eksportuoti tai asmenims, kurie neturi prieigos prie CS Imaging 8 versijos, rekomenduojame pasirinkti kitą vaizdo tipą.
Pateikimui	Tik skaityti skirtas formatas, kuris gali būti naudojamas kitose su DICOM suderinamose programose.
BMP, JPEG, TIFF, PNG	Įprasti grafiniai formatai. Svarbu. Šie formatai nesuteikia tikslaus matavimo galimybės ir neturėtų būti naudojami diagnostikos tikslais.

- **Modelio tipas** Poz. 2.1. d)

Palikti dabartinį formatą	CS Imaging failo formatas, visa apdorota informacija išsaugota. Svarbu. Šiuo formatu įrašyti failai gali būti naudojami tik CS Imaging 8 versijoje. Jei ketinate eksportuoti tai asmenims, kurie neturi prieigos prie CS Imaging 8 versijos, rekomenduojame pasirinkti kitą vaizdo tipą.
STL, PLY	Standartiniai 3D formatai.

CS 9600 Technical Training



 **Carestream**
DENTAL

CS 9600: Product description

3 configurations:

- 12x10 Edition
- 16x10 Edition
- 16x17 Edition

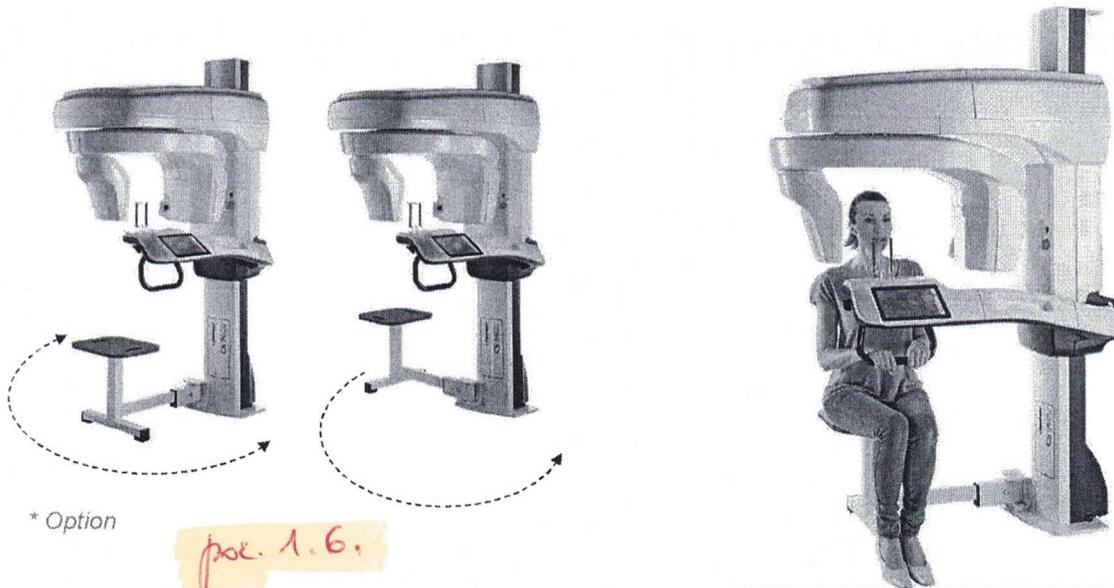
Offering a unique clinical experience:

- ❖ Highly detailed images:
 - up to 75 μ m resolution from 4x4 cm to 10x10 cm FOV
- ❖ High Resolution, standard and Low dose scan mode for any FOV size
- ❖ High quality images at lowest dose:
 - 120 kV chain + adaptative filtration for CBCT acquisition
 - 2D images low dose protocols



CS 9600: A perfect fit for all patients

- First unit with an integrated retractable seat*
- Ensure patient comfort and stability
- Ideal for examinations requiring higher stability or for challenging patient
- Can be rotated 180° when not in use or to accommodate patient in wheelchair



ThinkStation P340 TWR & SFF

POWER OF A WORKSTATION
PRICE OF A DESKTOP



STYLISH, ROBUST, UNCOMPROMISED PERFORMANCE

Experience performance, style, and Lenovo's unmatched reliability in the P340. Featuring high-end graphics and processing options, and cutting-edge storage and memory technology, the P340 delivers an uncompromised computing experience. The robust usability, combined with tool-less component access, ThinkShield security suite, and comprehensive I/O and expansion capabilities, makes the P340 ideal for both beginners and advanced users. Perfect for CAD, Architecture Design, Education, Healthcare, and Finance, users can choose from the compact stylish P340 SFF or the powerhouse VR-ready desktop P340 Tower for value without sacrificing compute power.

FEATURES



Up to Intel® Xeon® W-Series or 10th Gen Intel® Core™ processors



Support for VR-ready NVIDIA® Quadro RTX™ 5000* graphics card



Up to 500W power supply* (up to 92% efficient)



Up to 128GB, 2933MHz memory



Dual M.2 NVMe PCIe storage with RAID capability



3 DisplayPort™ ports¹ on board, up to 11 independent displays

*NVIDIA Quadro RTX 5000 and 500W power supply in P340 Tower only

Lenovo™

Lenovo™ Options & Accessories



ThinkVision® P24q-20



NVIDIA® Quadro® P1000



ThinkStation® 1TB SATA Enterprise HDD

Lenovo ThinkStation P340 TWR & SFF Specifications

PERFORMANCE

Processor

TWR
Up to Intel® Xeon® W-1290P
Up to 10th Gen Intel® Core™ i9-10900K
(up to 10 cores, up to 5.2GHz)

SFF

Up to Intel Xeon W-1290
Up to 10th Gen Intel Core i9-10900
(up to 10 cores, up to 5.1GHz)

Chipset

Intel W480

Operating System

Windows 10 Pro for Workstations¹
Windows 10 Pro²
Windows 10 Home
Ubuntu® Linux³
Red Hat® Linux (certified)

Graphics

TWR:

Up to NVIDIA® Quadro RTX™ 5000

SFF:

Up to NVIDIA Quadro P1000

Total Memory

Up to 128GB DDR4, 2933MHz
4 UDIMM Slots

Memory DIMM Capacity

4GB / 8GB / 16GB / 32GB ECC¹
8GB / 16GB / 32GB non-ECC²

Total Storage

Up to 6 total drives⁴
Max M.2 = 4 (8TB)⁵
Max 3.5" = 2 TWR (12TB)⁵; 1 SFF (6TB)⁵
Max 2.5" = 2 TWR (2TB)⁵; 1 SFF (1TB)⁵

Storage Type Capacity

M.2 PCIe NVMe SSD up to 2TB
3.5" SATA 7200rpm up to 6TB
2.5" SATA SSD up to 1TB

RAID

M.2 = 0/1 (TWR/SFF)
SATA = 0/1/5/10 (TWR); 0/1 (SFF)

CONNECTIVITY

Front Ports

(2) USB 3.2 Gen 1 Type-A*
(1) USB 3.2 Gen 1 Type-C*
(2) USB 3.2 Gen 2 Type-A**
(1) Audio Jack
(1) Microphone Jack

Rear Ports

(2) USB 2.0 Type-A
(2) USB 3.2 Gen 1 Type-A*
(1) Audio (Line Out)
(3) DisplayPort™⁶
(1) RJ-45 Gigabit Ethernet Poz. 3.1.
(2) Serial Port⁷
(1) Thunderbolt™ 3⁵
(1) HDMI⁸
(2) PS/2⁸
(1) Parallel Port⁸
(1) Dual Type-C Ports USB 3.1 Adapter⁸
(1) Dual Type-A Ports USB 2.0 Adapter⁸

WLAN

Intel AX201 AC Wi-Fi + Bluetooth™ 5.0
Intel Wi-Fi w/ Bluetooth™ External
Antenna Kit⁸

Removable Storage

(1) 3-in-1 Media Card Reader⁸
(1) Slim ODD⁸
(1) Front Accessible Drive Tray⁸

Power Supply

TWR
300W (90% efficient) or
500W (92% efficient)
SFF
310W or 380W (92% efficient)

Expansion Slots

(1) PCIe 3.0 x16
(1) PCIe 3.0 x1
(1) PCIe 3.0 x4

SOFTWARE

Lenovo Preload⁹

Lenovo Vantage
Lenovo ThinkShield

DESIGN

Dimensions (WxDxH)

TWR (mm): 170 x 315.35 x 376
(inches): 6.7 x 12.4 x 14.8
SFF (mm): 92.5 x 309.7 x 339.5
(inches): 3.6 x 9.3 x 13.4

Weight

TWR max configuration: 20.7lbs (9.4kg)
SFF max configuration: 12.6lbs (5.7kg)

ISV CERTIFICATIONS

AVID®, Adobe®, Altair®, Autodesk®,
ANSYS®, Bentley®, Dassault®,
Nemetschek®, PTC®, Siemens®,
Barco®, McKesson®

GREEN CERTIFICATIONS

ENERGY STAR® 8.0 Poz. 3.3; 3.4
EPEAT®¹⁰
GREENGUARD®
RoHS Compliant

For a full list of accessories and options, please visit:

<https://accsmartfind.lenovo.com>

Page 1: (1) Serial port standard; (1) Serial port optional

Page 2: 1 Intel Xeon processors only

2 Intel Core processors only

3 Select versions available via preorder; versions are configuration specific

4 Any combination of storage to equal maximum storage drives

5 Additional hardware required

6 (2) DisplayPort standard; (1) DisplayPort optional

7 (1) Serial port standard; (1) Serial port optional

8 Optional

9 Available with Windows 10 Operating System only

10 Certification available on select models; EPEAT registered where applicable. EPEAT registration varies by country. See www.epeat.net for registration status by country.

* The actual transfer speed of the USB 3.2 Gen1 will vary and, depending on many factors, such as the processing capability of host and peripheral devices, file attributes and other factors related to system configuration and your operating environments, will be slower than a speed of 5Gbit/s.

** The actual transfer speed of the USB 3.2 Gen2 will vary and, depending on many factors, such as the processing capability of host and peripheral devices, file attributes and other factors related to system configuration and your operating environments, will be slower than a speed of 10Gbit/s.

RECOMMENDED SERVICES

Lenovo offers a comprehensive portfolio of services to support and protect your ThinkStation investment—so you can focus on your business, not your IT.

Premier Support

Bypass phone menus and scripted troubleshooting to access advanced-level technicians with the expertise needed to quickly diagnose and solve problems.

Warranty Upgrades—Onsite and Next Business Day

Maximizes PC uptime and productivity by providing convenient, fast repair service the next business day.

Warranty Extensions (1 to 5 years total duration)

This fixed-term, fixed-cost service helps you accurately budget for PC expenses, protect your valuable investment, and potentially lower the cost of ownership over time.

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Lenovo™

Lenovo ThinkStation P340 30DH - Tower - 1 x Core i7 10700K / 3.8 GHz - RAM 16 GB - SSD 512 GB - TCG Opal Encryption, NVMe - DVD-Writer - UHD Graphics 630 - GigE - vPro - Win 10 Pro 64-bit - monitor: none - keyboard: English - TopSeller



Lenovo

Prekės nr.: 30DH00HHMH

- Korpuso tipas: Tower
- DDR4 SDRAM
- Kietųjų diskų talpa: 512 GB
- Optinio įrenginio tipas: DVD-Writer
- **Windows 10 Pro 64-bit Edition** [Poz. 3.1.](#)

Specifikacija

General

Platform Technology	Intel vPro Technology
Type	Workstation
Product Form Factor	Tower
Embedded Security	Trusted Platform Module (TPM 2.0) Security Chip
Localisation	Language: English, German, French, Dutch / region: Netherlands

Processor / Chipset

CPU	Intel Core i7 (10th Gen) 10700K / 3.8 GHz Poz. 3.1.
Max Turbo Speed	5.1 GHz Poz. 3.1.
Number of Cores	8-core Poz. 3.1.
CPU Qty	1
Max CPU Qty	1
CPU Socket	LGA1200 Socket Poz. 3.1.
Chipset Type	Intel W480 Poz. 3.1.

Cache Memory

Installed Size	16 MB
Cache Per Processor	16 MB

RAM

Installed Size	16 GB / 128 GB (max) Poz. 3.1.
Technology	DDR4 SDRAM - non-ECC

Lenovo ThinkStation P340 30DH - Tower - 1 x Core i7 10700K / 3.8 GHz - RAM 16 GB - SSD 512 GB - TCG Opal Encryption, NVMe - DVD-Writer - UHD Graphics 630 - GigE -...

Effective Memory Speed	2933 MHz
Rated Memory Speed	2933 MHz
Form Factor	DIMM 288-pin
Slots	4 (Total) / 3 (empty)
Features	Unbuffered
Configuration Features	1 x 16 GB

Hard Drive

Type	SSD - M.2	Poz. 3 .1.
Capacity	1 x 512 GB	Poz. 3 .1.
Interface Type	PCI Express	
Features	TCG Opal Encryption, NVM Express (NVMe)	

Storage Controller

Type	1 x RAID
Controller Interface Type	SATA 6Gb/s
RAID Level	RAID 0, RAID 1, RAID 5, RAID 10

Storage Controller (2nd)

Type	1 x NVMe
Controller Interface Type	PCI Express
RAID Level	RAID 0, RAID 1

Optical Storage

Type	DVD-Writer DVD-Writer	Poz. 3 .1.
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Card Reader

Type	Card reader
Supported Flash Memory Cards	SD Memory Card

Monitor

Monitor Type	None.
--------------	-------

Graphics Controller

Graphics Processor	Intel UHD Graphics 630
Video Interfaces	DisplayPort

Audio Output

Compliant Standards	High Definition Audio
---------------------	-----------------------

Input Device

Type	Mouse, keyboard	Poz. 3 .1.
------	-----------------	------------

Keyboard

Interface	USB
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Lenovo ThinkStation P340 30DH - Tower - 1 x Core i7 10700K / 3.8 GHz - RAM 16 GB - SSD 512 GB - TCG Opal Encryption, NVMe - DVD-Writer - UHD Graphics 630 - GigE -...

Localization & Layout English

Mouse

Mouse Name Lenovo Calliope Mouse
Interface USB

Networking

Ethernet Controller Intel I219-LM
Data Link Protocol Ethernet, Fast Ethernet, Gigabit Ethernet Poz. 3.1.
Features Wake on LAN (WoL), Intel Active Management Technology (AMT) 14 Poz. 3.1.

Expansion / Connectivity

Bays 1 (total) / 0 (free) x external 5.25" Slim Line
2 (total) / 2 (free) x internal 3.5"
2 (total) / 2 (free) x internal 2.5"

Slots 1 (total) / 1 (free) x PCIe 3.0 x16 - full-length, full-height
1 (total) / 1 (free) x PCIe 3.0 x1 - full-length, full-height
1 (total) / 1 (free) x PCIe 3.0 x16 - full-length, full-height (x4 mode)
2 (total) / 1 (free) x M.2 Card

Interfaces 4 x USB 3.2 Gen 1 (2 front, 2 rear)
2 x USB 3.2 Gen 2 (2 in front)
1 x USB-C 3.2 Gen 1 (1 in front)
1 x microphone (1 in front)
1 x headphones/microphone (1 in front)
2 x USB 2.0
1 x LAN (Gigabit Ethernet)
1 x serial
2 x DisplayPort
1 x audio line-out

Miscellaneous

Theft/Intrusion Protection Security lock slot (cable lock sold separately), padlock loop, cable lock, chassis intrusion switch, chassis E-Lock

Security Slot Type Kensington security slot

Compliant Standards RoHS

Manufacturer Selling Program TopSeller

Power

Device Type Power supply

Nominal Voltage AC 120/230 V (50/60 Hz)

Power Provided 500 Watt

80 PLUS Certification 80 PLUS Platinum

Efficiency 92%

Operating System / Software

OS Provided Windows 10 Pro 64-bit Edition Dutch / English / French / German / Italian

Lenovo ThinkStation P340 30DH - Tower - 1 x Core i7 10700K / 3.8 GHz - RAM 16 GB - SSD 512 GB - TCG Opal Encryption, NVMe - DVD-Writer - UHD Graphics 630 - GigE -...

Environmental Standards poz. 3.3; 3.4.

TCO Certified	TCO Certified Desktops 8
EPEAT Compliant	EPEAT Silver
ENERGY STAR Certified	Yes
ENERGY STAR Version	8.0

Manufacturer Warranty

Service & Support Limited warranty - 3 years - on-site

Dimensions & Weight

Width	17 cm
Depth	31.535 cm
Height	37.6 cm
Weight	9.38 kg

Environmental Parameters

Min Operating Temperature	10 °C
Max Operating Temperature	35 °C
Humidity Range Operating	30 - 90% (non-condensing)

Papildoma medžiaga

Available on the website (PDF) Product Data Sheet / Brochure

THE ECO DECLARATION



ECMA/TC38-TG3/2015/026
(Rev. 1 – 15 April 2017)

Annex B2 - Product environmental attributes Desktop/All-in-One Computers

The declaration may be published only when all rows and/or fields marked with * are filled-in (n.a. for not applicable). Additional information regarding each item may be found under P15.

Brand *	<i>Lenovo</i>	Logo 
Company name *	<i>Lenovo</i>	
Contact information * e-mail address	<i>Lenovo Global Environmental Affairs Alvin L Carter alcarter@lenovo.com</i>	
Internet site *	<i>http://www.lenovo.com/social_responsibility/us/en/environment.html</i>	
Additional information	<i>The latest version of this document can be found at: http://www.lenovo.com/ecodeclaration</i>	

The company declares (based on product specification or test results based obtained from sample testing), that the product conforms to the statements given in this declaration.	
Type of product *	<i>Workstation</i>
Commercial name *	<i>ThinkStation P340 Tower</i>
Model number *	<i>30DH, 30DJ, 30DM</i>
Issue date *	<i>2020/05/13</i>
Intended market *	<input checked="" type="checkbox"/> Global <input type="checkbox"/> Europe <input type="checkbox"/> Asia, Pacific & Japan <input type="checkbox"/> Americas <input type="checkbox"/> Other
Additional information	

This is an uncontrolled copy when in printed form. Please refer to the contact information for the latest version.

About Annex B2

Annex B2 reflects Product environmental attributes relevant for Computers and Computer Monitors. The following items from the ECMA-370 Main body are not shown in the template:
P4.1 – P4.3 Consumable materials
P9.1 TEC and Print speed
P10.2 - P10.3 Chemical emissions from printing products
P11.1 - P11.3 Consumable materials for printing products.

Model number *	30DH, 30DJ, 30DM	Logo	
Issue date *	2020/05/13		

Product environmental attributes - Legal requirements		Requirement met		
Item		Yes	No	n.a.
P1	Hazardous substances and preparations			
P1.1*	Products do comply with current European RoHS Directive. (See legal reference and NOTE B1)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
P1.2*	Products do not contain Asbestos (see legal reference). Comment: Legal reference has no maximum concentration value.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
P1.3*	Products do not contain Ozone Depleting Substances: Chlorofluorocarbons (CFC), hydrobromofluorocarbons (HBFC), hydrochlorofluorocarbons (HCFC), Halons, carbon tetrachloride, 1,1,1-trichloroethane, methyl bromide (see legal reference). Comment: Legal reference has no maximum concentration values.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
P1.4*	Products do not contain more than; 0,005% polychlorinated biphenyl (PCB), 0,005% polychlorinated terphenyl (PCT) in preparations (see legal reference).	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
P1.5*	Products do not contain more than 0,1% short chain chloroparaffins (SCCP) with 10-13 carbon atoms in the chain containing at least 48% per mass of chlorine in the SCCP (see legal reference).	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
P1.6*	Parts with direct and prolonged skin contact do not release nickel in concentrations above 0,5 µg/cm ² /week (see legal reference). Comment: Max limit in legal reference when tested according to EN1811:2011-5.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
P1.7*	REACH Article 33 information about substances in articles is available at (add URL or mail contact): https://www.lenovo.com/us/en/Lenovo-REACH-SVHC-Disclosure	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
P2	Batteries			
P2.1*	If the product contains a battery or an accumulator, the battery/accumulator is labeled with the disposal symbol. Information on proper disposal is provided in user manual. (See legal reference)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
P2.2*	Batteries or accumulators do not contain more than 0,0005% of mercury or 0,002% of cadmium. (See legal reference)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
P2.3*	Batteries and accumulators are readily removable. (See legal reference)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
P3	Conformity verification & Eco design (ErP)			
P3.1*	The product is CE-marked to show conformance with applicable legal requirements (see legal reference). The Declaration of Conformity can be requested at: https://www.lenovo.com/us/en/compliance/eu-doc	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
P3.2*	The product complies with the Eco design requirements for energy-related products, (see legal reference). Required information is; <input type="checkbox"/> given in item P15 or added to this document, <input checked="" type="checkbox"/> available at: https://www.lenovo.com/us/en/compliance/eco-declaration	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
P5	Product packaging Poz. 3.3.			
P5.1*	Packaging and packaging components do not contain more than 0,01% lead, mercury, cadmium and hexavalent chromium by weight of these together.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
P5.2*	The packaging materials are marked with abbreviations and numbers indicating the nature of the material(s) used (see legal reference).	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
P5.3*	The product packaging material is free from ozone depleting substances as specified in the Montreal Protocol (see legal reference). Comment: Legal reference has no maximum concentration values.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
P6	Treatment information			
P6.1*	Information for recyclers/treatment facilities is available (see legal reference).	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

NOTE B1 Restriction applies to the homogeneous material, unless other specified and expressed in weight %. Stating "Yes" means that the product is compliant with the mandatory requirements.

Model number *	30DH, 30DJ, 30DM	Logo			
Issue date *	2020/05/13				
Product environmental attributes - Market requirements (See General NOTE GN below)					
- Environmental conscious design					Requirement met
Item	* = mandatory to fill in. Additional information regarding each item may be found under P14.				Yes No n.a.
P7 Design, Disassembly, recycling					
P7.1*	Parts that have to be treated separately are easily separable Poz. 3.3.				<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
P7.2*	Plastic materials in covers/housing have no surface coating.				<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
P7.3*	Plastic parts > 100 g consist of one material or of easily separable materials.				<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
P7.4*	Plastic parts > 25 g have material codes according to ISO 11469 referring ISO 1043-4. Poz. 3.3.				<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
P7.5	Plastic parts are free from metal inlays or have inlays that can be removed with commonly available tools.				<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
P7.6*	Labels are easily separable. (This requirement does not apply to safety/regulatory labels).				<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
Product lifetime					
P7.7*	Upgrading can be done e.g. with processor, memory, cards or drives				<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
P7.8*	Upgrading can be done using commonly available tools				<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
P7.9	Spare parts are available after end of production for: 5 years				<input type="checkbox"/>
P7.10	Service is available after end of production for: 5 years				<input type="checkbox"/>
Material and substance requirements					
P7.11*	Product cover/housing material type (e.g. plastics, metal, aluminum): Material type: ABS Material type: Material type:				
P7.12	Insulation materials of external electrical cables are PVC free.				<input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/>
P7.13	Insulation materials of internal electrical cables are PVC free.				<input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/>
P7.14	External plastic casing/cover parts > 25 g contain no more than 0,1% weight (1000 ppm) bromine and 0,1% weight (1000 ppm) chlorine attributable to brominated flame retardants, chlorinated flame retardants, and polyvinyl chloride or 0,3% weight (3000 ppm) bromine and 0,3% weight (3000 ppm) chlorine in parts containing more than 25% post-consumer recycled content.				<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
P7.15	Printed circuit boards, PCBs (without components) are low halogen: all <input type="checkbox"/> PCBs > 25 g <input checked="" type="checkbox"/> are low halogen as defined in IEC 61249-2-21. (See 1NOTE B2)				<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
P7.16	Flame retarded plastic parts > 25 g in covers / housings are marked according ISO 1043-4: Marking: >ABS <				<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
P7.17	Alt. 1: Chemical specifications of flame retardants in printed circuit boards > 25 g (without components): <input type="checkbox"/> TBBPA (additive), <input checked="" type="checkbox"/> TBBPA (reactive) (See NOTE B3), <input type="checkbox"/> Other: , CAS #: 79-94-7				<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
	Alt. 2: Chemical specifications of flame retardants in printed circuit boards (without components) > 25 g according ISO 1043-4:				<input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/>
P7.18	Alt. 1: Flame retarded plastic parts > 25 g contain the following flame retardant substances/preparations in concentrations above 0,1%: 1. Chemical name: , CAS #: (See NOTE B4) 2. Chemical name: , CAS #: " 3. Chemical name: , CAS #: "				<input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/>
	Alt. 2: Chemical specifications of flame retardants in plastic parts > 25 g according ISO 1043-4:				<input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/>
P7.19	In plastic parts > 25 g, flame retardant substances/preparations above 0,1% are used which have been assigned the following Risk phrases; and Hazard statements: The source(s) for these classifications is/are found at (add URL(s)): , (See note B5)				<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
P7.20*	Postconsumer recycled plastic material content is used in the product (See Note B6): If YES; at least one of the two alternatives below shall be answered; a) Of total plastic parts' weight > 25 g, the postconsumer recycled plastic material content (calculated as a percentage of total plastic by weight) is 38.6% . or b) The weight of recycled material is 243.2 g .				<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>

GENERAL NOTE Standard references should direct to the latest version of a standard. If an older version of a standard is used, section P15 shall be used for explanation.

NOTE B2 IEC 61249-2-21 defines maximum limits of 900 ppm for each of the substances chlorine and bromine and a maximum limit of 1500ppm of these substances combined. The standard does not address fluorine, iodine and astatine which are included in the group of halogens.

NOTE B3 and B4 A Guidance document on Chemical substances is available; see <http://www.ecma-international.org/publications/standards/Ecma-370.htm>

NOTE B5 If a certain substance has been assigned a certain risk phrases / hazard statement in the referenced source, this does not necessarily mean the substance has been tested for all of the hazards referred to by a certain customer.

NOTE B6 Applies to a product containing plastic parts whose combined weight exceeds 100 g with the exception of printed circuit boards, cables, connectors and electronic components and bio-based plastic material.

Model number *	30DH, 30DJ, 30DM	Logo	
Issue date *	2020/05/13		

Product environmental attributes - Market requirements (continued)		Requirement met		
Item		Yes	No	n.a.

Material and substance requirements (continued)				
P7.21*	Biobased plastic material content is used in the product (See NOTE B7):	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
P7.22*	Light sources are free from mercury, i.e. less than 0,1 mg/lamp. If mercury is used specify: Number of lamps: and maximum mercury content per lamp: mg	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
P8 Batteries				
P8.1*	Battery chemical composition:			<input checked="" type="checkbox"/>
P9 Energy consumption (See NOTE B8)				
P9.1 For the product the following power levels or energy consumptions are reported:				
Energy mode *	Power level at 100 V AC	Power level at 115 V AC	Power level at 230 V AC	Reference/Standard for energy modes and test method * <input type="checkbox"/>
Peak (On-max)	136.03 W	157.53 W	147.33 W	Full load
Category				
Short Idle State - WOL Enabled	34.4 W	34.62 W	34.14 W	Use for ENERGY STAR V8 registration (P_{idle})
Long Idle State - WOL Enabled	32.62 W	32.61 W	32.25 W	Use for ENERGY STAR V8 registration (P_{idle})
Sleep (S3) - WOL Enabled	4.37 W	4.37 W	4.38 W	Use for ENERGY STAR V8 registration (P_{sleep})
Off (S5) - WOL Enabled	1.04 W	1.04 W	1.02 W	Use for ENERGY STAR V8 registration (P_{off})
Off (S5) - WOL Disabled	W	W	1.02 W	Use for ErP
EPS No-load (External power supply / charger plugged in the wall outlet but disconnected from the product.)	W	W	W	<input type="checkbox"/>
PTEC * Typical Energy Consumption	20.20 W	20.27 W	20.03 W	<input type="checkbox"/>
ETEC * Annual Energy Consumption	kWh/year	kWh/year	kWh/year	$E_{TEC} = (8760/1000) \times (P_{off} \times 0.45 + P_{sleep} \times 0.05 + P_{long_idle} \times 0.15 + P_{short_idle} \times 0.35)$ <input checked="" type="checkbox"/>
<i>P_{off}: Off Mode(S5) - WOL Enabled; P_{sleep}: Sleep Mode(S3) - WOL Enabled; P_{idle}: Idle State - WOL Enabled</i>				
External Power Supply Efficiency Level (International Efficiency Marking Protocol) * :				<input checked="" type="checkbox"/>
Display resolution * : megapixels				<input checked="" type="checkbox"/>
Default time to enter energy save mode: 25 minutes				<input type="checkbox"/>
P9.2*	Information about the energy save function is provided with the product.			<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
P9.3	Energy efficiency class (monitors only):			<input checked="" type="checkbox"/>
P10 Emissions				
Noise emission – Declared according to ISO 9296 (See NOTE B9)				
P10.1	Mode	Mode description	Statistical upper limit A-weighted sound power level, L _{WA,c} (B)	
	Idle	* HDD:Idle	* 3.2 <input type="checkbox"/>	
	Operation	* HDD: Operating	* 3.2 <input type="checkbox"/>	
	Other mode	Declared A-weighted sound pressure level (dBL)(A)	18.6 (operator position desktop – idle)	
	Other mode	Declared A-weighted sound pressure level (dBL)(A)	19 (operator position desktop – HDD operating)	
Measured according to: <input checked="" type="checkbox"/> ISO 7779 <input checked="" type="checkbox"/> ECMA-74 <input type="checkbox"/> Other (only if not covered by ECMA-74)				

NOTE B7 The following is to be excluded from the calculation of percentage: printed circuit boards, labels, cables, connectors and electronic components and postconsumer recycled plastic

NOTE B8 A Guidance document on Energy Efficiency is available;
see <http://www.ecma-international.org/publications/standards/Ecma-370.htm>

NOTE B9 A Guidance document on Acoustic Noise is available;
see <http://www.ecma-international.org/publications/standards/Ecma-370.htm>

Model number *	30DH, 30DJ, 30DM			Logo			
Issue date *	2020/05/13						
Product environmental attributes - Market requirements (continued)					Requirement met		
Item					Yes	No	n.a.
Electromagnetic emissions							
P10.4	Computer display meets the requirement for low frequency electromagnetic fields of the following voluntary program(s):				<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
P12 Ergonomics for computing products							
P12.1*	The display meets the ergonomic requirements of ISO 9241-307 for visual display technologies.				<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
P12.2*	The physical input device meets the requirements of ISO 9995 and ISO 9241-410.				<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
P13 Packaging and documentation							
P13.1*	Product packaging material type(s): Paper		weight (kg): 1.076				
	Product packaging material type(s): LDPE		weight (kg): 0.356				
	Product packaging material type(s):		weight (kg):				
P13.2*	Product plastic primary packaging is free from PVC.				<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
P13.3*	For product primary corrugated fiberboard packaging, specify the contained percentage of minimum post-consumer recovered fiber content: 30 %						<input type="checkbox"/>
P13.4*	Specify media for user and product documentation (tick box): <input checked="" type="checkbox"/> Electronic, <input checked="" type="checkbox"/> Paper, <input type="checkbox"/> Other						<input type="checkbox"/>
P13.5	(Please only complete this item if paper documentation used) User and product documentation on paper media is chlorine-free: If Yes, please specify: Totally chlorine-free Elemental chlorine-free Processed chlorine-free				<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/>
P14 Voluntary programs							
P14.1	The product meets the requirements of the following voluntary program(s):						
	ENERGY STAR®	Criteria version: 8.0	Date: 2020/3/31	Product category: Workstation			
	Eco-label: EPEAT	Criteria version: 2018	Date: 2020/7/21	Product category: Workstation			
	Eco-label:	Criteria version:	Date:	Product category:			
P15 Additional information (See NOTE B10)							
P9	Energy consumption of specific configuration may vary; description of the tested product configuration:						
	NOTE: Supplier makes no representations, guarantees, assurances or warranties whether express or implied, regarding the information contained in this document. All information provided by supplier in this document is provided based on supplier's knowledge available at the time of completion, and supplier shall have no obligation to update such information. The information provided here is approximate and provided for informational purposes only. See a Lenovo Account Representative for more information.						
P9	See Energy Star Qualified Notebooks & Tablet Computers for the latest information: http://www.energystar.gov/index.cfm?fuseaction=find_a_product.showProductGroup&pgw_code=CO						

NOTE B10 Additional lines may be inserted to declare further items, by positioning the cursor at the far right of the row and hitting the <Enter> key.

Legal references Europe Annex B2

Reference	Declaration item
Directive 2011/65/EU (RoHS Directive) * * Specific exemptions apply for certain products and applications.	P1.1
Regulation (EC) 1907/2006(REACH, Annex XVII)	P1.2, P1.4, P1.6, P1.7
Regulation (EC) 2037/2000, 2038/2000, 2039/2000 (Marketing and use of Ozone layer depleting substances)	P1.3, P5.3
Norwegian regulation relating to restrictions on the use of certain dangerous chemicals 20.12.2002	P1.5
Directive 2013/56/EC (Battery and accumulators Directive) * * These provisions shall not apply where, for safety, performance, medical or data integrity reasons, continuity of power supply is necessary and requires a permanent connection between the appliance and the battery or accumulator.	P2.1, P2.2, P2,3, P8.1
Directive 2006/95/EC (Low Voltage Directive)	P3.1
Directive 2004/108/EC (EMC Directive)	P3.1
Directive 1999/5/EC (R&TTE Directive)	P3.1
Regulation (EC) 801/2013 amending Regulation (EC) No 1275/2008 with regard to ecodesign requirements for standby, off mode electric power consumption of electrical and electronic household and office equipment, and amending Regulation (EC) No 642/2009 with regard to ecodesign requirements for televisions	P3.1, P3.2
Regulation (EC) No 1272/2008 (CLP Regulation)	P7.19
Directive 2004/12/EC (Packaging Directive)	P5.1
Decision 97/129/EC (Secondary packaging legislation)	P5.2
Directive 2012/19/EU (WEEE directive)	P6.1

Lenovo ErP Lot3 Information Sheet

- PC / Notebook -

As required by COMMISSION REGULATION (EU) No 617/2013 of 26 June 2013 implementing Directive 2009/125/EC of the European Parliament and of the Council with regard to ecodesign requirements for computers and computer servers (ErP Lot3).

Products scope of this sheet:

Desktop computer, integrated desktop computer, and notebook computer

This document is only valid in connection with the IT Eco Declaration of the specific Product.

Commercial name	ThinkStation P340 Tower	Logo 
Model Number	30DH, 30DJ, 30DM	
Issue Date	2020/05/13	
Additional information	Energy Star 8.0;	

P7.1.1 Product environmental attributes					
(d) year of manufacture:		2020			
(e) Etec value (kWh) per ErP Lot 3 Category and capability adjustments applied when all discrete graphics cards (dGfx) are disabled and if the system is tested with switchable graphics mode with UMA driving the display.					
(f) Etec value (kWh) per ErP Lot 3 Category and capability adjustments applied when all discrete graphics cards (dGfx) are enable					
		Category A	Category B	Category C	Category D
		(according to ErP Lot 3)			
capability adjustments applied during testing	Memory over base [GB]				
	Additional internal storage	(Yes / No)	(Yes / No)	(Yes / No)	(Yes / No)
	Discrete television tuner	(Yes / No)	(Yes / No)	(Yes / No)	(Yes / No)
	Discrete Audio Card	(Yes / No)	(Yes / No)	(Yes / No)	(Yes / No)
	Discrete graphics Card(s) [number / #]	(Yes / No) #:			
	Category of discrete graphics Card(s)				
Test results	Etec Value (kWh) - dGfx disabled all discrete graphics cards (dGfx) are disabled / UMA is active for switchable graphics/ product has no graphics cards (dGfx)				
	Etec Value (kWh) - dGfx enabled all discrete graphics cards (dGfx) are enabled				
(g) Idle state power demand (Watts);		34.22			
(h) Sleep mode power demand (Watts);		NA			
(i) Sleep mode with WOL enabled power demand (Watts) (where enabled);		4.31			
(j) Off mode power demand (Watts);		NA			
(k) Off mode with WOL enabled power demand (Watts) (where enabled);		1.02			
(l) Internal power supply efficiency at 10 %, 20 %, 50 % and 100 % of rated output power (if applicable): PCK010-EL0G: 10% 90.72% 20% 92.57% 50% 93.57% 100% 90.38% Average 92.17% PCK023-EL0G: 10% 86.72% 20% 88.93% 50% 90.76% 100% 88.24% Average 89.31%					
(m) External power supply efficiency (if applicable)*: Average active efficiency: N/A <small>*internal note: show values for all available external power supplies</small>					
(o) Minimum number of loading cycles that the batteries can withstand (applies only to notebook computers):		N/A			
(p-1) Measurement methodology used to determine information mentioned in points (l) – internal PSU efficiency: Generalized Test Protocol for Calculating the Energy Efficiency of Internal Ac-Dc and Dc-Dc Power Supplies Revision 6.6					

(p-2)	Measurement methodology used to determine information mentioned in points (m) – external PSU efficiency: N/A
(p-3)	Measurement methodology used to determine information mentioned in points (o) – loading cycles batteries: N/A
(p-4)	Measurement methodology used to determine information mentioned in maximum, idle, sleep, off mode power as defined in Point P9.1 in the Product IT Eco Declaration: IEC 62623 Ed. 1.0, 2012-10
(q)	Sequence of steps for achieving a stable condition with respect to power demand: Based on user manual/Power on->Wait 5 minutes->Stable condition
(r)	Description of how sleep and/or off mode was selected or programmed: Based on user manual/Begin menu -> Power -> Select sleep or off mode
(s)	Sequence of events required to reach the mode where the equipment automatically changes to sleep and/or off mode: Based on user manual/Control Panel->Power Options-> Change Settings-> Restore default settings for this plan
(t)	Duration of idle state condition before the computer automatically reaches sleep mode , or another condition which does not exceed the applicable power demand requirements for sleep mode (in minutes): 20
(u)	Length of time after a period of user inactivity in which the computer automatically reaches a power mode that has a lower power demand requirement than sleep mode (in minutes): NA
(v)	Length of time before the display sleep mode is set to activate after user inactivity (in minutes): 10
(w)	Information on the energy-saving potential of power management functionality: Based on user manual
(x)	User information on how to enable the power management functionality: Based on user manual
(z)	Test parameters for measurements: — test voltage in V and frequency in Hz, — total harmonic distortion of the electricity supply system, — information and documentation on the instrumentation, set-up and circuits used for electrical testing: 230V, 50Hz, Total Harmonic Distortion <2 %

Additional Notebook Battery Information:

	Battery[ies] not user replaceable	Battery[ies] user replaceable	n/a
	The battery[ies] in this product cannot be easily replaced by users themselves. ¹⁾		
Internal/built-in Battery	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
External/detachable Battery	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Bios Backup Battery	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Additional information

1)

The battery[ies] in this product cannot be easily replaced by users themselves.
 Аккумуляторната[ите] батерия[и] в този продукт не може да се замени[ят] лесно от самите потребители.
 Las baterías de este producto no pueden ser sustituidas fácilmente por los propios usuarios.
 Výměnu baterie/baterií v tomto výrobku by neměli provádět sami uživatelé.
 Brøgeren kan ikke uden videre udskifte batteriet/batterierne i dette produkt.
 Der Akku/die Akkus dieses Produkts kann/können nicht ohne weiteres vom Benutzer selbst ausgetauscht werden.
 Kasutajad ei saa selle toote akut/akusid ise hõlpsasti asendada.
 Η μπαταρία[ς] στο προϊόν αυτό δεν μπορούν να αντικατασταθούν εύκολα από τους ίδιους τους χρήστες.
 La/les batterie(s) présente(s) dans ce produit ne peuvent être facilement remplacée(s) par les utilisateurs eux-mêmes.
 Korisnik ne može lako zamijeniti Bateriju sam u ovom proizvodu.
 La batteria/le batterie in questo prodotto non può/possono essere facilmente sostituita/e dall'utente.
 Lietotāji paši nevar nomainīt šā ražojuma akumulatoru(-us).
 Šio gaminio baterijos [baterijų] pats vartotojas negali lengvai pakeisti.
 A termék akkumulátorát/akkumulátorait a felhasználó nem tudja egyedül egyszerűen kicserélni.
 Il-batterija/batteriji f'dan il-prodott ma tistax/jistghux tiġi/jiġu sostitwita/i mill-utenti stess.
 Batteriet [ene] i dette produktet kan ikke lett erstattes av brukerne selv.
 De batterij(en) in dit product is (zijn) door de gebruiker niet gemakkelijk vervangbaar.
 Użytkownik nie może sam w łatwy sposób wymienić baterii w tym produkcie.
 A ou as baterias deste produto não podem ser facilmente substituídas pelos próprios utilizadores.
 Bateria (bateriile) din acest produs nu poate (pot) fi ușor înlocuită (înlocuite) de utilizatorii înșiși.
 Batériu(-ie) v tomto výrobku nemôže vymieňať používateľ.
 Baterij/baterije v tem izdelku uporabniki sami ne morejo zlahka zamenjati.
 Tämä tuotteen akku [akut] ei[vät] ole helposti käyttäjän vaihdettavissa.
 Det är inte enkelt för kunden att själv byta ut batteriet/batterierna.
 Bu üründeki batarya(lar) kullanıcılar tarafından kolaylıkla değiştirilemez.

MSI GTX 1050 TI 4GT LP - Graphics card - GF GTX 1050 Ti - 4 GB GDDR5 - PCIe 3.0 x16 low profile - DVI, HDMI, DisplayPort



MSI

Prekės nr.: GEFORCE GTX 1050 TI 4GT LP

- NVIDIA GeForce GTX 1050 Ti
- Vaizdo išvesties sąsajos tipas: PCI Express 3.0 x16
- GDDR5 SDRAM
- Maksimalus monitorių skaičius: 3; 7680 x 4320

Specifikacija

General

Device Type	Graphics card - low profile
Bus Type	PCI Express 3.0 x16
Graphics Engine	NVIDIA GeForce GTX 1050 Ti
Core Clock	1290 MHz
Boost Clock	1392 MHz
CUDA Cores	768
Max Resolution	7680 x 4320
Max Monitors Supported	3
Interfaces	DVI-D (dual link) DisplayPort HDMI

API Supported

DirectX 12, OpenGL 4.5 [Poz. 3.1.](#)

Features

Dual Fan Design, MSI Afterburner, Military Class 4 Components, NVIDIA G-Sync ready, NVIDIA GameWorks, Nvidia SHIELD ready, FinFET technology, HDCP

Memory

Size	4 GB Poz. 3.1.
Technology	GDDR5 SDRAM
Effective Clock Speed	7.008 GHz
Bus Width	128-bit

System Requirements

Required Power Supply	300 W
-----------------------	-------

Miscellaneous

Power Consumption Operational	75 Watt
-------------------------------	---------

**MSI GTX 1050 TI 4GT LP - Graphics card - GF GTX 1050 Ti - 4 GB GDDR5 - PCIe 3.0 x16
low profile - DVI, HDMI, DisplayPort**

Software Included	MSI Afterburner
Compliant Standards	MIL-STD 810G
Width	3.5 cm
Depth	18.2 cm
Height	6.9 cm
Weight	290 g

Papildoma medžiaga

Available on the website (PDF)

Product Data Sheet / Brochure

Lenovo Smartcard - Keyboard - USB - Lithuanian - black - for Legion S7 15; ThinkBook 14s G2 ITL; ThinkCentre M70; M75q Gen 2; M75s Gen 2; M90



Lenovo

Prekės nr.: 4X30E51021

Specifikacija

General

Device Type	Keyboard
Interface	USB Poz. 3.1..

Input Device

Hot Keys Function	Windows shortcuts
Localization and Layout	Lithuanian Poz. 3.1.
Security Devices	Smart card reader
ISO Card Tracks	Tracks 1, 2, 3 & 4
Features	Tilt legs, NumLock function
Width	45.713 cm
Depth	18.53 cm
Height	2.5 cm
Weight	965 g

Miscellaneous

Colour	Black
Cables Included	1 x USB cable - 2 m
Compliant Standards	ISO 7816, UL, TUV GS, VCCI, C-Tick, BSMI, CB, HBCI (Homebanking Computer Interface), FCC, KCC, ICES, FIPS 201

Software & System Requirements

OS Required	Microsoft Windows 7 64-bit Edition, Windows 8 64-bit Edition, Windows 8 32-bit Edition, Microsoft Windows XP 32-bit, Windows 8.1 32-bit Edition, Windows 8.1 64-bit Edition, Microsoft Windows 7 32-bit Edition
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Manufacturer Warranty

Service & Support	Limited warranty - replacement - 1 year
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Lenovo Smartcard - Keyboard - USB - Lithuanian - black - for Legion S7 15; ThinkBook 14s G2 ITL; ThinkCentre M70; M75q Gen 2; M75s Gen 2; M90

Environmental Parameters

Min Operating Temperature	10 °C
Max Operating Temperature	40 °C
Humidity Range Operating	8 - 80%

Compatibility Information

Designed For	<p> Lenovo 100e (2nd Gen) 82GJ Lenovo 300e (2nd Gen) 82GK Lenovo IdeaPad 1 11ADA05 82GV Lenovo IdeaPad 1 14ADA05 82GW Lenovo IdeaPad 3 14IGL05 81WH Lenovo IdeaPad 3 15IGL05 81WQ Lenovo IdeaPad 3 17IIL05 81WF Lenovo IdeaPad 5 14ITL05 82FE Lenovo IdeaPad 5 15ITL05 82FG Lenovo IdeaPad S145-15IIL 82DJ Lenovo IdeaPad Slim 7 15IMH05 82AE Lenovo Legion 5 17ARH05H 82GN Lenovo Legion 5P 15IMH05 82AY Lenovo Legion 5P 15IMH05H 82AW Lenovo Legion S7 15ARH5 82HM Lenovo ThinkBook 13s G2 ITL 20V9 Lenovo ThinkBook 14 G2 ARE 20VF Lenovo ThinkBook 14 G2 ITL 20VD Lenovo ThinkBook 14s G2 ITL 20VA Lenovo ThinkBook 14s Yoga ITL 20WE Lenovo ThinkBook 15 G2 ARE 20VG Lenovo ThinkBook 15 G2 ITL 20VE Lenovo ThinkCentre M70a 11E3 Lenovo ThinkCentre M70c 11GJ, 11GK, 11GL Lenovo ThinkCentre M70s 11EX Lenovo ThinkCentre M70t 11EV Lenovo ThinkCentre M75n 11G5, 11G7, 11GX Lenovo ThinkCentre M75n IoT 11BW, 11BX, 11GW Lenovo ThinkCentre M75q Gen 2 11JJ, 11JK, 11JM Lenovo ThinkCentre M75s Gen 2 11JA, 11JB, 11JD Lenovo ThinkCentre M75t Gen 2 11KC Lenovo ThinkCentre M80s 11EM Lenovo ThinkCentre M80t 11EK Lenovo ThinkCentre M90a 11DY, 11E0 Lenovo ThinkCentre M90q 11DJ, 11DL Lenovo ThinkCentre M90s 11D6 Lenovo ThinkCentre M90t 11D4 Lenovo ThinkPad E14 Gen 2 20TA, 20TB Lenovo ThinkPad E15 Gen 2 20TE Lenovo ThinkPad L13 Gen 2 20VH Lenovo ThinkPad L13 Yoga Gen 2 20VK Lenovo ThinkPad P1 (3rd Gen) 20TJ Lenovo ThinkPad P14s Gen 1 20Y1 Lenovo ThinkPad P15v Gen 1 20TR Lenovo ThinkPad P17 Gen 1 20SQ Lenovo ThinkPad T15g Gen 1 20UR, 20US Lenovo ThinkPad T15p Gen 1 20TM Lenovo ThinkStation P340 30DJ, 30DM, 30DN, 30DR </p>
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Lenovo Smartcard - Keyboard - USB - Lithuanian - black - for Legion S7 15; ThinkBook 14s G2 ITL; ThinkCentre M70; M75q Gen 2; M75s Gen 2; M90

Lenovo ThinkStation P620 30E0, 30E1
Lenovo V15-IGL 82C3
Lenovo V30a-22IIL 11LC
Lenovo V30a-24IIL 11LA
Lenovo V50a-22IMB 11FN
Lenovo V50a-24IMB 11FJ
Lenovo V50s-07IMB 11HB
Lenovo V50t-13IMB 11ED, 11HD
Lenovo V55t-15ARE 11KG

Papildoma medžiaga

[Available on the website \(PDF\)](#)

[User Manual](#)

Lenovo Essential - Mouse - right and left-handed - optical - 3 buttons - wired - USB - black - for IdeaPad S740-15; Legion S7 15; ThinkBook 14s G2 ITL; ThinkCentre M70; M75s Gen 2; M90



Lenovo

Prekės nr.: 4Y50R20863

Specifikacija

General

Device Type	Mouse
Orientation	Right and left-handed
Width	6.23 cm
Depth	11.13 cm
Height	3.337 cm
Weight	70 g
Colour	Black

Input Device

Connectivity Technology	Wired
Interface	USB Poz. 3.1.
Movement Detection Technology	Optical Poz. 3.1.
Buttons Qty	3 Poz. 3.1.
Movement Resolution	1600 dpi
Features	Ambidextrous design

Expansion / Connectivity

Interfaces	1 x USB - 4 pin USB Type A
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Miscellaneous

Compliant Standards	UL, TUV GS, VCCI, BSMI, CB, FCC, KCC, ICES, EAC, RCM
Works With Chromebook	Yes

Software / System Requirements

OS Required	Microsoft Windows 7 / 8 / 8.1 / 10
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Lenovo Essential - Mouse - right and left-handed - optical - 3 buttons - wired - USB - black - for IdeaPad S740-15; Legion S7 15; ThinkBook 14s G2 ITL; ThinkCentr...

Manufacturer Warranty

Service & Support	Limited warranty - 1 year
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Environmental Parameters

Min Operating Temperature	0 °C
Max Operating Temperature	50 °C
Humidity Range Operating	10 - 90%

Compatibility Information

Designed For	<p>Lenovo IdeaPad 1 11ADA05 82GV Lenovo IdeaPad 1 14ADA05 82GW Lenovo IdeaPad 3 14IGL05 81WH Lenovo IdeaPad 3 15IGL05 81WQ Lenovo IdeaPad Flex 3 CB 11M735 82HG Lenovo IdeaPad Flex 5 14IIL05 81WS Lenovo IdeaPad Flex 5 14ITL05 82HS Lenovo IdeaPad Flex 5 15ITL05 82HT Lenovo IdeaPad S145-15IIL 82DJ Lenovo IdeaPad S740-15IRH 81NY Lenovo IdeaPad Slim 7 15IMH05 82AE Lenovo Legion 5 17ARH05H 82GN Lenovo Legion 5P 15IMH05 82AY Lenovo Legion S7 15ARH5 82HM Lenovo ThinkBook 13s G2 ITL 20V9 Lenovo ThinkBook 14 G2 ARE 20VF Lenovo ThinkBook 14 G2 ITL 20VD Lenovo ThinkBook 14s G2 ITL 20VA Lenovo ThinkBook 14s Yoga ITL 20WE Lenovo ThinkBook 15 G2 ARE 20VG Lenovo ThinkBook 15 G2 ITL 20VE Lenovo ThinkCentre M70a 11E3 Lenovo ThinkCentre M70c 11GJ, 11GK, 11GL Lenovo ThinkCentre M70s 11EX Lenovo ThinkCentre M70t 11EV Lenovo ThinkCentre M75n 11G7 Lenovo ThinkCentre M75n IoT 11BW, 11BX, 11GW Lenovo ThinkCentre M75q Gen 2 11JJ, 11JK, 11JM Lenovo ThinkCentre M75s Gen 2 11JA, 11JB, 11JD Lenovo ThinkCentre M75t Gen 2 11KC Lenovo ThinkCentre M80s 11EM Lenovo ThinkCentre M80t 11EK Lenovo ThinkCentre M90a 11DY, 11E0 Lenovo ThinkCentre M90q 11DJ, 11DL Lenovo ThinkCentre M90s 11D6 Lenovo ThinkCentre M90t 11D4 Lenovo ThinkPad C13 Yoga Gen 1 Chromebook 20UY Lenovo ThinkPad E14 Gen 2 20TA, 20TB Lenovo ThinkPad E15 Gen 2 20TE Lenovo ThinkPad L13 Gen 2 20VH Lenovo ThinkPad L13 Yoga Gen 2 20VK Lenovo ThinkPad P14s Gen 1 20Y1 Lenovo ThinkPad T15g Gen 1 20UR Lenovo ThinkPad T15p Gen 1 20TM</p>
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**Lenovo Essential - Mouse - right and left-handed - optical - 3 buttons - wired - USB - black
- for IdeaPad S740-15; Legion S7 15; ThinkBook 14s G2 ITL; ThinkCentr...**

Lenovo ThinkStation P340 30DM, 30DN, 30DR

Lenovo ThinkStation P620 30E0, 30E1

Lenovo V15-IGL 82C3

Lenovo V30a-22IIL 11LC

Lenovo V30a-24IIL 11LA

Lenovo V50a-22IMB 11FN

Lenovo V50a-24IMB 11FJ

Lenovo V50s-07IMB 11HB

Lenovo V50t-13IMB 11ED, 11HD

Lenovo V55t-15ARE 11KG

Lenovo Yoga 7 14ITL05 82BH

Lenovo Yoga 7 15ITL05 82BJ

Lenovo Yoga Slim 7 14ITL05 82A3

ThinkVision S27i-10

BUILT FOR PRODUCTIVITY
AND COLLABORATION



INCREDIBLE CLARITY THAT ENABLES BETTER PERFORMANCE

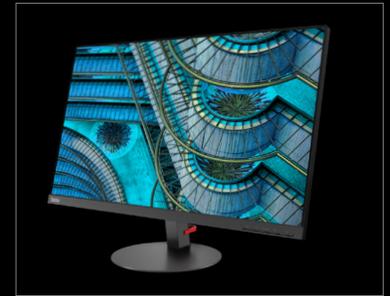
The ThinkVision® S27i-10 offers crisp visuals that ensure you don't miss any detail. This high-performance monitor perfectly complements all your business activities. With the near-edgeless panel, versatile connectivity options, and vivid display, users can experience improved productivity.

FEATURES OF THINKVISION® S27I-10 MONITOR



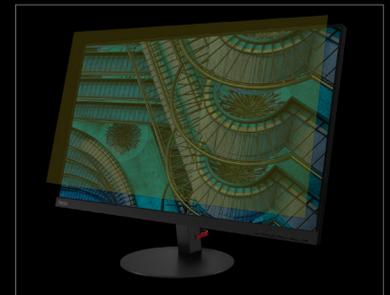
Borderless Productivity

With its 27" near-edgeless panel coupled with In-Plane Switching 178° wide viewing angle, this monitor offers a stunning view from all angles. The 1920 x 1080 full-HD resolution ensures unimpeded clarity, always.



Easy on the Eye

With the TÜV Eye Comfort certification, users can work for longer hours without any eye strain. The FreeSync™ technology prevents screen tearing and facilitates smooth data viewing.



Convenient Connectivity

With the VGA and HDMI ports, all connectivity needs are met. The ergonomic quick release tilt stand and the VESA mount allow users to position the monitor comfortably.



ThinkVision® S27i-10

DISPLAY

Panel Size

27 inch

Screen Dimensions (H x V) (mm)

597.89 (H) × 336.31 (V)

Panel Type

In-Plane Switching

Backlight

WLED

Aspect Ratio

16:9

Resolution

1920 x 1080

Pixel Pitch (H x V) (mm)

0.3110 × 0.3110

Viewing angle (H x V)

178° / 178°

Response Time (gray to gray)

4 ms (extreme mode)

6 ms (normal mode)

Contrast Ratio (typical)

1000:1

Dynamic Contrast Ratio (typical)

3M:1

Color Gamut NTSC (CIE 1931)

72%

Color Support

16.7M

CONNECTIVITY

Video Input Signals

VGA + HDMI 1.4

Video Cable Length

1.8 m

Audio Out

Yes (3.5 mm)

MULTI-MEDIA

Optional Soundbar Support

Yes

DIMENSIONS

Size Packed (D x H x W) (mm/inch)

132 x 455 x 715 mm / 5.20 x 17.91 x 28.15 inch

Size Unpacked w/stand (D x H x W) (mm/inch) (Lowest Position)

220.0 x 443.5 x 611.9 mm / 8.66 x 17.46 x 24.10 inch

Size Unpacked w/stand (D x H x W) (mm/inch) (Highest Position)

220.0 x 443.5 x 611.9 mm / 8.66 x 17.46 x 24.10 inch

Size Unpacked w/o stand (D x H x W) (mm/inch) (Head Only)

46.2 x 366.5 x 611.9 mm / 1.82 x 14.43 x 24.10 inch

Weight Packed (kg/lbs.)

6.80kg / 14.99 lbs.

Weight Unpacked (kg/lbs.)

4.76kg / 10.49 lbs.

Weight (Monitor Head Only) (kg/lbs.)

4.22kg / 9.30 lbs.

SPECIAL FEATURES

Anti-Glare

Yes

Thin Client Support (Tiny)

Yes

(by VESA mount PN:4XFON03161)

MECHANICAL

Tilt Angle (front/back)

-5° / 22°

VESA Mount

Yes (100 mm)

Kensington™ Lock Slot

Yes

Cable Management

Yes

Bezel Color

Raven Black

Bezel Width (Side)

2.0 mm

Bezel Width (top / bottom)

2.0 mm / 21.68 mm

WHAT'S IN THE BOX

Monitor with stand

1 x HDMI Cable

1 x VGA Cable (AP, EMEA only)

1 x Power Cable

Quick setup guide

CERTIFICATIONS [Poz. 3.3; 3.4.](#)

ENERGY STAR Rating

7.0

TCO

7.0

EPEAT™

Gold

ULE

Gold

RoHS

Yes

Windows Certification

Windows 7, Windows 10

China Energy Efficiency Standard

Tier 2

Ambient Operating Temperature

0°C to 40°C

TÜV Eye Confort Certification

Yes



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Specifications may vary depending upon region.

Lenovo™

Lenovo ThinkVision S27i-10 - LED monitor - 27" (27" viewable) - 1920 x 1080 Full HD (1080p) @ 75 Hz - IPS - 250 cd/m² - 1000:1 - 6 ms - HDMI, VGA - raven black



Lenovo

Prekės nr.: 61C7KAT1EU

- Ekranas raiška: 1920 x 1080; 1000:1; 6 ms
- Monitoriaus jungtis: VGA (HD-15), HDMI
- Ekranas pozicijos reguliavimas: Tilt
- Raven black

Specifikacija

General

Display Type	LED-backlit LCD monitor / TFT active matrix Poz. 3.2.
Energy Class	Class A
Energy Consumption per Year	35 kWh
Diagonal Size	27" Poz. 3.2.
Viewable Size	27" Poz. 3.2.
Panel Type	IPS Poz. 3.2.
Aspect Ratio	16:9
Native Resolution	Full HD (1080p) 1920 x 1080 at 75 Hz
Pixel Pitch	0.311 mm
Pixel Per Inch	82
Brightness	250 cd/m ²
Contrast Ratio	1000:1 / 3000000:1 (dynamic)
Colour Support	16.7 million colours
Response Time	6 ms (typical); 4 ms (extreme)
Vertical Refresh Rate	49 - 76 Hz
Horizontal Refresh Rate	54 - 90 kHz
Horizontal Viewing Angle	178 Poz. 3.2.
Vertical Viewing Angle	178 Poz. 3.2.
Backlight Technology	WLED
Features	Anti-glare, 72% colour gamut Poz. 3.2.
Colour	Raven black
Dimensions (WxDxH)	61.19 cm x 22 cm x 44.35 cm - with stand
Weight	4.76 kg
Connectivity	

Lenovo ThinkVision S27i-10 - LED monitor - 27" (27" viewable) - 1920 x 1080 Full HD (1080p) @ 75 Hz - IPS - 250 cd/m² - 1000:1 - 6 ms - HDMI, VGA - raven black

Interfaces	HDMI VGA (HD-15) Headphones
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Mechanical

Display Position Adjustments	Tilt
Tilt Angle	-5/+22
VESA Mounting Interface	100 x 100 mm

Miscellaneous

Features	Security lock slot (cable lock sold separately)
Cables Included	1 x VGA cable - 1.8 m 1 x HDMI cable - 1.8 m
Compliant Standards	DDC/CI, RoHS, China Energy standard Tier 2, VESA TMDS, TUV Rheinland Eye Comfort Certification
Localisation	English / Europe
Security Slot Type	Kensington security slot

Power

Voltage Required	AC 120/230 V (50/60 Hz)
Power Consumption Operational	24 Watt
Power Consumption Stand by	0.3 Watt
Power Consumption (Off Mode)	0.3 Watt

Software / System Requirements

OS Required	Microsoft Windows 7 / 10
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Dimensions & Weight

Dimensions & Weight Details	With stand - width: 61.19 cm - depth: 22 cm - height: 44.35 cm - weight: 4.76 kg Without stand - width: 61.19 cm - depth: 4.62 cm - height: 36.65 cm - weight: 4.22 kg
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Dimensions & Weight (Shipping)

Shipping Width	71.5 cm
Shipping Depth	13.2 cm
Shipping Height	45.5 cm
Shipping Weight	6.8 kg

Environmental Standards [poz. 3.4, 3.4](#)

TCO Certified	TCO Certified Displays 8, TCO Certified Edge Displays
ENERGY STAR Certified	Yes

Manufacturer Warranty

Service & Support	Limited warranty - 3 years
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Lenovo ThinkVision S27i-10 - LED monitor - 27" (27" viewable) - 1920 x 1080 Full HD (1080p) @ 75 Hz - IPS - 250 cd/m² - 1000:1 - 6 ms - HDMI, VGA - raven black

Environmental Parameters

Min Operating Temperature	0 °C
Max Operating Temperature	40 °C
Humidity Range Operating	10 - 80% (non-condensing)

Papildoma medžiaga

Available on the website (PDF)

User Manual

Product Data Sheet / Brochure

THE ECO DECLARATION



ECMA/TC38-TG3/2015/026
(Rev. 1 – 15 April 2015)

Annex B2 - Product environmental attributes Computer Monitors

The declaration may be published only when all rows and/or fields marked with * are filled-in (n.a. for not applicable). Additional information regarding each item may be found under P15.

Brand *	Lenovo	
Company name *	Lenovo	
Contact information * e-mail address	Lenovo Global Environmental Affairs Alvin L Carter alcarter@lenovo.com	
Internet site *	http://www.lenovo.com/social_responsibility/us/en/environment.html	
Additional information		

The company declares (based on product specification or test results based obtained from sample testing), that the product conforms to the statements given in this declaration.	
Type of product *	Monitor
Commercial name *	Lenovo S27i-10
Model number *	61C7
Issue date *	2018/04/17
Intended market *	<input checked="" type="checkbox"/> Global <input type="checkbox"/> Europe <input type="checkbox"/> Asia, Pacific & Japan <input type="checkbox"/> Americas <input type="checkbox"/> Other
Additional information	

This is an uncontrolled copy when in printed form. Please refer to the contact information for the latest version.

<p>About Annex B2</p> <p>Annex B2 reflects Product environmental attributes relevant for Computers and Computer Monitors. The following items from the ECMA-370 Main body are not shown in the template:</p> <p>P4.1 – P4.3 Consumable materials P9.1 TEC and Print speed P10.2 - P10.3 Chemical emissions from printing products P11.1 - P11.3 Consumable materials for printing products.</p>
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Model number *	61C7	Logo			
Issue date *	2018/4/17				
Product environmental attributes - Legal requirements					
		Requirement met			
Item		Yes	No	n.a.	
P1	Hazardous substances and preparations				
P1.1*	Products do comply with current European RoHS Directive. (See legal reference and NOTE B1)	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
P1.2*	Products do not contain Asbestos (see legal reference). Comment: Legal reference has no maximum concentration value.	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
P1.3*	Products do not contain Ozone Depleting Substances: Chlorofluorocarbons (CFC), hydrobromofluorocarbons (HBFC), hydrochlorofluorocarbons (HCFC), Halons, carbontetrachloride, 1,1,1-trichloroethane, methyl bromide (see legal reference). Comment: Legal reference has no maximum concentration values.	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
P1.4*	Products do not contain more than; 0,005% polychlorinated biphenyl (PCB), 0,005% polychlorinated terphenyl (PCT) in preparations (see legal reference).	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
P1.5*	Products do not contain more than 0,1% short chain chloroparaffins (SCCP) with 10-13 carbon atoms in the chain containing at least 48% per mass of chlorine in the SCCP (see legal reference).	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
P1.6*	Parts with direct and prolonged skin contact do not release nickel in concentrations above 0,5 µg/cm ² /week (see legal reference). Comment: Max limit in legal reference when tested according to EN1811:2011-5.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
P1.7*	REACH Article 33 information about substances in articles is available at (add URL or mail contact): http://www.lenovo.com/social_responsibility/us/en/environment.html	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
P2	Batteries				
P2.1*	If the product contains a battery or an accumulator, the battery/accumulator is labeled with the disposal symbol. Information on proper disposal is provided in user manual. (See legal reference)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
P2.2*	Batteries or accumulators do not contain more than 0,0005% of mercury or 0,002% of cadmium. (See legal reference)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
P2.3*	Batteries and accumulators are readily removable. (See legal reference)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
P3	Conformity verification & Eco design (ErP)				
P3.1*	The product is CE-marked to show conformance with applicable legal requirements (see legal reference). The Declaration of Conformity can be requested at (add link or e-mail address):	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
P3.2*	The product complies with the Eco design requirements for energy-related products, (see legal reference). Required information is; <input checked="" type="checkbox"/> given in item P15 or added to this document, <input checked="" type="checkbox"/> available at (add URL): https://www3.lenovo.com/us/en/social_responsibility/datasheets_monitors/	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
P5	Product packaging Poz. 3.3.				
P5.1*	Packaging and packaging components do not contain more than 0,01% lead, mercury, cadmium and hexavalent chromium by weight of these together.	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
P5.2*	The packaging materials are marked with abbreviations and numbers indicating the nature of the material(s) used (see legal reference).	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
P5.3*	The product packaging material is free from ozone depleting substances as specified in the Montreal Protocol (see legal reference). Comment: Legal reference has no maximum concentration values.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
P6	Treatment information				
P6.1*	Information for recyclers/treatment facilities is available (see legal reference).	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

NOTE B1 Restriction applies to the homogeneous material, unless other specified and expressed in weight %. Stating "Yes" means that the product is compliant with the mandatory requirements.

Model number *	61C7	Logo	
Issue date *	2018/04/17		

Product environmental attributes - Market requirements (See General NOTE GN below)				
- Environmental conscious design			Requirement met	
Item	*=mandatory to fill in. Additional information regarding each item may be found under P14.	Yes	No	n.a.
P7 Design				
Disassembly, recycling				
P7.1*	Parts that have to be treated separately are easily separable Poz. 3.3.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
P7.2*	Plastic materials in covers/housing have no surface coating.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
P7.3*	Plastic parts > 100 g consist of one material or of easily separable materials.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
P7.4*	Plastic parts > 25 g have material codes according to ISO 11469 referring ISO 1043-4. Poz. 3.3.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
P7.5	Plastic parts are free from metal inlays or have inlays that can be removed with commonly available tools.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
P7.6*	Labels are easily separable. (This requirement does not apply to safety/regulatory labels).	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Product lifetime				
P7.7*	Upgrading can be done e.g. with processor, memory, cards or drives	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
P7.8*	Upgrading can be done using commonly available tools	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
P7.9	Spare parts are available after end of production for: 5 years			<input type="checkbox"/>
P7.10	Service is available after end of production for: 5 years			<input type="checkbox"/>
Material and substance requirements				
P7.11*	Product cover/housing material type (e.g. plastics, metal, aluminum): Material type: ABS Material type: PC Material type:			
P7.12	Insulation materials of external electrical cables are PVC free.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
P7.13	Insulation materials of internal electrical cables are PVC free.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
P7.14	External plastic casing/cover parts > 25 g contain no more than 0,1% weight (1000 ppm) bromine and 0,1% weight (1000 ppm) chlorine attributable to brominated flame retardants, chlorinated flame retardants, and polyvinyl chloride or 0,3% weight (3000 ppm) bromine and 0,3% weight (3000 ppm) chlorine in parts containing more than 25% post-consumer recycled content.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
P7.15	Printed circuit boards, PCBs (without components) are low halogen: all <input checked="" type="checkbox"/> PCBs > 25 g <input type="checkbox"/> are low halogen as defined in IEC 61249-2-21. (See 1NOTE B2)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
P7.16	Flame retarded plastic parts > 25 g in covers / housings are marked according ISO 1043-4: Marking:	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
P7.17	<u>Alt. 1:</u> Chemical specifications of flame retardants in printed circuit boards > 25 g (without components): <input type="checkbox"/> TBBPA (additive), <input type="checkbox"/> TBBPA (reactive) (See NOTE B3), <input type="checkbox"/> Other: , CAS #: <u>Alt. 2:</u> Chemical specifications of flame retardants in printed circuit boards (without components) > 25 g according ISO 1043-4:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
P7.18	<u>Alt. 1:</u> Flame retarded plastic parts > 25 g contain the following flame retardant substances/preparations in concentrations above 0,1%: 1. Chemical name: , CAS #: (See NOTE B4) 2. Chemical name: , CAS #: " 3. Chemical name: , CAS #: " <u>Alt. 2:</u> Chemical specifications of flame retardants in plastic parts > 25 g according ISO 1043-4:	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
P7.19	In plastic parts > 25 g, flame retardant substances/preparations above 0,1% are used which have been assigned the following Risk phrases; and Hazard statements: The source(s) for these classifications is/are found at (add URL(s)): , (See note B5)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
P7.20*	Postconsumer recycled plastic material content is used in the product (See Note B6): If YES; at least one of the two alternatives below shall be answered; a) Of total plastic parts' weight > 25 g, the postconsumer recycled plastic material content (calculated as a percentage of total plastic by weight) is 40.5% . (EPEAT calculation) / 85% (TCO calculation) or b) The weight of recycled material is 746.8 g .	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

GENERAL NOTE Standard references should direct to the latest version of a standard. If an older version of a standard is used, section P15 shall be used for explanation.

NOTE B2 IEC 61249-2-21 defines maximum limits of 900 ppm for each of the substances chlorine and bromine and a maximum limit of 1500ppm of these substances combined. The standard does not address fluorine, iodine and astatine which are included in the group of halogens.

NOTE B3 and B4 A Guidance document on Chemical substances is available; see <http://www.ecma-international.org/publications/standards/Ecma-370.htm>

NOTE B5 If a certain substance has been assigned a certain risk phrases / hazard statement in the referenced source, this does not necessarily mean the substance has been tested for all of the hazards referred to by a certain customer.

NOTE B6 Applies to a product containing plastic parts whose combined weight exceeds 100 g with the exception of printed circuit boards, cables, connectors and electronic components and bio-based plastic material.

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Product environmental attributes - Market requirements (continued)		Requirement met		
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Item		Yes	No	n.a.
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Material and substance requirements (continued)				
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P7.21*	Biobased plastic material content is used in the product (See NOTE B7): If YES; at least one of the two alternatives below shall be answered; a) Of total plastic parts' weight > 25 g, the biobased plastic material content (calculated as a percentage of total plastic by weight) is 0%. or b) The weight of the biobased plastic material is 0g.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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P7.22*	Light sources are free from mercury, i.e. less than 0,1 mg/lamp. If mercury is used specify: Number of lamps: _____ and maximum mercury content per lamp: _____ mg	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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P8 Batteries				
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P8.1*	Battery chemical composition:	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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P9 Energy consumption (See NOTE B8)				
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P9.1 For the product the following power levels or energy consumptions are reported:

Energy mode *	Power level at 100 V AC	Power level at 115 V AC	Power level at 230 V AC	Reference/Standard for energy modes and test method *
ENERGY STAR® On Mode* (System Idle)	17.5W	17.2W	17.5W	ENERGY STAR® Program Requirements for Computer Monitors: Ver. 7.0
ENERGY STAR® Low Power Sleep Mode*	0.2W	0.2W	0.2W	ENERGY STAR® Program Requirements for Computer Monitors: Ver. 7.0
ENERGY STAR® Off / Apparent Off Mode*	0.09W	0.09W	0.17W	ENERGY STAR® Program Requirements for Computer Monitors: Ver. 7.0

PTEC *	W	W	W	<input type="checkbox"/>
Typical Energy Consumption				

ETEC *	54.6kWh/year	53.8 kWh/year	55 kWh/year	$E_{TEC} = (8760/1000) \times (P_{off} \times 0.6 + P_{sleep} \times 0.1 + P_{idle} \times 0.3)$	<input type="checkbox"/>
Annual Energy Consumption					

External Power Supply Efficiency Level (International Efficiency Marking Protocol) * :	<input type="checkbox"/>
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Display resolution* : 1920*1080 megapixels	ENERGY STAR® Program Requirements for Computer Monitors: Ver. 7.0
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Default time to enter energy save mode: 15 seconds	ENERGY STAR® Program Requirements for Computer Monitors: Ver. 7.0
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P9.2* Information about the energy save function is provided with the product.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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P9.3* The product meets the energy requirements of the following voluntary program/s: ENERGY STAR® version: 7.0 Product category: Display.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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P10 Emissions				
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Noise emission – Declared according to ISO 9296 (See NOTE B9)				
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P10.1	Mode	Mode description	Statistical upper limit A-weighted sound power level, $L_{WA,c}$ (B)	
	Idle	* HDD: Idle	*	<input type="checkbox"/>
	Operation	* HDD: Operating	*	<input type="checkbox"/>
	Other mode	Declared A-weighted sound pressure level (dB) L_{pAm}	(operator position desktop – idle)	
	Other mode	Declared A-weighted sound pressure level (dB) L_{pAm}	(operator position desktop – operating)	
Measured according to: <input checked="" type="checkbox"/> ISO 7779 <input type="checkbox"/> ECMA-74 <input type="checkbox"/> Other (only if not covered by ECMA-74)				

NOTE B7 The following is to be excluded from the calculation of percentage: printed circuit boards, labels, cables, connectors and electronic components and postconsumer recycled plastic

NOTE B8 A Guidance document on Energy Efficiency is available;
see <http://www.ecma-international.org/publications/standards/Ecma-370.htm>

NOTE B9 A Guidance document on Acoustic Noise is available;
see <http://www.ecma-international.org/publications/standards/Ecma-370.htm>

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Product environmental attributes - Market requirements (continued)		Requirement met		
Item		Yes	No	n.a.
Electromagnetic emissions				
P10.4	Computer display meets the requirement for low frequency electromagnetic fields of the following voluntary program(s):	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
P12 Ergonomics for computing products				
P12.1*	The display meets the ergonomic requirements of ISO 9241-307 for visual display technologies.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
P12.2*	The physical input device meets the requirements of ISO 9995 and ISO 9241-410.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
P13 Packaging and documentation				
P13.1*	Product packaging material type(s): <i>EPS</i> weight (kg): <i>0.26</i> Product packaging material type(s): <i>PE Bag</i> weight (kg): <i>0.05</i> Product packaging material type(s): <i>Paper</i> weight (kg): <i>0.03</i> Product packaging material type(s): <i>Carton</i> weight (kg): <i>1.20</i>			
P13.2*	Product plastic primary packaging is free from PVC.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
P13.3*	For product primary corrugated fiberboard packaging, specify the contained percentage of minimum post-consumer recovered fiber content: <i>0</i> %			<input type="checkbox"/>
P13.4*	Specify media for user and product documentation (tick box): <input checked="" type="checkbox"/> Electronic, <input checked="" type="checkbox"/> Paper, <input type="checkbox"/> Other			<input type="checkbox"/>
P13.5	(Please only complete this item if paper documentation used) User and product documentation on paper media is chlorine-free: If Yes, please specify: Totally chlorine-free Elemental chlorine-free Processed chlorine-free	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
		<input type="checkbox"/>		
		<input type="checkbox"/>		
		<input type="checkbox"/>		
P14 Voluntary programs				
P14.1	The product meets the requirements of the following voluntary program(s): ENERGY STAR® Criteria version: Date: Product category: Eco-label: Criteria version: Date: Product category: Eco-label: Criteria version: Date: Product category:			
P15 Additional information (See NOTE B10)				
P9	Energy consumption of specific configuration may vary; description of the tested product configuration: NOTE: Supplier makes no representations, guarantees, assurances or warranties whether express or implied, regarding the information contained in this document. All information provided by supplier in this document is provided based on supplier's knowledge available at the time of completion, and supplier shall have no obligation to update such information. The information provided here is approximate and provided for informational purposes only. See a Lenovo Account Representative for more information.			
P9	See Energy Star Qualified Monitors & Displays for the latest information: https://www.energystar.gov/products/office_equipment/displays			

NOTE B10 Additional lines may be inserted to declare further items, by positioning the cursor at the far right of the row and hitting the <Enter> key.

Legal references Europe Annex B2

Reference	Declaration item
Directive 2011/65/EU (RoHS Directive) * * Specific exemptions apply for certain products and applications.	P1.1
Regulation (EC) 1907/2006(REACH, Annex XVII)	P1.2, P1.4, P1.6, P1.7
Regulation (EC) 2037/2000, 2038/2000, 2039/2000 (Marketing and use of Ozone layer depleting substances)	P1.3, P5.3
Norwegian regulation relating to restrictions on the use of certain dangerous chemicals 20.12.2002	P1.5
Directive 2013/56/EC (Battery and accumulators Directive) * * These provisions shall not apply where, for safety, performance, medical or data integrity reasons, continuity of power supply is necessary and requires a permanent connection between the appliance and the battery or accumulator.	P2.1, P2.2, P2.3, P8.1
Directive 2006/95/EC (Low Voltage Directive)	P3.1
Directive 2004/108/EC (EMC Directive)	P3.1
Directive 1999/5/EC (R&TTE Directive)	P3.1
Regulation (EC) 801/2013 amending Regulation (EC) No 1275/2008 with regard to ecodesign requirements for standby, off mode electric power consumption of electrical and electronic household and office equipment, and amending Regulation (EC) No 642/2009 with regard to ecodesign requirements for televisions	P3.1, P3.2
Regulation (EC) No 1272/2008 (CLP Regulation)	P7.19
Directive 2004/12/EC (Packaging Directive)	P5.1
Decision 97/129/EC (Secondary packaging legislation)	P5.2
Directive 2012/19/EU (WEEE directive)	P6.1