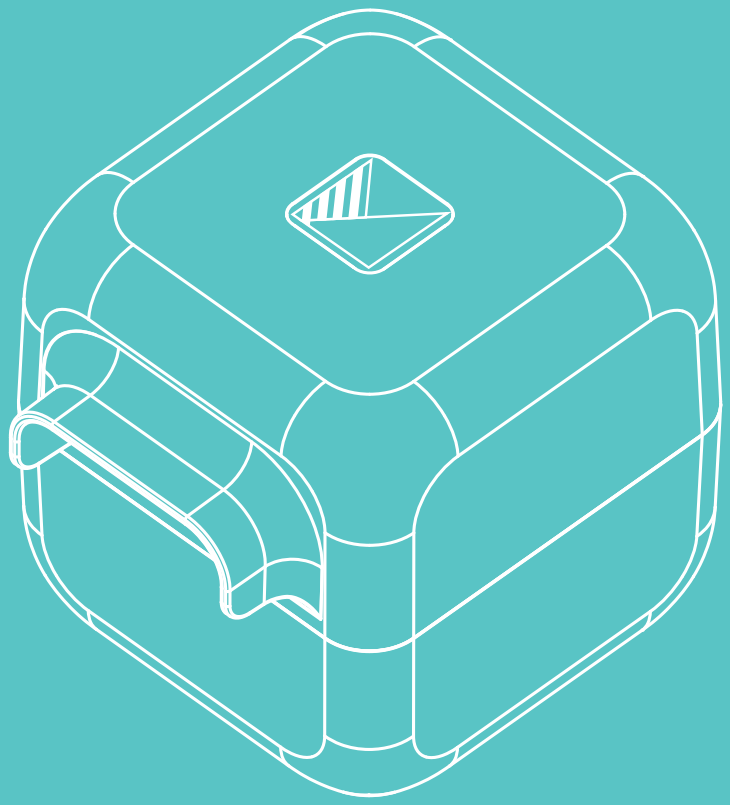
SUPERSEDED

MIMETRIK

Cubit360



Operating Manual

Version - 1.0. 2025

SUPERSEDED

Contents

Contents	01
Package Contents	02
Components	02
Operating System Requirements	03
Specifications	03
Device Summary	04
Installation	05
Indicator Lights	05
Operation - Model Scan	06
Settings	11
Maintenance	12
Safety & Precautions	13
Symbols & Labelling	15
Warranty	16
Certifications & Disposal	17
Other Notices & Copyright	18
Contact Mimetrik	18

Read Manual

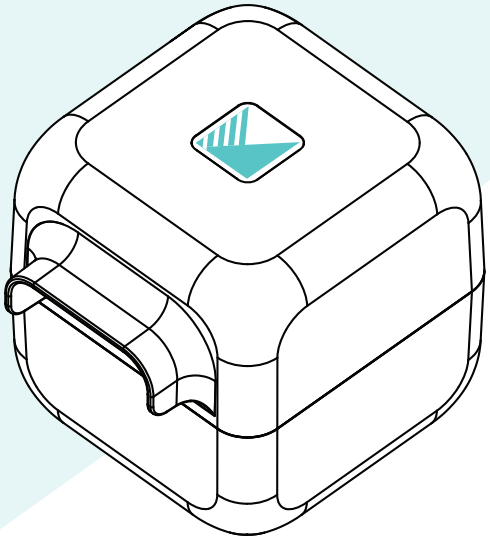
Important instructions and safety warnings appear in this manual.
READ THIS ENTIRE MANUAL BEFORE INSTALLATION AND USE!
PAY ATTENTION TO THE SAFETY WARNINGS ON PAGES 13 and 14, read the manual even if you have installed or used similar products before.

Keep these instructions in a safe place for future reference.

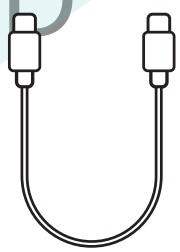
SUPERSEDED

SUPERSEDED

Package Contents



Cubit360 Scanning Unit



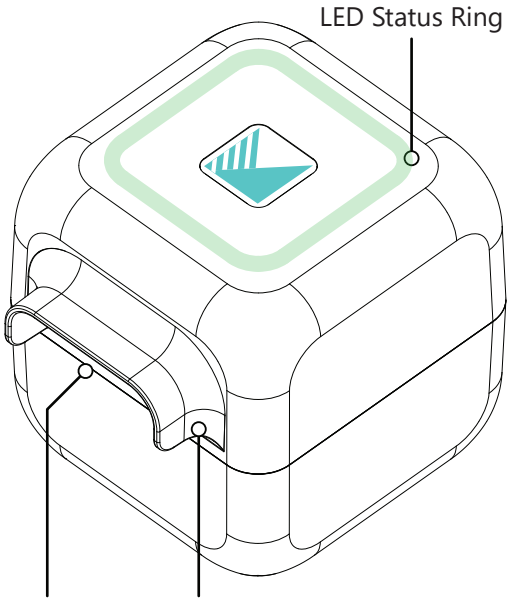
USB-C Cable

Quick Start Guide

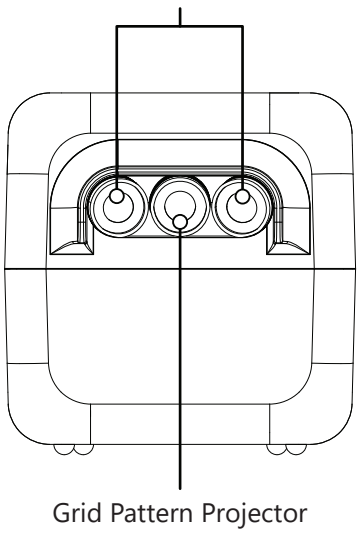
Components

Cubit360 is an optical acquisition unit consisting of two visible light cameras and a static pattern projector mounted in a cubic outer enclosure with an LED Status indicator.

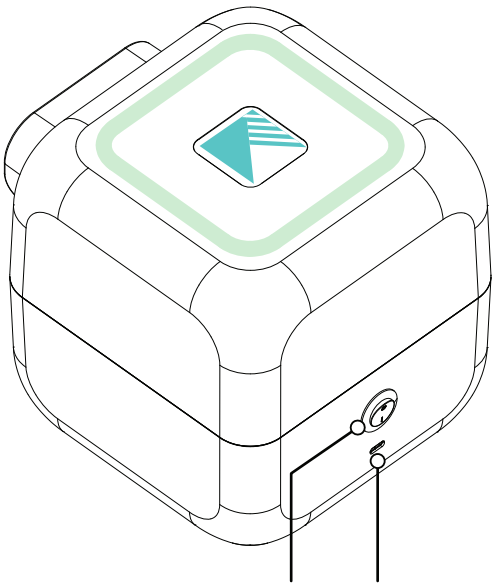
Front Quarter View



Front



Rear Quarter View



For further device information, go to:
www.mimetrik.tech/cubit360

For software updates and instructions, go to:
https://cubitupdates.mimetrik.tech/Downloads/

SUPERSEDED

SUPERSEDED

Operating System Requirements

Cubit360 software is required to use the system. Host computer must meet the minimum specifications below:

Component	Minimum Requirement
Hardware	Desktop Windows computer with monitor, keyboard and mouse
Supported OS	Windows 11 (24Hz or more recent) *Windows on Mac via Bootcamp is not recommended as lack of graphics card compatibility severely impacts performance.*
Processor (CPU)	IntelCore i9 Gen12 or newer
Memory (RAM)	128 GB or greater
Storage	500GB storage is required
Graphics	NVIDIA 4080 desktop GPU or above (at least 16GB) or equivalent Latest NVIDIA device driver Display resolution: 2560x1440
USB Ports	USB 3.2 Gen 2x2 Type-C
USB Cable	1x USB Type-C Male Speed: 10+ Gbps Voltage: >= 5V *Use only the supplied USB cable, alternatives may seriously impede performance.*
Other	Internet connection is required for software updates Administrator prlvileges required for installation The Cubit360 is not compatible with virtualisation environments.

Cubit360 Specifications

Item	Specification
Dimensions (Scanner)	170 x 170 x 200 mm (Cube shaped, Visor protrudes 30 mm)
Weight	1.4 kg
Protection Class	Class I
Protection	Ordinary equipment (no protection against ingress of water) Closed unit, minimises ingress of dust but not water
Duration of Operation	Intended for continuous operation in normal laboratory use
Type of System	Desktop. Intended for use in a fixed dedicated area Not intended for portable use
Port	1 x USB 3.2 Gen 2x2 Type-C
Voltage	5V
Area of Use	For indoor use only. Working area must be stable, clean and dry. Avoid exposure to extremely bright light during use.
Operating Ranges (Environment)	Temperature: 18°C Humidity: 30-75% (non-condensing) Altitude: Up to 2000m

SUPERSEDED

SUPERSEDED

Device Summary

Description:

Cubit360 is a 3D scanner intended for 3D scanning dental impressions and models.

It is a non-invasive medical device.

The Cubit360 3D scanning system is connected to and operated using a computer and proprietary Mimetrik software.

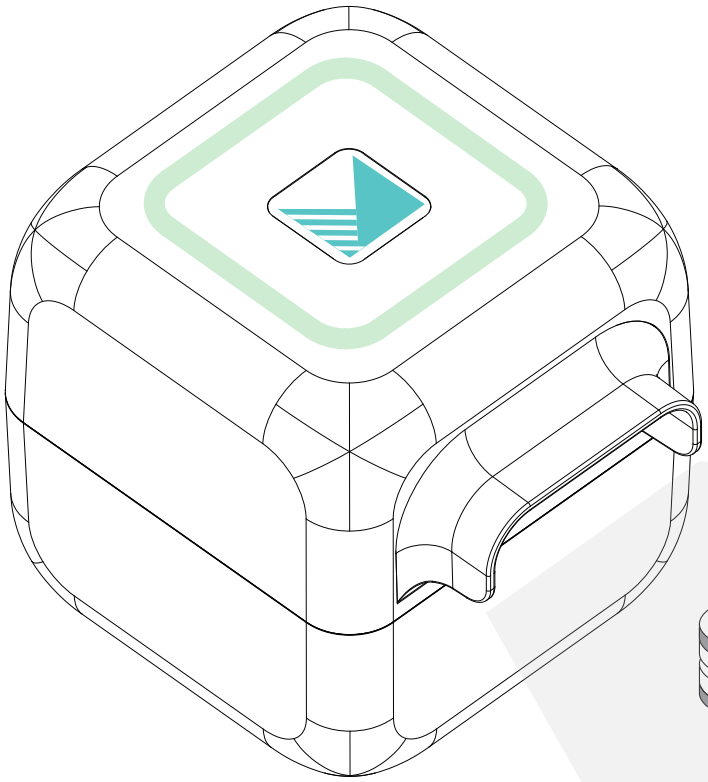
Neither the scanning unit nor the operating software can be used in isolation.

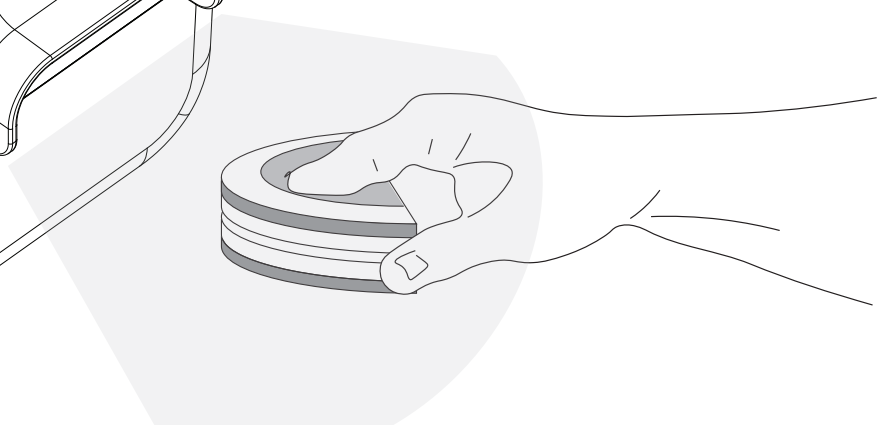
Use cases:

- Cubit360 is designed for use by dental professionals in a dental laboratory or dental practice setting.
- Cubit360 is intended for scanning dental impressions, models and prostheses.
- Cubit360 must **not** be used in any way to scan or interact directly with patients.
- The digital 3D models generated by Cubit360 may be used for archival use, to design dental prosthetics and appliances, for quality control and more."

Summary of use:

1. The user holds the item to be scanned approximately 5cm in front of the Cubit360 scanner.
2. The item to be scanned is then moved by hand to present all faces to the cameras.
3. Mimetrik proprietary software displays the scan in real time.
4. Colours denote whether the scanned item is at the optimum distance allowing the user to adjust for the best results. Red indicates close proximity to the scanner, green indicates ideal position, and blue indicates the most remote region of the active scanning area.
5. If scan tracking fails, move back to a previously scanned region to regain tracking.
6. Upon completion, the user can check the coverage of the scan in real-time before processing, allowing for additional scan data to be added if necessary. Red regions indicate locations that would benefit from additional scan data.
7. Once the scan is complete, the user can move to the next scan by clicking the '**Lower Jaw**' button, or if only one scan is required, '**Confirm Scan**', which triggers data processing.
8. If scanning articulated models: Once both models have been scanned, a brief scan of the models in stable occlusion on the "bite scan" screen will articulate the models during processing.





SUPERSEDED

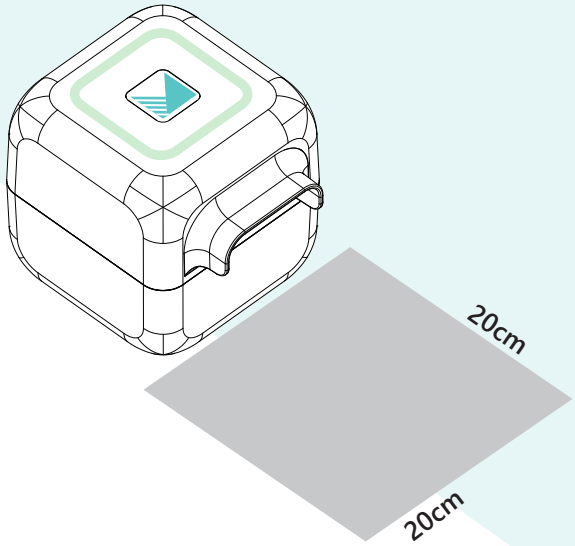
SUPERSEDED

Installation

Installation Environment

For indoor desktop use on a stable level surface:

- Area must be dry.
- Area should be clean.
- Allow a working footprint of at least 20 x 20 cm.
- Operator must be able to manipulate items for scanning freely in front of the Cubit360 during use.
- There are no special requirements for ventilation.
- Please see the safety instructions in this manual.



Lighting:

- Area should be well lit by diffused ambient light (standard ceiling lights are ideal).
- Direct bright light onto the Cubit360 will adversely affect scanning. Avoid bright sunlight or lamps shone directly onto the unit or the item being scanned.

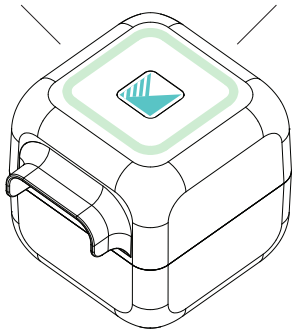
Installation Steps:

1. Set out a clean, stable & level surface.
2. Place the Cubit360 in the desired position.
3. Connect the USB cable from the Cubit360 to a high-speed USB 3.2 port on the computer. (Please note, using an incorrectly specified USB port may prevent the system from operating correctly.)
4. Switch on the Cubit360 using the power switch on the back of the device.
5. Double click to start the installer.
6. Follow the prompts.
7. Restart the computer to complete installation.
8. A shortcut to Cubit360 software will appear on the desktop.

Indicator lights

Indicator lights on the Cubit360 denote state:

State	LED Lights
Plugged in but software not launched.	Slow pulsing white
Initializing software and hardware.	Spinning white
Software and hardware ready and waiting.	Solid green
Scanning.	Solid green
Relocation (trying to pick up scan if tracking is lost).	Pulsing green
Scanning paused (if user has stopped scanning for 30+ seconds).	Slow pulsing green
Post-processing.	Spinning green
Hardware error.	Solid red



SUPERSEDED

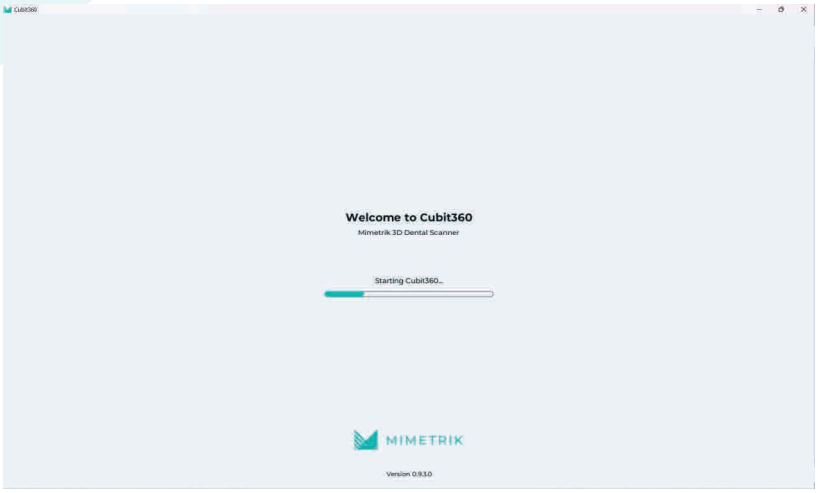
SUPERSEDED

Operation

A. Model Scan

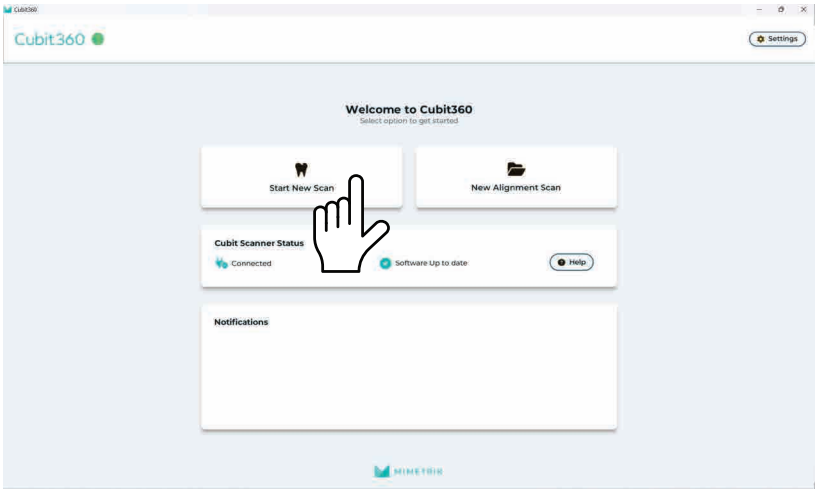
A1. Turn on and initialise.

- Ensure the scanner is switched on using the toggle switch on the back of the device.
- Start the 'Cubit360' software using the shortcut on the desktop.
- The Cubit360 initialises.



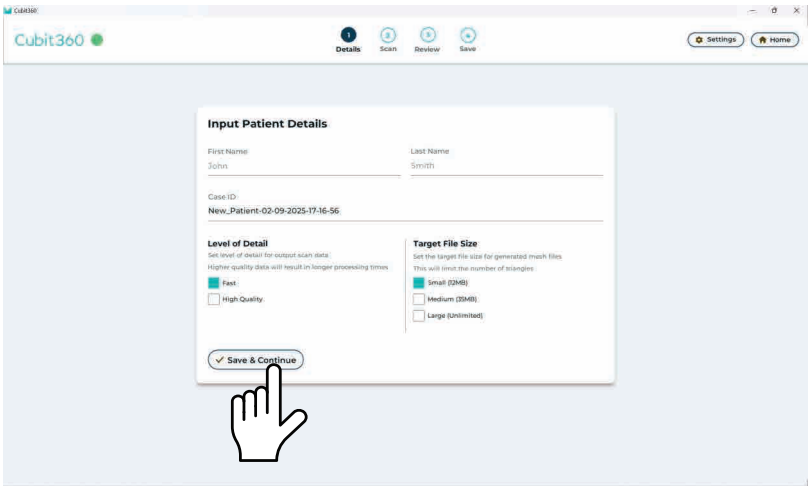
A2. Start new scan.

- Once initialised, the home screen loads.
- Click on **'Start New Scan'**



A3. Enter patient details.

- Enter the patient details in the next screen.
- Click '**Save & Continue**'.
- The scanning window opens, ready for a scan.



SUPERSEDED

SUPERSEDED

Operation

A. Model Scan (continued)

A4. Scan Model.

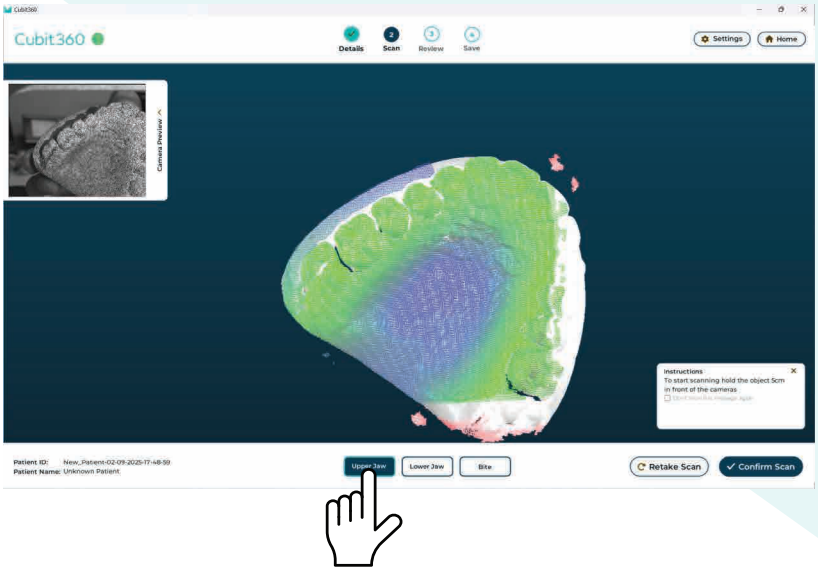
- Indicate whether you are scanning the upper or lower jaw. The software assumes the upper jaw is being scanned first.
- **Hold and move the dental model approximately 5cm in front of the Cubit360's cameras.**
- Colours denote whether the scanned item is at the optimum distance, allowing the user to adjust for the best results.
  - Red indicates close proximity to the scanner, green indicates ideal position, and blue indicates the most remote region of the active scanning area.
  - **Keep the area you wish to scan in the green region for optimal results.**
- When not actively scanning, red indicates an under-scanned area. Ensure all areas of clinical interest are sufficiently scanned (not red) before processing.

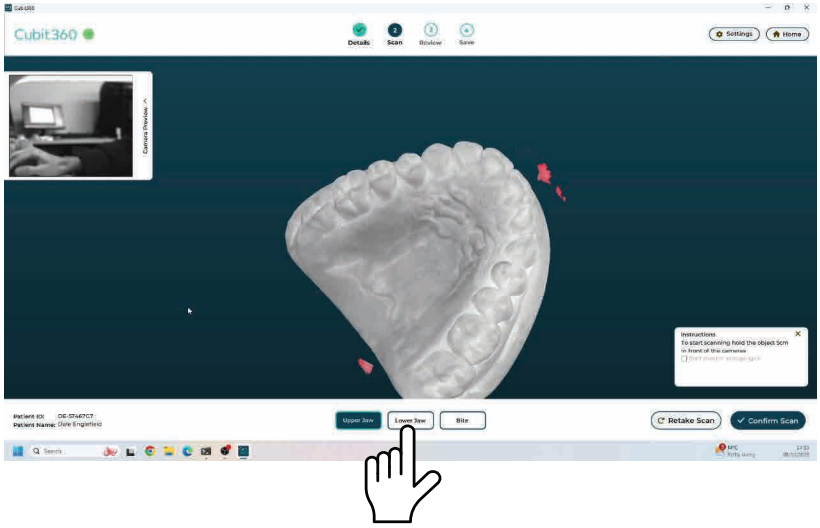
Inspect the scan:

- Hold left mouse button, drag to rotate.
- Hold right mouse button, drag to pan.
- Double-click anywhere to set rotation point. (Double-click outside the model to recentre).
- Use mouse wheel to zoom in and out.
- If unhappy, click '**Retake Scan**'.

If satisfied with the scan, toggle to the upper/lower jaw to scan the opposing model.

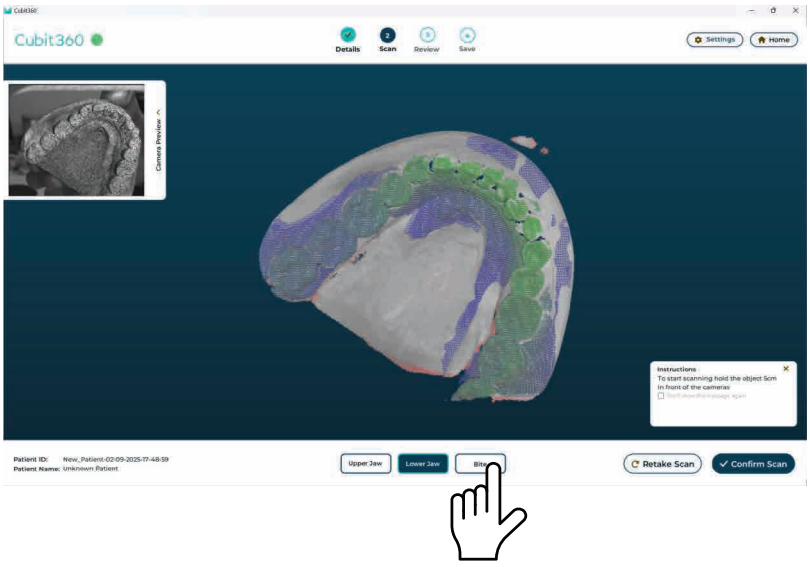
The button on the previous scan greys out with a spinning border to denote that the model is processing in the background (only if using a sufficiently specified desktop computer).





A5. Scan Opposing Model.

- Repeat the process as above.
- Proceed to '**Bite**' (button on bottom bar) if you wish to articulate the models.
- If not, click '**Confirm Scan**'.



SUPERSEDED

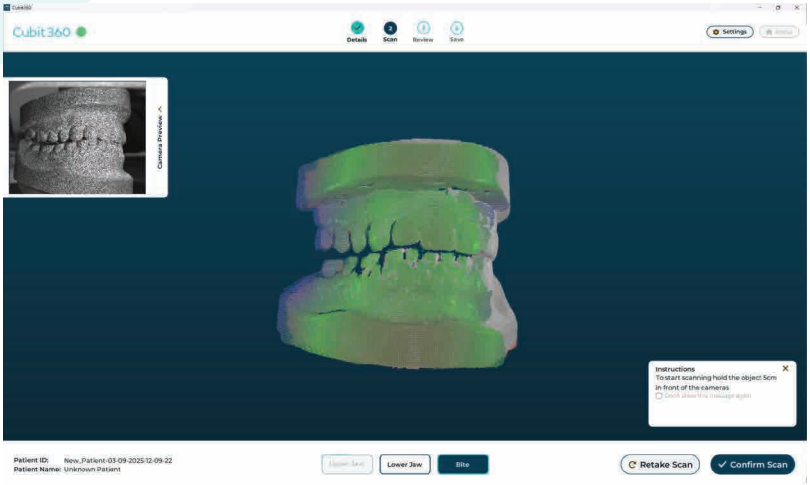
SUPERSEDED

Operation

A. Model Scan (continued)

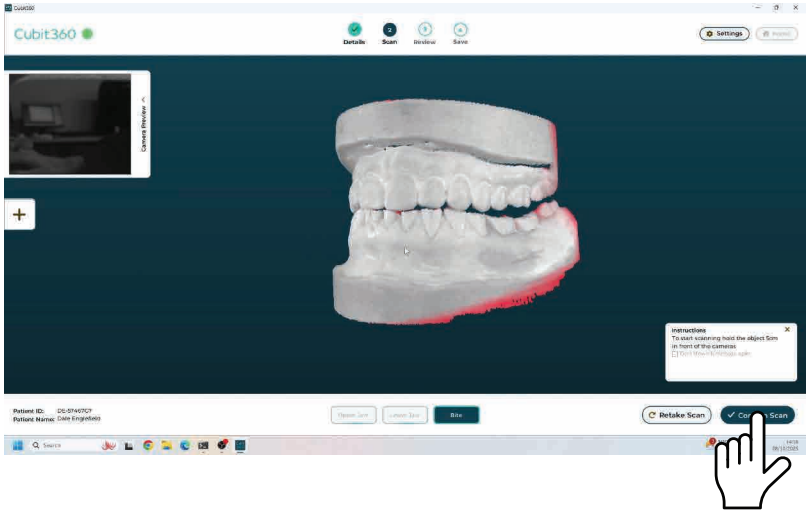
A6. Bite Scan.

- Scan the models held in occlusion in one continuous scan.
- Capturing the entire arch is more likely to produce a successful articulation than a smaller segment scan.



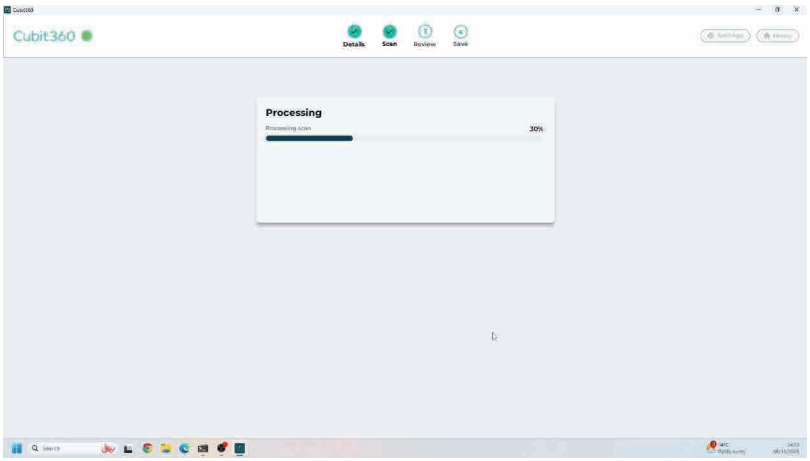
- Check and click '**Retake Scan**' to scan again, if necessary.
- Red denotes areas that were not scanned with enough detail.

- Once satisfied with the scan, click on '**Confirm Scan**'.



A7. Processing.

- The Processing screen appears.
- The software will now process all data captured.
- Please wait.



SUPERSEDED

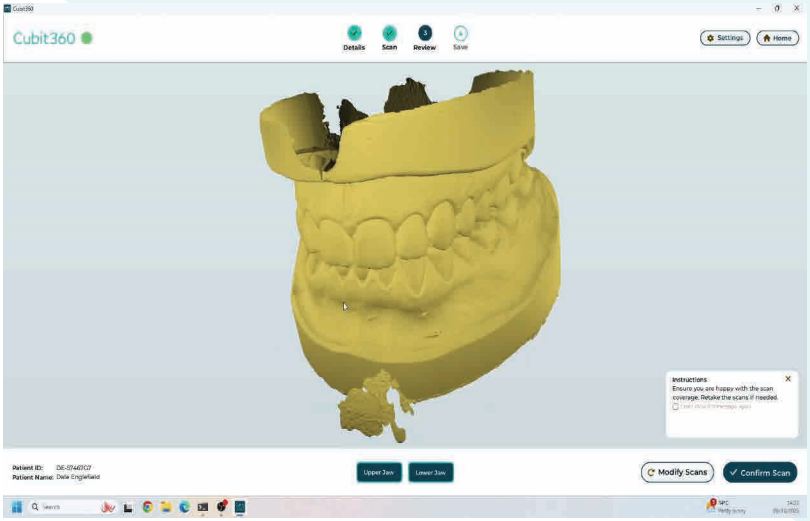
SUPERSEDED

Operation

A. Model Scan (continued)

A8. Review.

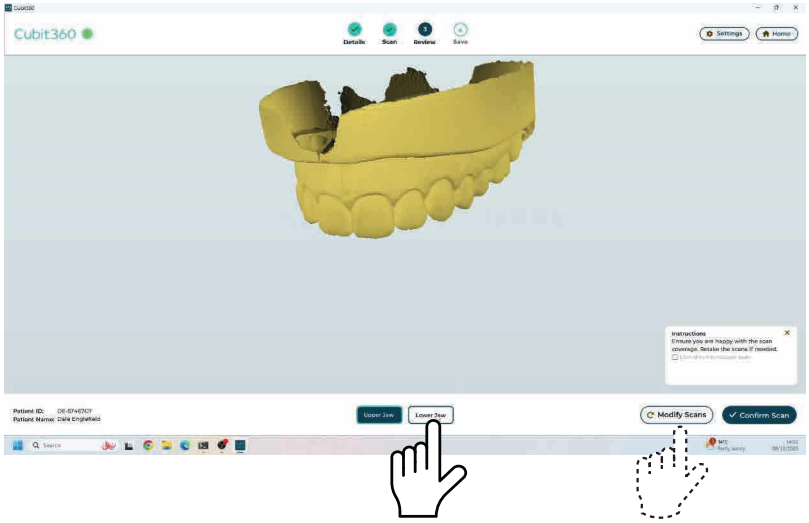
- Once processing is complete, the final scans will be displayed.



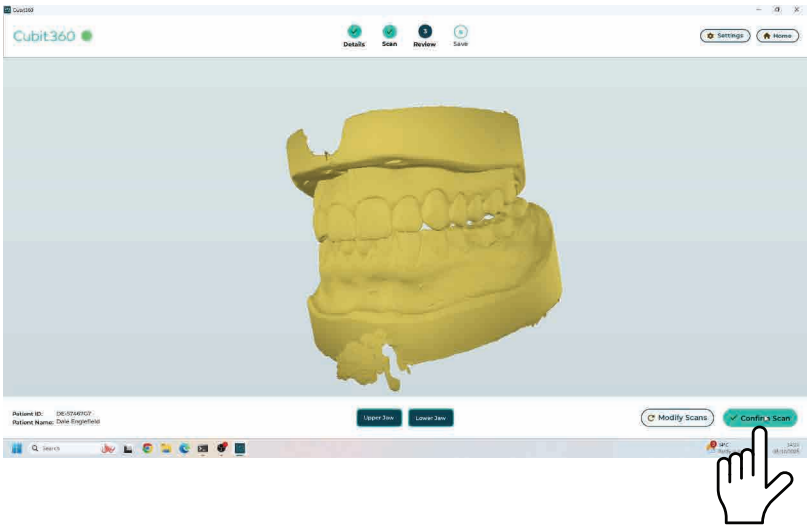
- Toggle visibility of the scans by selecting '**Upper Jaw**' or '**Lower Jaw**' buttons.
- Additional functionalities are displayed in the top left corner window. Using the keyboard, "I" inverts the orientation of the scan, "c" toggles between different display modes.

- **3D navigation:**
  - Left click and drag to rotate.
  - Double click to recentre on point.
  - Double click outside the scan data to recentre the scans.

- Clicking on '**Modify Scans**' reverts back to the scanning screen, where you can choose to append or redo any of the scans.
- *Return to the review screen by clicking 'Confirm Scan'.*



- Once satisfied with the scans, click on '**Confirm Scan**' to export the scan data.



SUPERSEDED

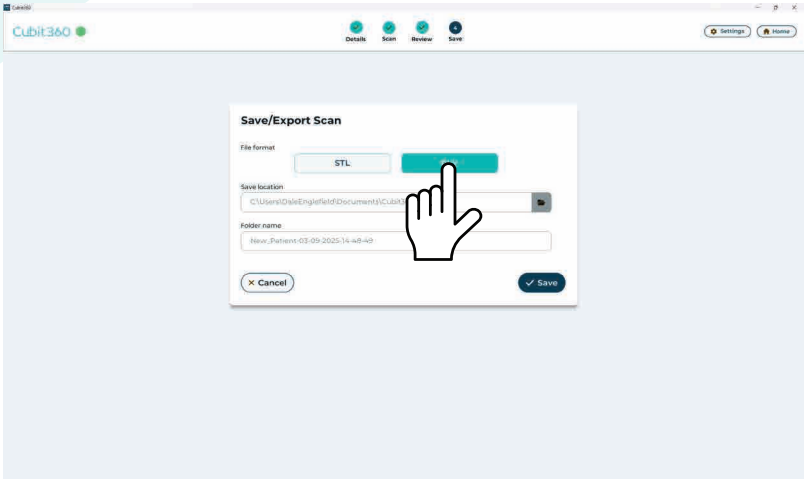
SUPERSEDED

Operation

A. Model Scan (continued)

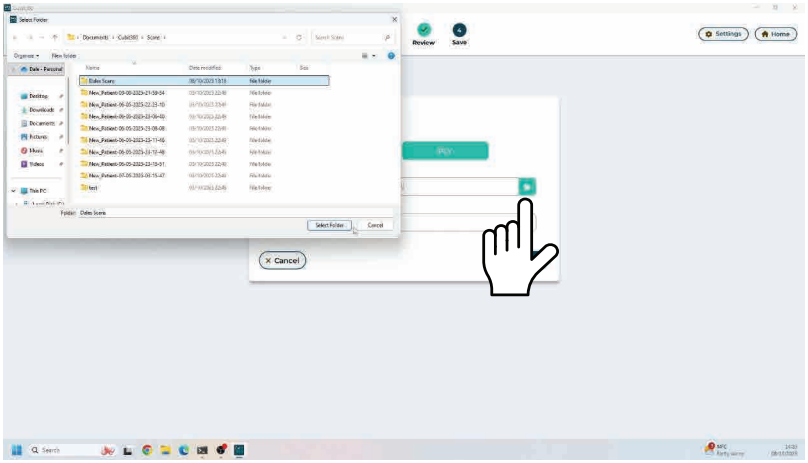
A9. Save processed scan.

- Select the required file format.
- **Please note:** PLY files retain colour information, whereas STL files do not.

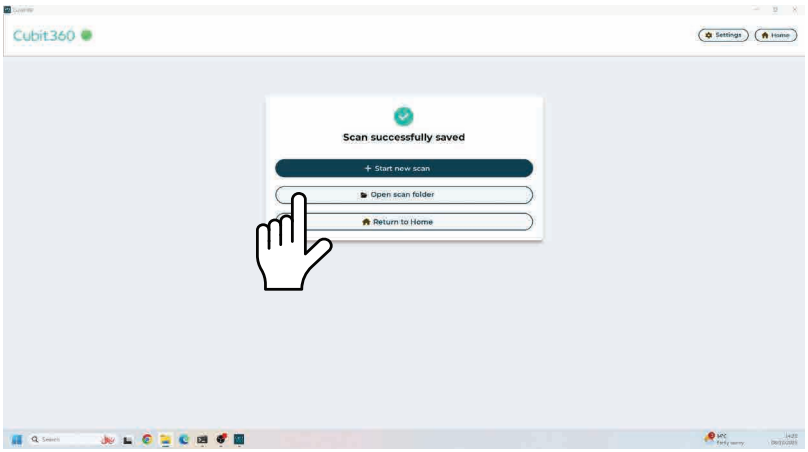


- Click on the **folder icon** to select the file saving location.
- By default, the Case ID is used as the folder name. This can be modified by entering a different Folder name.

- Click on '**Save**'



- A confirmation screen appears confirming whether the scan data was successfully saved.
- Select '**Open Scan Folder**' to inspect the saved files, or select '**Start New Scan**', '**Return to Home**' (or close the programme), as required.



SUPERSEDED

SUPERSEDED

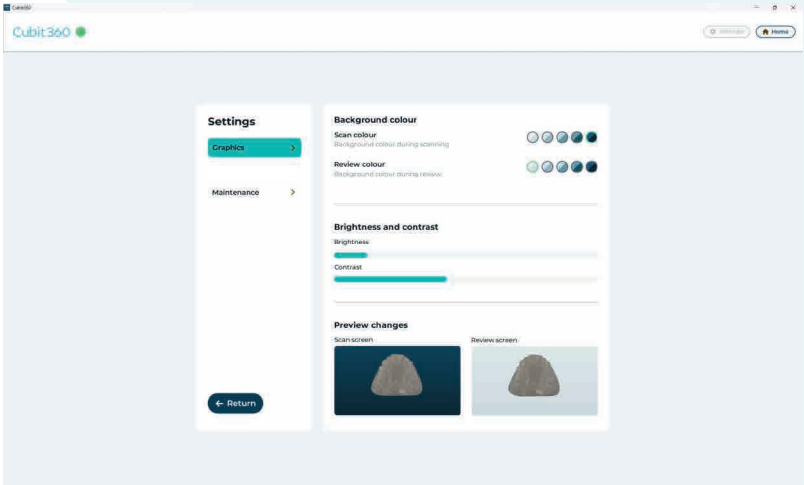
Settings

Access settings using the '**Settings**' button on the Home Screen (top right).
Return to the Home Screen using the '**Home**' button (appears top right).

S1. Graphics Settings.

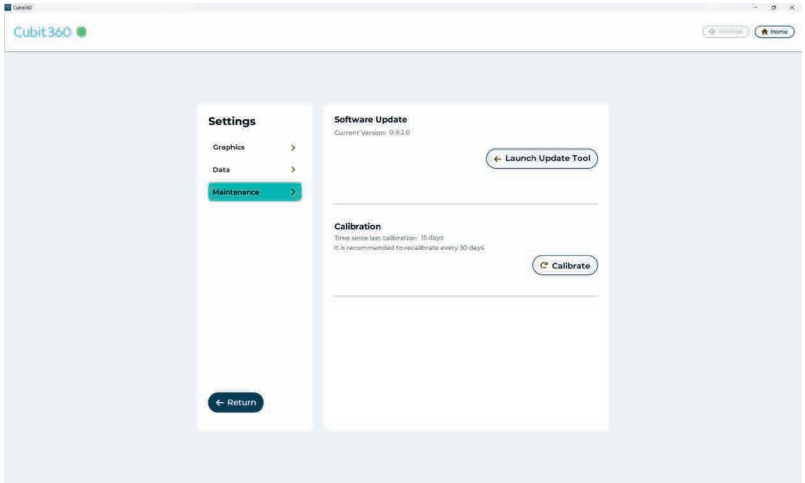
- **Scan Colour:** Select the background colour during scanning. Does not affect the colour of the saved scan.
- **Review Colour:** Select the background colour during review. Does not affect the colour of the saved scan.
- **Brightness and Contrast:** Changes the appearance of the screen. Has no effect on scans.

Settings are saved upon selection.



S2. Maintenance Settings.

- **Software Update:** Click '**Launch Update Tool**' to check for updates and to install the latest software. (A notification also appears on the Home Screen if an update is available).
- **Calibration:** Calibration is conducted at the factory before shipping. ***If you believe recalibration is required, please contact Mimetrik, do not attempt calibration yourself.***



SUPERSEDED

SUPERSEDED

Maintenance

To ensure optimal performance of the Cubit360 and general hygiene, please clean the **external surfaces** of the device as needed - per conditions in your working environment and frequency of use.

Housing:

Avoid contact with optical lenses!

- **Prepare a cleaning cloth** - Use a soft, lint-free, dry microfibre cloth. Check the cloth before use to ensure there is no grit or dirt that might damage the Cubit360.
- **Gently wipe the housing** - Gently wipe all exposed surfaces of the Cubit360 housing to remove dust, smudges, or other particles.
- **To remove stubborn dirt** - If residues are more difficult to remove, **slightly** dampen the cloth with water or a mild non-abrasive detergent suitable for computer equipment. Take care not to oversaturate the cloth.
- ***Do not spray cleaning solutions directly onto the scanner. Always apply the solution to the cloth first.***
- Clean the working environment and surfaces under and around the Cubit360 **regularly**, to avoid the buildup of dust and dirt around the unit.

Lens Cleaning:

Avoid contact with optical lenses! Lenses are very sensitive and do not normally require cleaning if due caution is exercised.

- The 3D camera system is a very sensitive optical device and must be handled with utmost care. It is NOT normally necessary to clean the optical surfaces as these are located inside the device.
- Clean optical surfaces with **extreme caution** ONLY if cleaning is required **as an exception**, and as follows:
  - Attempt to blow away the dust. Use a photographic air blower for this.
  - If further cleaning is required, clean optical surfaces using fresh lint-free wipes intended for lens/optical cleaning.
  - Use very light up and down passes of the cloth over the lens - Do NOT use a swirling or circular action.
  - Do not use general purpose wipes to clean the lenses.
  - Do not put excessive pressure on the lenses as this could affect device performance.

SUPERSEDED

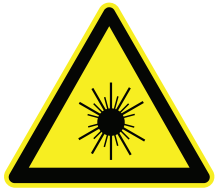
SUPERSEDED

Safety & Precautions

General Cautions:

- The device should only be used by **trained professionals.**
- The device is not intended to scan teeth in situ, people or animals.
- The device should be used on a stable, level work surface to prevent movement during use that could result in unintentional exposure of the user and others to the projector light.
- Avoid using the device in environments where light from the device projector can be reflected towards people.
- The device should be used in a dust-free environment with adequate ventilation.
- The device is for indoor use only.
- Ensure the device and accessories are free from damage before use.
- Ensure cables are connected correctly before switching the device on.
- Ensure cables are managed so they do not present a tripping hazard or a risk of pulling the device off the work surface.
- Do not submerge or expose the device to liquids.
- Do not place objects or liquid on top of the device.
- The device is not intended to be portable.
- Use only the USB-C cables that are supplied with the device. Do not connect to other leads or voltages above the rating stated in Specifications.

During Use (LED Caution):



This device contains an LED projector, classified as Risk Group 0. This is considered safe. Nevertheless, continual exposure to bright light can be harmful to eyes. The following precautions are recommended:

- Do not look directly into the projector while the device is in use.
- Do not point the device projector towards other people.
- Ensure light from the device projector is not reflected towards other people.
- Do not tilt the device during use as this may direct light from the projector towards the user or other people.
- Ensure the device is placed on a stable, level worksurface during use.
- Switch off the device if the device is to be left unattended or not used for a long time.
- Do not allow unauthorised persons to use or have access to the device.

SUPERSEDED

SUPERSEDED

Safety & Precautions
Continued

During Use (General Precautions):

- Switch off the device if the device is to be left unattended or not used for a long time.
- Do not disconnect the device during use.
- Do not disconnect the device during software updates.
- Do not disassemble, modify or attempt to open the device. Opening the device could damage the device and possibly result in electric shock or injury.
- All repairs must be performed by Mimetrik or a Mimetrik approved repair centre. If you suspect that there is an issue with the device, stop using the device and contact your country representative.
- Continuous or repeated transportation of the device may result in calibration drift.
- Avoid applying scan powder to objects near the device. If scan powder is deposited on the lens, follow the instructions for cleaning provided in the maintenance section.
- If you notice the device becomes excessively hot, begins to smoke or produces fumes, immediately stop using the device and notify Mimetrik. (The device will get moderately warm during normal use).

System:

- Use of accessories that do not meet the requirements stated in these instructions could impact device performance.
- Use of the device with a desktop that does not meet the requirements stated in these instructions could impact device performance.
- Desktop systems used with this device should have the latest security updates installed.

Storage & Transport:

- Please store in a safe place to avoid breakage or damage.
- Exercise caution when moving the device.
- Temperature: 0°C to 45°C.
- Humidity 20-80% (non-condensing).

Incidents:

- The dental professional remains responsible for determining if the 3D model created by the device is suitable for further use.
- If a serious incident has occurred in relation to the device it should be reported to Mimetrik using the contact details provided in this instruction manual and to the national competent authority where the user is established.

SUPERSEDED

SUPERSEDED

Safety & Precautions
Continued

Safety and Electromagnetic Compatibility (EMC):

- This device has been tested and verified to meet all applicable safety and performance standards for medical electrical equipment, including IEC 60601 series requirements. It is safe for its intended use when operated according to these instructions.
- The device also complies with electromagnetic compatibility requirements of IEC 60601-1-2. To ensure proper operation:
  - Do not use the device near strong electromagnetic sources (e.g., mobile phones, RF transmitters).
  - Install and operate the device as described in these instructions.
  - If interference is suspected, increase the distance between the device and the source or switch off the source.

Symbols & Labelling

Symbol	Meaning	Symbol	Meaning
	Indicates the medical device manufacturer.		Warning: Optical radiation.
REF	Reference number/ catalogue number.	UDI	Unique Device Identifier.
EC REP	Indicates the authorised representative in the European Community / European Union.	MD	Medical Device.
SN	Device serial number.	UK CA	UK Conformity Assessed mark.
	Date of manufacture.	CE	The CE mark, which stands for "Conformité Européenne" (European Conformity) indicates that a product conforms to health, safety, and environmental protection standards within the European Economic Area (EEA).
	Consult instructions for use.		The **crossed-out wheeled bin symbol** indicates that the product must be disposed of separately from household waste. This equipment is subject to the European WEEE directive 2012/19/EU.
	For indoor use only.		DC voltage sign.
	Caution.		

SUPERSEDED

SUPERSEDED

Warranty

Mimetrik **guarantees and warrants** the Covered Product to be free of all defects in material and workmanship for **12 months** starting from the date of documented initial device installation.

The Standard Warranty extends to the original buyer within the initial standard warranty period. **Within the period of this warranty, Mimetrik will repair or replace, free of charge; any part proving defective in material, conformity or workmanship provided that:**

- Mimetrik is promptly notified of the problem using **support@mimetrik.tech**.
- The Product has not been altered in any way or subjected to damage, misuse, abuse, repair or alteration by a person other than a person authorised by Mimetrik.
- The Covered Product is returned to Mimetrik.
- Mimetrik is given the right – at our discretion – to remove the Covered Product from the customer's premises and test at our manufacturing site before confirming a full warrantied replacement is applicable.

All warranty repairs and service must be performed by an authorised Mimetrik technician, or at an authorised Mimetrik service facility. The decision to repair or replace any part is solely at the discretion of Mimetrik.

Standard Warranty Exclusions
Warranties are non-transferable and are valid from the first installation of a new device by Mimetrik or a Mimetrik authorised distributor.

This warranty does NOT apply to the following or any costs, repairs, or services thereof:

- Service calls to correct the installation of the Covered Product, or to explain usage of the Product to the buyer or end-user.
- Damage caused due to installation by a person other than a person authorised by Mimetrik.
- Repairs necessitated by the buyer or end-user using the Covered Product in any way other than as intended and/or using the Product in any way that is expressly prohibited in Mimetrik product manuals and/or literature and/or in safety warnings and instructions.
- Improper use of the Covered Product not following Mimetrik manuals and literature or damage reasonably considered to be through the negligence of the user or due to modification of the Covered Product by the user or due to not following the cleaning and other maintenance instructions given by Mimetrik.
- Defects due to the use of spare parts or accessories that are not original Mimetrik products or products expressly specified by Mimetrik to be compatible or that have been tampered with, modified, or repaired by the client, user or any other person who has not been previously authorised by the manufacturer.
- Damage resulting from misuse, abuse, accidents, alterations, or improper installation.
- Acts of nature and/or events and circumstances beyond Mimetrik's control.
- Normal wear and tear, including, but not limited to, minor discoloration and scratches.
- Damage and loss during transport of the Covered Product to and from the buyer or end-user. Transport must be separately covered by insurance at the customer's cost, if necessary.
- Consumables, including, but not limited to, lens caps and USB cables.
- Injury to a person.

In addition to the above grounds for limitation of liability, the manufacturer shall not be held responsible for any consequences derived from use of the product in violation of health and safety regulations or any other regulations, and:

- The warranty is voided if damages are the result of improper use, such as using the Covered Product outside of the conditions stated in these instructions, or as a result of accidental damage, such as dropping the Product.
- The user/health professional is solely responsible for the application and the intended use of the Product and for the use of scans and 3D models created by the device.
- Mimetrik will not accept any responsibility for any consequences arising from the use of the scans and 3D models created by the device.
- Any attempt to open the device or service it by the buyer or end user may cause damage to the device or lead to personal injury and will void the warranty with immediate effect.

SUPERSEDED

SUPERSEDED

Certifications & Disposal

Mimetrik declares that the device, Cubit360 bearing the UKCA marking, complies with:

- UK Medical Device Regulation Regulations (SI 2002 No. 618), as amended.
- Electrical and Electronic Equipment Regulations 2013 (SI 2013 No. 3113), as amended.
- Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment Regulations 2012 (S.I. 2012/3032), as amended.
- UK Registration, Evaluation, Authorisation and Restriction of Chemicals (UK REACH) Regulation.

Mimetrik declares that the device, Cubit360 bearing the CE marking, complies with the following European Regulation and Directives with amendments and their relevant transposition into national laws of the member states into which we place the device:

- 2017/745/EU Medical Device Regulation.
- 2011/65/EU Restriction of Hazardous Substances (RoHS) Directive.
- 1907/2006/EC Registration, Evaluation, Authorization and Restriction of Chemicals (REA CH) Regulation.
- 2012/19/EU Waste Electrical and Electronic Equipment (WEEE) Directive.

This device is subject to the European Directive 2012/19/EU (WEEE) and the laws applicable in your country for environmentally responsible recycling / disposal.

Do not dispose of the device in household or general waste.

To prevent potential harm to the environment and human health from uncontrolled waste disposal, this device must be collected separately and disposed of at designated collection points for the recycling of electrical and electronic equipment (EEE). This product contains components that include substances of very high concern (SVHC) as defined under the EU REACH Regulation (EC) No. 1907/2006. These substances are securely enclosed within the device components and are not released during normal use. Contact your local waste management authority or the manufacturer for further guidance on proper disposal..

SUPERSEDED

SUPERSEDED

Other Notices & Copyright

Trademarks

All product and company names mentioned in this manual are the trademarks or registered trademarks of Mimetrik Solutions Ltd or their respective owners.

Intellectual Property

Mimetrik Solutions Ltd is the sole owner of the content and copyright of this and all other Mimetrik instruction and product manuals and literature. This and all other Mimetrik instruction and product manuals and their content are protected by copyright law.

Unauthorized reproduction, distribution, or use of any part of this manual is prohibited.

Mimetrik product designs, branding and technologies belong to Mimetrik Solutions Ltd. All intellectual property rights are reserved.

Disclaimer

The information in all Mimetrik literature and manuals is provided "as is" without any warranties, expressed or implied, including but not limited to the implied warranties of merchantability and fitness for a particular purpose.

The manufacturer, distributor, and sellers shall not be liable for any indirect, special, incidental, or consequential damages resulting from the use of this product.

It is impossible to cover every aspect of devices, safety, scanning, 3D modelling or applications in product manuals. The literature provided is not comprehensive and Mimetrik accepts no responsibility for errors or omissions or for any consequences arising.

Users are responsible for their own methods of use, risk assessments and safety.

For further information and advice on the use of your machine, please see our website at **www.mimetrik.tech** or contact Mimetrik.

Contact Mimetrik

Mimetrik Solutions Limited
Nexus,
Discovery Way,
Leeds, LS2 3AA.
United Kingdom

Email: support@mimetrik.tech

Printed copy of Manual

This device is supplied with electronic instructions for use (eIFU).

A paper copy of these instructions is available upon request, free of charge. To request a paper copy, please contact Mimetrik.

SUPERSEDED

SUPERSEDED

MIMETRIK

www.mimetrik.tech

Copyright

Copyright © 2025 Mimetrik Solutions Ltd.

This manual is protected under international copyright laws.

No part of this manual may be reproduced, distributed, translated, or transmitted in any form or by any means, electronic or mechanical, including photocopying, recording, or storing in any information storage and retrieval system.

Trademarks

Mimetrik Cubit360 and the Mimetrik logo are trademarks of Mimetrik Solutions Ltd.

All other trademarks and copyrights mentioned here are the property of their respective owners.

Manual Version: Version 1. Date of issue: 05/12/2025. CUBIT360.