

3Shape Lab Scanner



[User Manual](#)

Rx Only



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1. Indications for Use

Intended Use

The 3Shape Lab Scanner System is used to record the topographical characteristics of dentition by scanning objects, for example teeth, dental gypsum or impression models that can include scan bodies. A 3D model is created, which can further be annotated and corrected for scan artifacts.

Intended User Profile

The 3Shape Lab Scanner System is operated by trained dental professionals and qualified personnel.

Intended Conditions of Use

The 3Shape Lab Scanner System will be used in a lab with restricted access, and environmental conditions are those found in laboratories.

Intended Patient Profile

The 3Shape Lab Scanner System is not in direct contact with the patient, but it can be operated on models based on the topographical characteristics of the dentition (including gingiva) with no restrictions in patient population.

Indications for Use

The 3Shape Lab Scanner System digital images are indicated for:

- **Dental Prosthetic Restorations**
- **Orthodontics**
- **Dental Implantology**

Contraindications

None





Components of the System

The 3Shape Lab Scanner System consists of the following components:

- **Lab Scanner Hardware & Lab Scanner Tools**
- **ScanIt Dental Software**
- **ScanSuite Lab Software**

2. 3Shape Lab Scanners

This user manual is applicable to the following 3Shape scanner models:

3Shape Scanners				
Scanner Features	E1	E2	E3	E4
Cameras	2 x 5.0 Megapixels	2 x 5.0 Megapixels	2 x 5.0 Megapixels	4 x 5.0 Megapixels
Accuracy (ISO 12836:2015 Annex A&B)	10 µm	10 µm	7 µm	4 µm
Gypsum model scanning (w. antagonist)	+	+	+	+
Impression scanning	Add-on	Add-on	+	+
Multi-Die Scanning	Add-on	Add-on	+	+
Texture scanning	Not available	Black and White	Color	Color

Scanner Visual Indications

Scanner Status	Top Light	Logo LED (if available)
Awaiting Scanner Interaction	On	White
Awaiting Computer Interaction	Off	White
Scanning	On/Off is Scan State Specific (Follow on-screen instructions)	Blue
Error	Off	Red

Non E-series 3Shape Scanners

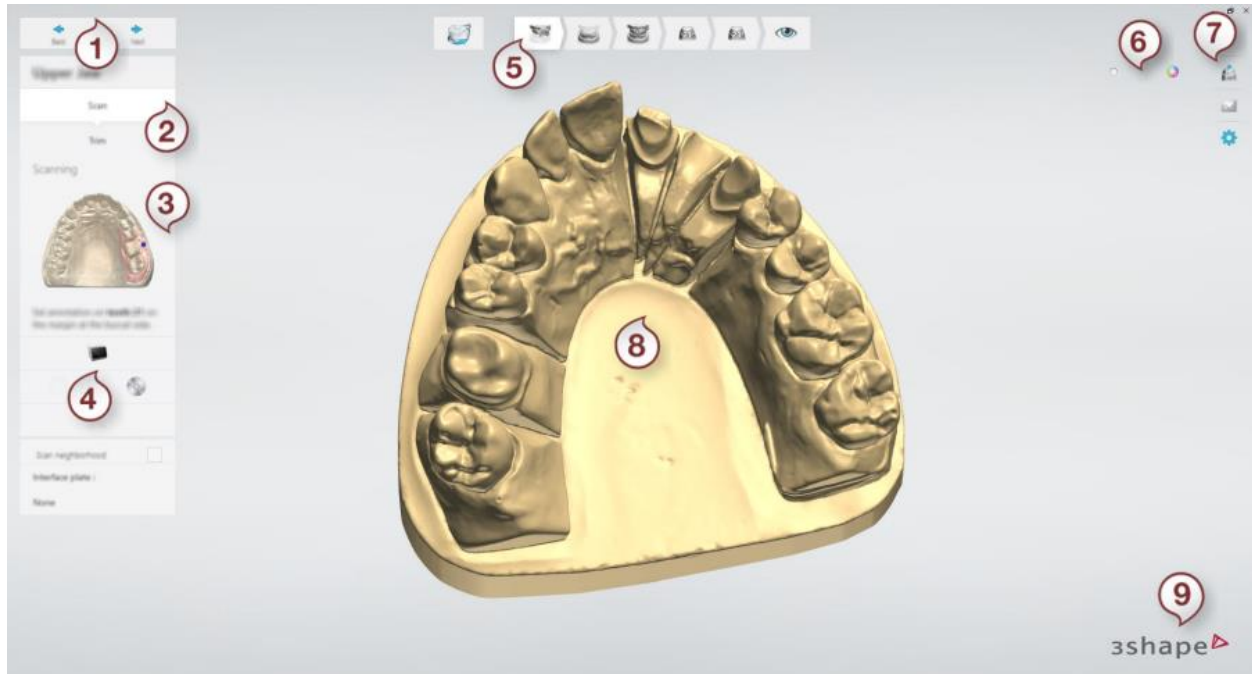
For non E-series hardware (i.e. scanners, scanner tools etc.), which are supported by ScanSuite & ScanIt Dental software, refer to the original user manual supplied with device/system at the time of purchase for detailed instructions. These existing models are supported: D/R2000, D/R1000, D/R900L, D/R900, D/R850, D810, D/R800, D/R750, D710, D/R700, and D/R500.

3. ScanIt Dental Software

ScanIt Dental Software takes an order from a 3Shape CAD/CAM software application with request for specific scans as input and then guides the user through a scanning workflow by using ScanSuite Lab for direct communication with the scanner.

Main Window

When ScanIt Dental starts, its main window appears on the screen:



(1) Back/Next Buttons

The **Back** and **Next** buttons allow you to navigate between workflow steps. Click **Next** as you complete each step to advance through the workflow.

(2) Sub-Steps

Each workflow step may contain sub-steps, for example scanning, trimming, and alignment. Sub-Steps completion may be required before proceeding.

(3) Help Images and Text

The help images and help text guide you through what to do on the current workflow step. To complete a workflow, follow the instructions and click **Next** when done with each step of the workflow.

(4) Scan Tools

For each step, a set of relevant tools will be shown. Follow the instructions in the help text and tooltips to use them.

(5) Workflow Bar

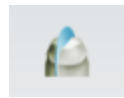
The workflow bar displays main steps of the scanning process, which differ depending on your order. The last step is usually the Inspect step, which lets you view the result of scanning. Workflows are designed so that a standard scanning job can be completed by sequentially going through the workflow steps by clicking **Next**. It is also possible to jump between steps by clicking on a step in the workflow bar. Workflow steps that are shown in full color are accessible and may be worked. A green check-mark indicates step completion. Greyed out workflow steps are blocked until preceding steps have been completed.

(6) Visibility Slider

The Visibility Slider(s) allow you to show or hide parts of the scan, e.g. textures.

(7) Tools

Several tools are located on the right of the main window and include the following:



Cross section - lets you place a cross section across a scan body.



Send feedback report - send a feedback report with the active order, screenshot and information on a form. Alternatively, you can press **Ctrl + F**.



Settings - opens the ScanIt Dental Settings page, where the behavior of the application can be fine-tuned to each user's preferences.

(8) Scanning Window


The main area of the screen shows the 3D model(s) for the current step.

(9) Program and Product Information

Click the 3Shape logo to open the Program and Product Information access panel. You will gain quick access to the following; Online support, Training Center, User Manual, What's new, Safety guide, Privacy Policy and General License Terms, Third Party Licenses, and Customer Feedback reports.

4. ScanSuite Lab and Calibration

ScanSuite Lab

ScanSuite Lab is a family of drivers that integrate your 3D scanners into the ScanIt Dental scanning application. ScanServer is an integral part of ScanSuite Lab. ScanServer must be activated before you scan. The ScanServer  icon is shown in your Windows system tray when ScanServer is active.

Scanner calibration

Scanner calibration is performed using ScanServer. Scanner calibration is required for calculation of internal scanner geometry and camera parameters. Calibration is your scanners only required maintenance.

When to calibrate

For accurate results, calibrate your scanner each time it is moved, and at least twice a week. However, if the scanner is placed on a stable surface and kept at a constant temperature, the calibration intervals can be increased. Calibration is always required when a scanner is first unpacked.

You will need:

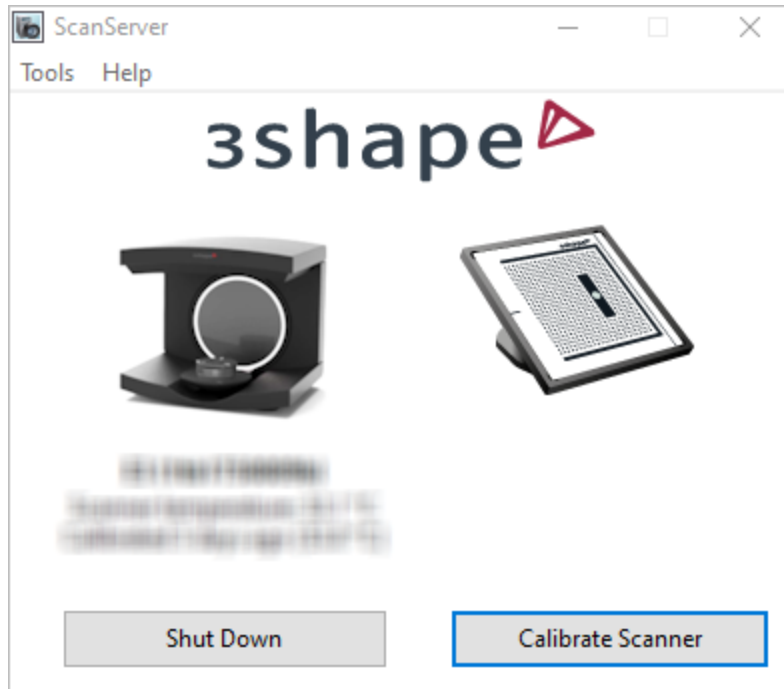
1. ScanServer application installed on your PC
2. Calibrating object(s) supplied with your scanner
3. Height Adapter supplied with your scanner

How to calibrate

Calibration is a simple process and almost completely automatic:

► **Step 1: After a 30 minute warm up, click on the ScanServer  icon in the system tray**

The ScanServer window appears:



▶ **Step 2: Click the *Calibrate Scanner* button**

▶ **Step 3: Follow the instructions**

Follow the details of the step by step instructions through the calibration process.

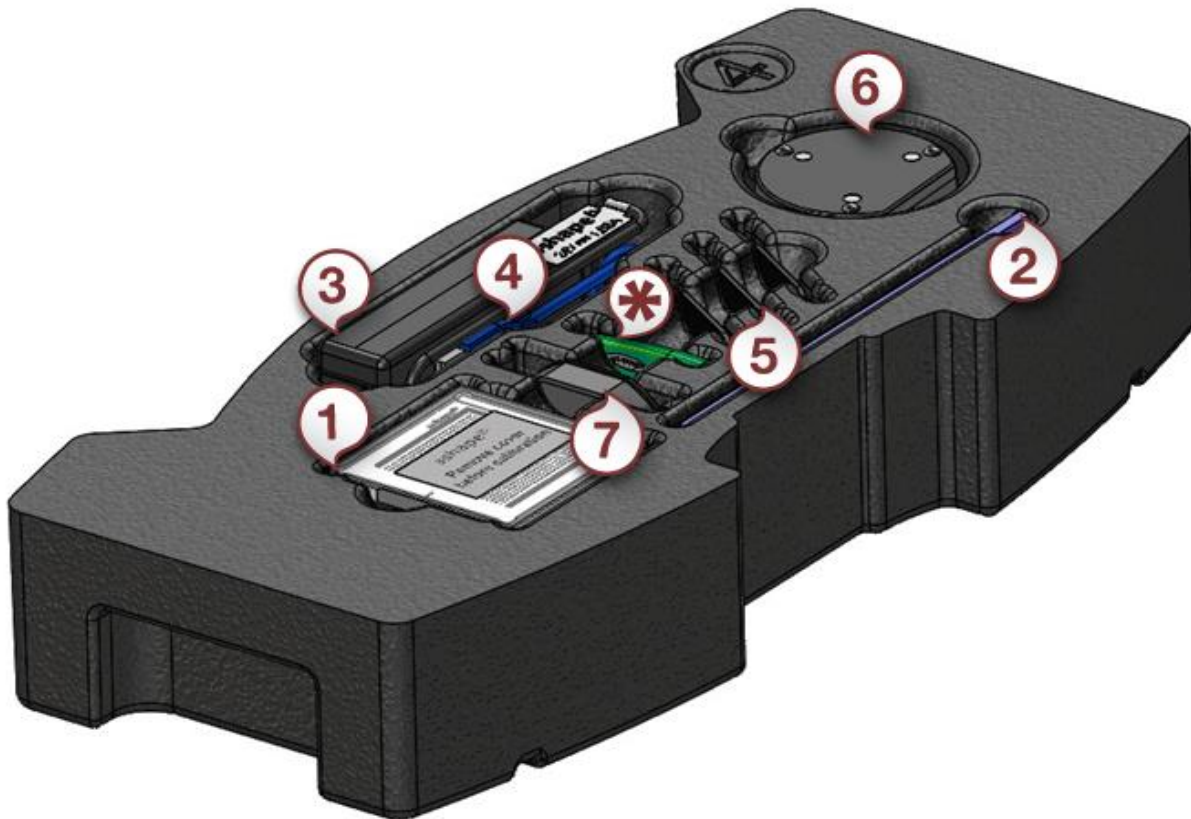
5. Scanner Tools

3Shape Lab Scanners are packed together with all the Scanner Tools needed to initially connect the Scanner to the PC. Special packaging materials made from transport security foam are used to protect the Scanner and Scanner Tools during transportation.



Note! When unpacking, please verify the package contents and contact your 3Shape re-seller's customer support if any part is found missing or defective.

The **Contents** of the box:

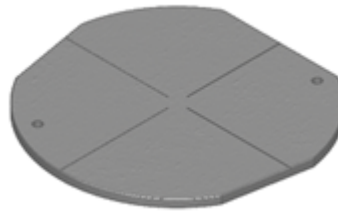


Position # and Description	Quantity
(1) Passive Calibration Object	1
(2) Bostik Blue Clay (Blu Tack)	1
(3) Power Supply	1
(4) USB-2 Cable Type A Black 1.8m	1
(5) Interface Plate	3
(6) Scan Height Adapter	1
(7) Passive Multi-Die Fixture	(1) E3 only
(*) Dongle Green Dinkey Pro USB	*As Required

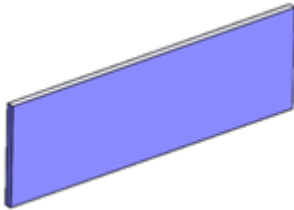
Scanner tools supplied with 3Shape lab scanners: (Not to scale)



Passive Calibration Object



Interface Plate



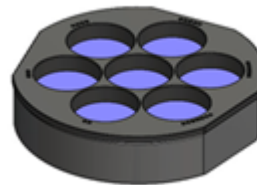
Bostik Blue Clay (Blu Tack)



Scan Height Adapter



Power Supply



Passive Multi-Die Fixture

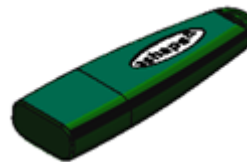
This tool provided only with E3 Scanners or sold separately.

Dongle Green Dinkey Pro USB

*Dongle type and delivery are dependent on the specifications of your order. Please contact your reseller if you have any questions.



USB-2 Cable Type A Black 1.8m



Optional scanner tools available for 3Shape lab scanners

Accuracy Objects

Precision object enabling digital compensation for specific scanner tolerance identity.



Articulator Calibration Object

Used for calibrating the transfer of position from physical articulator to virtual articulator.

Model Fixtures

Mechanical devices enabling model scanning of non-articulated models and impressions.



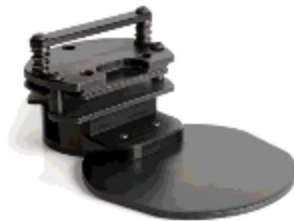
Wax Up Fixture

Used for fixing complete wax up bridges.



Implant Cast Fixture

Used for fixing implant models in the scanner.



Impression Fixture

Used for fixing dental impression trays in the scanner.



Full Denture Fixture

Used for fixing dental impression full arch single and triple tray

Articulated Model Fixtures

Mechanical devices allowing scanning of dental models locked in occlusal state.



Dental 2cast Fixture

Used for fixing the occlusal alignment of upper and lower cast during scanning.



Occlusion Setup Tool

Allows articulation of dental model sets not mounted in the articulator.

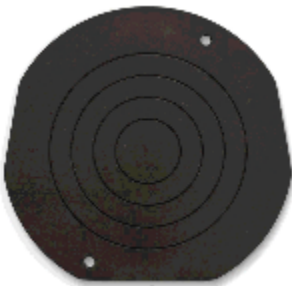


3Shape Articulator Holder

Coupling Platform that allows secure placement and positioning of an articulator containing gypsum-models

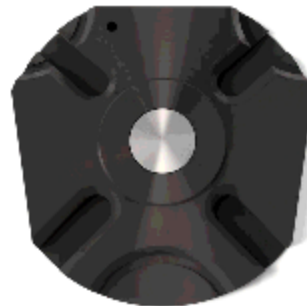
Coupling Elements

Mechanical kinematic bridge elements.



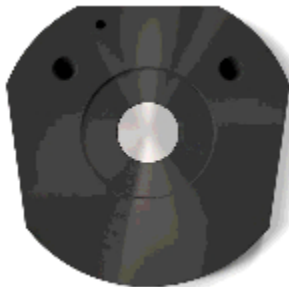
Generic Articulator Transfer Plate

Articulator Transfer Plate for unsupported Articulator systems.



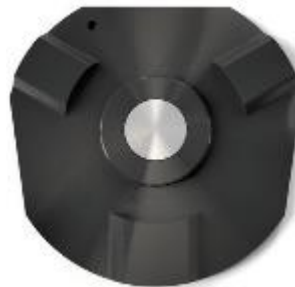
Adesso Artex Articulator Transfer Plate

Supports:
- Baumann Dental, Adesso split® - Artex® Splitex System



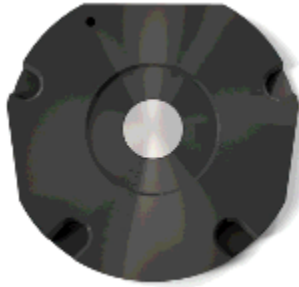
Whip Mix Articulator Transfer Plate

Supports: DENAR Mark 330 (Magnetic Mount. Plates, 300 Series)



SAM Articulator Transfer Plate

Supports: AXIOSPLIT® (MOUNTING PLATE ASP 420)



**KaVo Protar
Articulator
Transfer Plate**

Supports: Mounting
plate with split cast
(0.622.0791)



**Shofu MSMP
Articulator
Transfer Plate**

Supports: Splitcast
Mounting Plate
(Variant S)

3Shape lab scanners are tested, sold and delivered together with an approved PC.

3Shape does not guarantee the functionality of the scanners if:

- third party software is installed on the scanner PC
- third party computer peripherals are installed (e.g. USB flash key, WLAN adapters)
- the software is installed on a different PC



Note! The default Windows user name and password for the 3Shape PC is "scan".



Note! Be sure to change password after initial logon.

Appendices

[Appendix A: System Requirements](#)

[Appendix B: Contact Information](#)

[Appendix C: Warnings and Disclaimers](#)

Appendix A: System Requirements

Item	Minimum Requirements*	Recommended
Operating System	Windows 8.1 Home (64-bit) Windows 10 Home (64-bit)	Windows 8.1 Pro (64-bit) Windows 10 Pro (64-bit)
Memory (RAM)	16GB	32GB (64GB**)
Video Card	2GB NVIDIA GeForce or NVIDIA Quadro DirectX 10 or later***	4GB NVIDIA GeForce or NVIDIA Quadro DirectX 10 or later
HDD/SSD	250GB	500GB SSD (1TB****)
Available HDD/SSD Space	Minimum of 20GB of free disk space	
Processor	Intel Core i5	Intel Core i7 or equivalent
3D Mouse	-	3DConnexion SpaceMouse™ Pro
Monitor Resolution	1920 x 1080 1920 x 1200	
Network	Internet connection	
USB Ports	USB 2.0 for 3Shape desktop scanner	
Mouse	Mouse with wheel button support	
* If you are planning to use this system with other 3Shape applications, please check their respective system requirements in the corresponding user manuals.		
** For simultaneous scanning and modeling of large cases, we recommend 64GB RAM.		
*** For scanning, the minimum requirement is 2GB.		
**** We recommend 1TB SSD if used as a stand-alone system or a server with the order folder.		



Note! 3Shape Lab Scanners must be connected to a USB 2.0 port and it should be the only device in that USB host controller unless otherwise recommended by 3Shape for specific PCs, 3Shape lab scanners do not work on a shared USB connection. It is recommended to connect keyboard, mouse, dongle and other peripherals to a free USB 3.0 port when available.

Appendix B: Contact Information

3Shape Europe	3Shape North America	3Shape (APAC) Co., Ltd	3Shape South America
<p>3Shape Headquarters Europe, Middle East & Africa Sales Holmens Kanal 7 1060 Copenhagen K Denmark</p> <p>P: +45 70 27 26 20</p>	<p>North American Sales Somerset Hills Corporate Center 10 Independence Boulevard, Suite 150 Warren, New Jersey 07059, USA</p> <p>P: +1 908 867 0144</p>	<p>3Shape, Asia Room 906, Tower A of Eton Place No. 69, Dongfang Road 200120 Shanghai, China</p> <p>P: +86 21 5835 2281</p>	<p>3Shape, Colombia Carrera 18 No. 4N - 60 Armenia Colombia</p> <p>P: +57 1 508 84 86</p>
<p>3Shape Germany GmbH Volmerswerther Straße 41 40221 Düsseldorf Germany</p> <p>P: +49 211 33 67 20 10</p>		<p>3Shape, Japan Place Canada 1/F 7-3-37 Akasaka Minato-ku, Tokyo 107-0052 Japan</p> <p>P: +81 3 6894 7475</p>	<p>3Shape, Brazil Av. Das Nações Unidas 12.399, cj.101B 04758.000 São Paulo SP-Brazil</p> <p>P: +57 1 508 84 86</p>
<p>3Shape Italy Srl Via Ripamonti, 137 20141 Milano Italy</p> <p>P: +39 02 57308525</p>		<p>3Shape Australia Pty Ltd Building 1, North Entry, Level 3, Suite E3B 75 O’Riordan street Alexandria 2015 New South Wales Australia</p> <p>P: +61 283 107 020</p>	
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3shape.com - visit our corporate website to learn more about 3Shape, its products and the location of our global offices.

support.3shape.com - visit the support site to download a printable version or request a printed copy of this manual at no additional cost.

Contact your reseller for requests regarding support, customer service, software download or an upgrade.

In case of malfunctioning 3Shape lab scanner, please report to 3Shape at support@3shape.com.

Appendix C: Warnings and Disclaimers



Note! Before operation, please refer to the 3Shape Safety and Setup guide delivered with your Lab Scanner for applicable Warnings, Cautions, Notes, and Hints which are applicable to your 3Shape product.



Note! During operation, please follow all 3Shape Pop-Up Warnings, Cautions, Notes, Hints, and Device Status Lights as they appear while operating your 3Shape lab Scanner System.



Note! The user manual in .pdf format is available for download at www.3shape.com. You can obtain a free printed copy of the user manual within 7 days by contacting 3Shape support.



Note! - Disclaimer! - The device must only be used as intended. Other use or modification to the device which may impair the safety of operators or third parties is strictly prohibited and 3Shape will accept no responsibility for any loss, damage or injury caused by such unintended use.



Note! If the lab scanner gets exposed to ESD/EMI, it could enter a 3 minutes recovery state before resuming normal operation.



Note! In case of any serious incident that has occurred in relation to the use of the device, please report the incident to 3Shape at support@3shape.com. You can also report it to the competent authority of the state in which the user and/or patient is established.



Electronic Instructions for Use - indicates that information on product usage is available in an electronic format.