Huvítz

# HUVITZ Integrated Image Server HIIS-1

**User Manual** 

_	HUVITZ WAR WHEN HARMAN	
		Login to your account
		Password C REMEMBER ME

#### Precautions

This product may malfunction due to the electromagnetic wave, generated from mobile phone, two-way radio, wireless calibration machine. Keep it away from device that affects this product.

This user manual's contents were examined carefully in detail, and we believe that they are accurate in overall. However, Huvitz does not assume any responsibility for any latent mistake or omission that results from the use of information included in this user manual.

Huvitz has the right to modify this product or product specifications any time, without special notification, and this modification may not be renewed in this document.

Huvitz does not guarantee any responsibilities for abnormal symptoms causing from the installation of S/W not related to the equipment

Do not install this program in HOCT-1/1F, and Huvitz does not guarantee any responsibilities for abnormal symptoms causing from the installation.



Revision	Date	Approval	Description
A	2020.10.05	er A	Initial release
В	2022.06.03	A and a	<ul> <li>Swiss Authorized Representative Information Added</li> <li>Overview and Instruction regarding Myopic Management Analysis Screen Added</li> </ul>
С	2022.11.30	And all all all all all all all all all al	<ul> <li>Added Import Watcher daemon setting method.</li> <li>Added equipment connection configuration diagram and connection setting method.</li> <li>Added DICOM Setting</li> </ul>

#### 9000ENG0097-B (2022.06)

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## **CONTENT**

1	Introduction	6
	Overview	6
	Intended Use	6
	Safety Caution	6
	Recommended Specifications for the Installation	7
	1.1.1 Server	7
	1.1.2 Client	7
	Classification	7
	Symbol Information	8
2	Installer Installation	9
	New Installation	9
	Version Upgrade	20
3	Screen Description	28
	Access Screen	28
	Log-in Screen	30
	Administrator Screen	31
	3.1.1 User Management	31
	3.1.2 Configuration	33
	Patient Information Screen	34
	Patient Add-on Screen	35
	Move to Analysis Screen	36
	Analysis Screen Overview	36
	Macular 3D Analysis Screen – Summary (1)	37
	Macular 3D Analysis Screen – Summary (2)	38
	Macular 3D Analysis Screen – Summary (3)	39
	Macular 3D Analysis Screen – Summary (4)	40
	Macular 3D Analysis Screen – OU	41
	Macular 3D Analysis Screen – Progression (1)	41
	Macular 3D Analysis Screen – Progression (2)	42
	Macular 3D Analysis Screen – Comparison	42
	Macular 3D Analysis Screen – 3D (1)	43
	Macular 3D Analysis Screen – 3D (2)	43
	Macular Wide Analysis Screen	44
	Macular Line Analysis Screen – Summary	44
	Macular Line Analysis Screen – OU	45
	Macular Line Analysis Screen – Comparison	45
	Macular Cross Analysis Screen – Summary	46
	Macular Cross Analysis Screen – OU	46

Macular Cross Analysis Screen – Comparison	47
Macular Radial Analysis Screen - Summary	47
Macular Radial Analysis Screen – OU	48
Macular Radial Analysis Screen – Comparison	48
Macular Raster Analysis Screen – Summary	49
Macular Raster Analysis Screen – OU	50
Macular Raster Analysis Screen – Comparison	50
Disc 3D Analysis Screen – Summary	51
Disc 3D Analysis Screen – OU	52
Disc 3D Analysis Screen – Progression	52
Disc 3D Analysis Screen – Comparison	53
Disc 3D Analysis Screen – 3D	53
Disc Radial Analysis Screen – Summary	54
Disc Radial Analysis Screen – OU	54
Disc Radial Analysis Screen – Comparison	55
Disc Raster Analysis Screen – Summary	55
Disc Raster Analysis Screen – OU	56
Disc Raster Analysis Screen – Comparison	56
Disc Circle Analysis Screen – Summary	57
Disc Circle Analysis Screen – OU	57
Disc Circle Analysis Screen – Comparison	58
Anterior Radial Analysis Screen – Summary	58
Anterior Radial Analysis Screen – OU	59
Anterior Radial Analysis Screen – Comparison	59
Anterior Line Analysis Screen – Summary	60
Anterior Line Analysis Screen – OU	60
Anterior Line Analysis Screen – Comparison	61
Anterior Wide Analysis Screen – Summary	61
Anterior Wide Analysis Screen – OU	62
Anterior Wide Analysis Screen – Comparison	62
Angiography Analysis Screen - Summary (1)	63
Angiography Analysis Screen - Summary (2)	64
Angiography Analysis Screen – OU	65
Angiography Analysis Screen – Comparison	66
Angiography Analysis Screen – Progression	67
Color Fundus Analysis Screen – Summary (1)	68
Color Fundus Analysis Screen – Summary (2)	68
Color Fundus Analysis Screen – OU	69
Color Fundus Analysis Screen – Comparison	69

	Color Fundus Analysis Screen – Stereo	70
	Color Fundus Analysis Screen – Panorama	70
	Biometry Analysis screen – Summary	72
	Biometry Analysis Screen - OU	73
	Topography Analysis Screen - Summary	74
	Topography Analysis Screen - Detailed	75
	Topography Analysis Screen - OU	76
	Topography Analysis Screen - Comparison	77
	Topography Analysis Screen - Progression	78
	Refraction Screen Overview	83
	Refraction Analysis Screen	84
	Overview of Myopic Management Analysis Screen	85
	How to use the Myopia Management Analysis Screen	85
	After operation	88
	Trouble Shooting Guide	88
4	Import Cannon fundus Data (EyeScape)	90
	Import Watcher daemon	90
5	Huvitz's equipment connection diagram	91
	<ul> <li>Huvitz's equipment connection diagram</li> </ul>	91
6	Setting method for device connection	92
	<ul> <li>HIIS (v2.3.0) HUVITZ Integrated Image Server</li> </ul>	92
	<ul> <li>HOCT-1/1F, HFC-1 (v1.3.3) Optical Coherence Tomography</li> </ul>	93
	<ul> <li>HIS-5000U (v4.04.20) Slitlamp &amp; Imaging System</li> </ul>	95
	<ul> <li>HRK-9000A Auto Ref / Keratometer</li> </ul>	97
	■ HRK-Mate (v1.0.12)	100
	<ul> <li>HDR-9000 (v1.1.2) Digital Refractor</li> </ul>	101
	■ HDR-Mate	102
	HLM-9000 Auto Lensmeter	103
	<ul> <li>HTR-1A Optometry &amp; intraocular pressure</li> </ul>	105
	<ul> <li>HNT-1/1P Non-contact Tonometer</li> </ul>	108
	<ul> <li>HBM-1 &amp; HTG-1 Standalone Biometry &amp; Topography / Only Topography</li> </ul>	109
7	DICOM Setting	110
8	Specifications and Accessories	111
	Standard Accessories	111
	Optional Accessories	111
_	Specifications.	111
9	Information Needed for Service	112

## 1 Introduction

#### **Overview**

Huvitz Integrated Image Server, HIIS-1 (hereafter, HIIS-1) films eyeball's eyeground or retina's shape in a non-contact non-invasive manner, and it is the software that provides information that helps with the ophthalmic complications.

This software of the Server-Client structure exchanges data with the software built-into HUVITZ'S ophthalmic device (hereafter, device). PC with HIIS-1 server installed (hereafter, server) becomes Server while device becomes Client. Server and device (Client) operate regardless of the distance as long as they are in the same network. Here, same network includes Internet when seen broadly and even the 1:1 cable connection when seen narrowly.

Image filmed on the device is transmitted to the server and user can check the result filmed from the personal PC through Web browser. Personal PC does not need to be installed with special software, and it can be used with the regular Web browser such as Internet Explorer, Chrome, Safari and Firefox. (HIIS-1 is optimized to the latest Chrome version, and there may be function that does not operate in other Web browser.)

#### **Intended Use**

This software (HIIS-1) is a web-based software that can view, store, transmit, and analyze the medical images of patients acquired from ophthalmic imaging devices such as fundus cameras, optical coherence tomography, auto ref/keratometer, etc. on the computer where the software is installed.

#### **Safety Caution**

- Do not make a diagnosis base on a single captured image. Doctors are responsible for making the final diagnosis based on the present and past medical records of the patient such as captured images. Without sufficient information, proper diagnosis may not be made.
- 2. User must not change the setting supported by the manufacturer. This change might make some trouble in program. The manufacturer isn't responsible for the problem.
- 3. The software must be operated by a trained and qualified person or under his or her supervision.
- 4. Repair of this instrument must be conducted by HUVITZ's service technicians or other authorized persons.
- Maintenance by users must observe the User's Manual and Service Manual. Any additional maintenance may only be performed by HUVITZ's service technicians or other authorized persons.

- 6. Manufacturers are responsible for the safety, reliability, and performance of this program only when the following requirements are fulfilled.
  - (1) When the program has been installed in a proper PC, following the manual.
  - (2) When the program has been operated and maintained according to the manual and service manual.
- Manufacturers are not responsible for the damages caused by unauthorized alterations. Such tampering will forfeit any rights to receive services during the term of guarantee.
- 8. Only those who have undergone proper training and instructions are authorized to install, use, operate, and maintain this instrument.
- 9. Keep the User's Manual and Service Manual in a place easily accessible at all times for persons operating and maintaining the equipment.
- 10. The program may be impaired if it is used in a manner not specified by the manufacturers or manual.

#### **Recommended Specifications for the Installation**

#### 1.1.1 Server

- O/S: Windows 7 or greater (Windows 10 recommended)
- CPU: Intel i5 or greater
- Memory: 4GB or greater (8GB recommended)
- Ethernet: Fast Ethernet (Gigabit Ethernet recommended)

#### 1.1.2 Client

- O/S: Windows 7 or greater (Windows 10 recommended)
- CPU: Intel i5 or greater
- Memory: 4GB or greater (8GB recommended)
- Ethernet: Fast Ethernet (Gigabit Ethernet recommended)
- Browser: Chrome (recommended), IE 11 or greater

#### Classification

- Classification of product: Class IIa according to Annex IX (Rule 11) of the Medical Device Regulation 2017/745.
- Resistance against electric shock: Not applicable.
- Protection class against electric: Not applicable .
- This device is medical device.

## Symbol Information

Symbol	Indication
<b>C E</b> 0197	CE Mark (Marque CE)
EC REP	Authorized representative in the European Community – EU ONLY (Représentant autorisé dans la Communauté européenne- EU seulement)
CH REP	Authorized representative in Switzerland (Représentant autorisé dans la Suisse)

## 2 Installer Installation

#### **New Installation**

2

1 Execute Setup\_Huvitz\_HIIS-1\_X.X.X\_x64\_XXX\_No.X.XX\_release.exe Installer.

Setup\_Huvitz\_HIIS-1\_2.3.0\_x64\_20221125172421\_No.7.11\_release

2 Start installation. Press on the Next button.



3 Select the component to install. In case of new installation, select both 'PostgreSQL\_Database' and 'Huvitz HIIS-1'.

If it is not a new installation, uncheck the 'PostgreSQL\_Database' item.

Huvitz_HIIS-1 2.3.0 Setup		_		×
Choose Components Choose which features of Huvit	tz_HIIS-1 2.3.0 you want to insta	all.		
Check the components you war install. Click Next to continue.	nt to install and uncheck the comp	oonents you dor	n't want to	0
Select components to install:	PostgreSQL_Database Refraction Addon Huvitz HIIS-1	Description Position you over a comp see its descr	r mouse onent to iption,	
Space required: 793.0 MB				
Huvitz HIIS-1 Installer ————	< <u>B</u> ack	<u>N</u> ext >	Can	cel

4 Designate the path to install the program. Use the default value.

Huvitz_HIIS-1 2.3.0 Setup	_		×
Choose Install Location Choose the folder in which to install Huvitz_HIIS-1 2.3.0.			
Setup will install Huvitz_HIIS-1 2.3.0 in the following folder. To install in click Browse and select another folder. Click Next to continue.	a differe	ent folder,	,
Destination Folder	Brou	N/50	1
Space required: 793.0 MB Space available: 125.5 GB			
Huvitz HIIS-1 Installer	t >	Can	cel

5 Designate the path to save the patient data. Since the size of image data is large (5~25MB by each measurement), save on the disc with sufficient available space.

Huvitz_HIIS-1 2.3.0 Setup	-		×
Choose Install Location			
Choose the folder in which to Huvitz HIIS-1 data.			
The Huvitz HIIS-1 will search the Huvitz HIIS-1 data in the following for differenct folder, click Browse and select another folder. Click Next to	lder. To s continue.	elect in a	
Huvitz HIIS-1 Data Folder	Brou	NCO	1
C: WPTOgram Files (X86) WHUNDZWED WHOCTDATA	DIO	vsem	
Space required: 793.0 MB Space available: 125.5 GB			
Huvitz HIIS-1 Installer			
< <u>B</u> ack <u>N</u> e	xt >	Can	cel

6 Designate the path to install the program for the PostgreSQL database.

Huvitz_HIIS-1 2.3.0 Setup	_		×
<b>Choose Install Location</b> Choose the folder in which to install PostgreSQL Database.			
The PostgreSQL Database will be installed in the following folder. To sel folder, click Browse and select another folder. Click Next to continue.	ect in a	differenct	
PostgreSQL Database C:\PostgreSQL\10	Bro	wse	]
Space required: 793.0 MB Space available: 125.5 GB			
Huvitz HIIS-1 Installer	t>	Can	cel

7 Designates the port number to be used in the HIIS-1. Make sure to remember this port number since it is the number that is used when contacting from the personal PC via Web browser. For instance, when port number, set during this stage is 8080 and when the address of the installed server is <a href="http://192.168.1.3">http://192.168.1.3</a> is assumed, HIIS-1's contact address becomes <a href="http://192.168.1.3">http://192.168.1.3</a> is assumed, HIIS-1's contact address the HIIS-1 can divide its work. Since this port number is used for the communication among servers, user does not need to remember. When two port numbers overlap, server does not work. Thus, it is necessary to set so that the port numbers do not overlap. Screen of the next stage gets output when the port numbers overlap.</a>

Huvitz_HIIS-1 Configuration Web Server Ports			1		
WebServer Port WebConnector Port	8080				
Huvitz HIIS-1 Installer —————	<	: <u>B</u> ack	<u>N</u> ext >	Cancel	

8 The following error message gets output when the port number is already being used by other program. Other port number can be used, but must remember the input port number.



9 Designates port number to use in the PostgreSQL database. Use default value if possible since the port number is the number used by the system internally. There is no need to remember this port number.

Huvitz_HIIS-1 2.3.0 Setup		-	. [	×
Huvitz_HIIS-1 Configuration Database Port				
Enter Database Port number				
5432				
Huvitz HIIS-1 Installer ———————————————————————————————————	< <u>B</u> ack	Install		Cancel

10 Error message gets output when the number that is the same as the HIIS-1's port number is already in use. Set to another number when the following message appears.



11 Displays installation progress.

Huvitz_HIIS-1 2.3.0 Setup		_		$\times$
Installing Please wait while Huvitz_HIIS-1 2.3.0 is being	) installed.			
Extract: oraociei18.dll 28%				
Extract: HctMain.ico 100% Extract: octpc.exe 100% Extract: oci,dl 100% Extract: ocijdbc18.dll 100% Extract: ociw32.dll 100% Extract: oramysql18.dll 100% Extract: oranzsbb18.dll 100%				^
Extract: oraocci18d.dll 100% Extract: oraociei18.dll 28%				~
Huvitz HIIS-1 Installer	< <u>B</u> ack	<u>C</u> lose	Ca	ncel

12 Install PostgreSQL database Start mid-way. Click on the Next button.

🖥 Setup		_		$\times$
Packaged by: EDB POSTGRES	Setup - PostgreSQL Welcome to the PostgreSQL Setup Wizard.			
PostareSQL				
62				
- All				
	C Back N	evt \	Can	cel

13 Do not modify default value and continue to click on the Next. May malfunction when the default value is modified.

Setup	– 🗆 X
Select Components	
Select the components you want to install; clear the comp are ready to continue.	ponents you do not want to install. Click Next when you
<ul> <li>PostgreSQL Server</li> <li>pgAdmin 4</li> <li>Stack Builder</li> <li>Command Line Tools</li> </ul>	Click on a component to get a detailed description
InstallBuilder	< Back Next > Cancel

14 Designates PostgreSQL database installation path. Continue to click on the Next button.

🗃 Setup			_		$\times$
Data Directory				4	•
Please select a directory under which to store your data.					
Data Directory C:\PostgreSQL\10\data	<b>~</b>				
InstallBuilder					
	< Back	Next	:>	Can	cel

15 Designates PostgreSQL administrator password. Do not modify since it is used in the system internally. Continue to click on the Next button.

🍯 Setup				_		×
Password						•
Please provide a p	assword for the database s	uperuser (postg	res).			
Password	*****					
Retype password	*****					
InstallBuilder ———			< Back	Next >	Can	icel

16 Previously set port number is designated automatically. Do not modify and continue to click on the Next button.

🗃 Setup			_		$\times$
Port					
Please select the port number the server should listen on. Port 5432					
InstallBuilder	< Back	Nex	t>	Can	cel

17 Sets up the PostgreSQL database language. Continue to click on the Next button since it is possible to use default value.

<table-of-contents> Setup</table-of-contents>		_		×
Advanced Options				$\Rightarrow$
Select the locale to be used by the new database cluster. Locale [Default locale]				
InstallBuilder Kenne Ken	3ack	Next >	Car	ncel

18 Continue to click on the Next button.

📑 Setup	_		$\times$
Ready to Install			
Setup is now ready to begin installing PostgreSQL on your computer.			
InstallBuilder			
< Back N	lext >	Can	cel

19 Installation is executed. Wait for a moment.

🗃 Setup		_		×
Installing				
Please wait while Setup installs PostgreSQL on your comp	puter.			
Insta	lling			
Unpacking C:\PostgreSQL\10\doc\postgresql\html\tutor	rial-select.html			
InstallBuilder				
	< Back	Next >	Can	cel

20 PostgreSQL database installation is completed. Click on the Finish.

<table-of-contents> Setup</table-of-contents>		_		Х
Packaged by:	Completing the PostgreSQL Setup Wizard			
POSTGRES	Setup has finished installing PostgreSQL on your c	ompute	ſ.	
PostgreSQL				
GZ				
U				
	< Back Finis	h	Can	cel

21 When the black screen appears as follows, do not close the window. Instead, wait and it will close automatically. <u>Since database initialization is in progress, it does not operate normally when it is closed mid-way.</u>



When the next window pops up, click the "Ok" button.

Sentinel Run-time Environment Inst $ imes$
Operation successfully completed.
ОК

22 HIIS-1 installation is completed.

Huvitz_HIIS-1 2.3.0 Setup —		$\times$
Installation Complete Setup was completed successfully.		
Completed		
Extract: installer.json 100% Extract: changelog.json 100% Extract: create_hct.sql 100% Extract: create_tables.sql 100% Extract: update_tables.sql 100% Output folder: C:\Program Files (x86)\HuvitzWeb\config Extract: config.json 100% Execute: "C:\HuvitzLicense\Hasp_setup.bat" Created uninstaller: C:\Program Files (x86)\HuvitzWeb\HuvitzWeb\HuvitsLicense Completed		^
Huvitz HIIS-1 Installer	Car	ncel

#### Version Upgrade

To upgrade version, re-install after removing the installed HIIS-1 program. Uninstallation of installed version will automatically start when the upgrade version of HIIS-1 installer starts.

1. To remove installed version, please click 'OK' button.

Huvitz_HI	IS-1 2.3.0 Setup	$\times$
	Huvitz_HIIS-1 is already installed. Click 'OK' to remove the previous version or 'Cancel' to cancel this upgrade.	
	확인 취소	

2. Confirm the installed version, and click 'Yes' to start uninstallation.



#### 3. Removal in progress.

A	
Huvitz_HIIS-1 2.3.0 Uninstall     —     □	$\times$
Uninstalling	NUMBER
Please wait while Huvitz_HIIS-1 2.3.0 is being uninstalled.	0
Delete file: C:\Program Files (x86)\HuvitzWeb\public\lib\threejs\nodes\utils\Ve	locit
	•
Delete file: C: WProgram Files (x86) WHuvitzweb Wpublic Wild Withrees whog Wile_2	
Delete file: C: WProgram Files (x86) WHuvitzweb Wpublic Wild W direejs Wprog Wule_1	
Delete file: C: WProgram Files (x86) WHuvitzweb Wpublic Wild Wthreejs Wpng Wtie_U	
Delete file: C: WProgram Files (x86) WHuvitzweb Wpublic Wild Wthreejs Wpng Wrpe,png	
Delete file: C: WProgram Files (x86) WHuvitzweb Wpublic Wild Wthreejs Wpng Wresult	
Delete file: C: WProgram Files (x86) WHuvitzWeb Wpublic Wild Withreejs Wpng WOD_9	
Delete file: C:WProgram Files (x86)WHuvitzWebWpublicWibWthreejsWpngWOD_1	
Delete file: C:\Program Files (x86)\HuvitzWeb\public\lib\treejs\ppg\limpg	
Delete file: C:\Program Files (x86)\HuvitzWeb\public\lib\threejs\png\gd.png	
Delete file: C:\Program Files (x86)\HuvitzWeb\public\lib\threejs\nodes\Var	~
Huvitz HIIS-1 Installer	
Close	- 01

#### 4. Uninstallation is completed



5. Remove installed version manually by following instructions if the installed version is not deleted automatically.

Execute Window control panel and select 'remove program'.



6. Select HIIS-1 and execute 'remove'.

o	niis - Programs and Features					-		×
÷	← → × ↑ 👩 > Control Panel > Programs > Programs and Features 🗸 ♂							×
Eil	[ile <u>E</u> dit <u>V</u> iew <u>T</u> ools <u>H</u> elp							
•	Control Panel Home View installed updates To uninstall a program, select it from the list and then click Uninstall, Change, or Turn Windowr features on or							
-	off	Organize 💌					== -	?
		Name Huvitz_HIIS-1 2.3.0 Uninstall/4	Publisher Huvitz Co.Ltd	Installed On 2022-11-29	Size		Version 2.3.0	

#### 7. HIIS-1 removal in progress.



확인

8. Press on the Next button after executing new version Installer.



9. This the process for upgrading version.

Thus, press on the Next button after clearing selection in case of PostgreSQL\_Database installation.

Huvitz_HIIS-1 2.3.0 Setup		_		×
Choose Components Choose which features of Huvi	tz_HIIS-1 2.3.0 you want to insta	Ι.		
Check the components you wa install. Click Next to continue.	nt to install and uncheck the comp	onents you dor	n't want to	þ
Select components to install:	<ul> <li>PostgreSQL_Database</li> <li>Refraction Addon</li> <li>Huvitz HIIS-1</li> </ul>	Description Position you over a comp see its descr	r mouse onent to iption,	
Space required: 793.0 MB				
Huvitz HIIS-1 Installer —				
	< <u>B</u> ack	<u>N</u> ext >	Can	cel

10. Designates path to install the program.

Huvitz_HIIS-1 2.3.0 Setup	—		×
Choose Install Location Choose the folder in which to install Huvitz HIIS-1 2.3.0.			
Setup will install Huvitz_HIIS-1 2.3.0 in the following folder. To install in click Browse and select another folder. Click Next to continue.	a differe	nt folder,	,
Destination Folder C:₩Program Files (x86)₩HuvitzWeb	Brov	vse	]
Space required: 793.0 MB Space available: 125.1 GB			
Huvitz HIIS-1 Installer	t >	Can	cel

11. Designates path to save HIIS-1 data. Designates the path that was set as it is since previous data needs to be used as is.

Huvitz_HIIS-1 2.3.0 Setup	_		×
Choose Install Location			
Choose the folder in which to Huvitz HIIS-1 data.			
The Discount of the Angelian and the Discount of the South of the Souther South			
differenct folder, click Browse and select another folder. Click Next to	continue.	elect in a	
Huvitz HIIS-1 Data Folder			
	Deer		
C: WProgram Files (X86) WHUVITZWED WHOCTDATA	D <u>r</u> ov	wse	
Space required: 793.0 MB			
Space available: 125.1 GB			
Huvitz HIIS-1 Installer			
		-	
< <u>B</u> ack <u>N</u> e	xt >	Can	icel

12. Designates the port number to use in the HIIS-1. Remember this port number since is the number that needs to be used when contacting HIIS-1 server

Huvitz_HIIS-1 2.3.0 Setup					_		×
Huvitz_HIIS-1 Configuration Web Server Ports							0
Enter Web Server Ports number							
WebServer Port	8080						
WebConnector Port	8081						
Huvitz HIIS-1 Installer							
		< <u>B</u> ad	c [	<u>N</u> ext	>	Ca	ncel

13. Designates the port that is used in the installed PostgreSQL program.

Huvitz_HIIS-1 2.3.0 Setup			_		×
Huvitz_HIIS-1 Configuration Database Port					
Enter Database Port number					
5432					
Huvitz HIIS-1 Installer	< <u>B</u> ack	Instal	I	Car	ncel

14. HIIS-1 installation is in progress.

Huvitz_HIIS-1 2.3.0 Setup		_		$\times$
Installing				
Please wait while Huvitz_HIIS-1 2.3.0 is being	installed.			9
Extract: oraociei 18.dll 28%				
Extract: HctMain.ico 100%				^
Extract: octpc.exe 100%				
Extract: oci.dll 100%				
Extract: ocijdbc18.dll 100%				
Extract: ociw32.dll 100%				
Extract: oramysql18.dll 100%				
Extract: orannzsbb18.dll 100%				
Extract: oraocci18.dll 100%				
Extract: oraocci18d.dll 100%				
Extract: oraociei18.dll 28%				¥
Huvitz HIIS-1 Installer				
	< <u>B</u> ack	Close	Car	ncel

#### Click the "Ok" button that pops up next.

Sentinel Run-time Environment Inst $ imes$
Operation successfully completed.
ОК

15. HIIS-1 upgrade is completed.

D)	Huvitz_HIIS-1 2.3.0 Setup -		$\times$
Ins	stallation Complete		
S	etup was completed successfully.		$\underline{\bigcirc}$
С	Completed		
Γ	Extract: installer.json 100%		^
	Extract: changelog.json 100%		
	Extract: create_hct.sql 100%		
	Extract: create_tables.sql 100%		
	Extract: update_tables.sql 100%		
	Output folder: C:\Program Files (x86)\HuvitzWeb\config		
	Extract: config.json 100%		
	Execute: "C:\"HuvitzLicense\"hasp_setup.bat"		
	Created uninstaller: C: WProgram Files (X86) WHUVItzWeb WUNInst.exe		
	Completed		¥
	ta UTIS 1 Tastallar		
TUVI			
	< Back Close	Car	acel

Cache data of the previous version remains in the Web browser. Thus, there are instances in which <u>screen does not appear properly on the Web browser after upgrading</u>. In this case, open setting with Ctrl + Shift + Del button, delete all the Internet use records as follows and contact again.



## 3

### **3** Screen Description

#### **Access Screen**

1 Execute Web browser. (As for the types of Web browser, there are Internet Explorer and Chrome. However, Huvitz Integrated Image Server, HIIS-1 (hereafter, HIIS-1) is optimized for the Chrome browser. When using other Web browser, there may be functions that do not work since Web browser does not support those functions.)



2 Input address and port number where the HIIS-1 is installed in the Web browser's address input space (1). In the example, address is 172.10.106.161 and the port number is 8080. If the PC in use is HIIS-1 server, then it is possible to input as localhost:8080 or 127.0.0.1:8080.

← → C ③ 127.10.106.161:8080	0	-) 🖬 🛛 💿 🗄
	HUVITZ Data Marine	
	Password	
	○ REMEMBER ME	
	LOGIN	

- Method for finding out HIIS-1's server address
- 1. Execute command screen in the computer where HIIS-1 server is installed. (input 'cmd' after clicking on the task bar's Window button)



### Log-in Screen



- Input user's ID and password in the ID/Password input space used for logging-in.
   Administrator's ID and Password that are used for logging-in after the first installation are admin / admin.
- 2 Click on the LOGIN button.
- 3 Check "REMEMBER ME" to log-in automatically when the Web browser is executed next time.



4 The following type of administrator page is shown first when logging-in as administrator instead of regular user. Use after creating regular user ID. Ensure that only the user that manages the system can access the system.

() USER	
② CONFIGURATION	
(3) PATIENTS	

5 Moves to the patient information screen when 'PATIENTS' is clicked on.



#### **Administrator Screen**

#### 3.1.1 User Management

1 To add user, click in the following order; 'USER' > 'CREATE'. Input the information of the user to add on to the 'Create an account' input space and then click on the CREATE button.

	L0001
© USER +CREATE +LIST	
@ CONFIGURATION	Create an account
(9) PATIENTS	First name Last name
	User 10
	Password Confirm Password
	E-mail address
	Website/Link (optional)
	Select a role 🗸
	CREATE

2 Pop-up appears when user is added on normally. Click on 'Confirm'.

	octview.huvitz.com:8080 내용: Successfully created			LOGOUT
© USER		RU		
+UST			$\mathcal{I}$	
(2) CONFIGURATION	Creat	e an account		
(1) PATIENTS	test2	Last name		
	test2			
	E-mail address			
	Phone	Location		
	Website/Link (option	al)		
	Operator			
		CREATE		

3 Currently registered user information appears when clicked in the following order; 'USER' > 'LIST'. Each user can be modified and deleted. (Precaution) never delete the administrator. Since new user is added on, click on the 'LOGOUT' button at the upper right side and then log-in using new ID.

USR         Vert0         PretName         PartName         Itat Name         Inde         Phone         Email         Leadon         Italiant         Italiant           •CRATE         •crast         tester         tester         tester         tester         tester         operator         202.01.24         202.01.24         202.01.24           •conFiGURATION         test2         test2         test2         operator         202.01.24										LOGOUT
TOPE       Inter       Inter       Inter       physician       202.03.20         Inter       Inter       operator       operator       202.03.20         © CONFIGURATION       Inter       Inter       operator       202.03.20         @ PATIENTS       admin       admin       admin       administrator       3999.0.0.1         Internet       admin       administrator       operator       202.03.20         Internet       administrator       operator       202.03.20         Internet       internet       internet       internet         Internet       internet       internet       internet         Internet       internet       internet       internet         Internet       internet       internet       inter         Inter <th>① USER</th> <th>User ID ¢</th> <th>First Name 💠</th> <th>Last Name 💠</th> <th>Role ¢</th> <th>Phone ¢</th> <th>E-mail \$</th> <th>Location ‡</th> <th>Expiration Date</th> <th>•</th>	① USER	User ID ¢	First Name 💠	Last Name 💠	Role ¢	Phone ¢	E-mail \$	Location ‡	Expiration Date	•
end       end       eparter       operator       201.63.3         @ CONFGUENTION       end       end       11       operator       202.63.2         @ MATENTS       admin       admin       gerator       operator       202.63.2         1 Mint       operator       operator       202.63.2       202.63.2         1 X002       ·       ·       operator       202.63.2	+CREATE	tester	tester		physician				2023.03.28	
BOORFOODWATION         text         text         text         text         operator         control         control <thcontrol< th="">         contro         <thcontr< td=""><th>+1151</th><td>test2</td><td>test2</td><td></td><td>operator</td><td></td><td></td><td></td><td>2023.05.28</td><td></td></thcontr<></thcontrol<>	+1151	test2	test2		operator				2023.05.28	
@PMTENS       admin       admin       item       operator       202.03.26         12002       operator       202.03.26       item       202.03.26	© CONFIGURATION	test	test		operator				2023.03.28	
uhntj         operator         2023.03.28           120002         operator         2023.03.28	③ PATIENTS	admin	admin	관리자	administrator				9999.01.01	
13002 operator 2033.03.28		uhmtj			operator				2023.03.28	
		120002			operator				2023.03.28	

#### 3.1.2 Configuration

May modify the settings related to the report in the REPORT menu.

		LOGOUT
(1) USER +CREATE	Report Try changing the settings for the report.	
+LIST	Report Format     Jall      Antoenal     Antoenal	
CONFIGURATION     + SETUP	Report File Naming Rule  Support, Sup	
+ REPORT PATIENTS	Pupil State Group Constraints	
	Report Lago  ADD IMAGE	
	<i>Huvitz</i>	
	REMOVE	
	SWI SWI	
	Huvitz	

### **Patient Information Screen**

The following screen is the patient information screen that is seen first when regular user logs-in.



- Shows the patient list saved in the HIIS-1 database currently. New patient gets added into the patient list when new patient information is transmitted at the HUVITZ's ophthalmic device or when patient is added on using 'Add Patient' in the HIIS-1. When mouse is placed on top of the patient list, URL copy icon that enables move to the applicable patient immediately, gets activated.
- 2 Outputs detailed information on the selected patient. Displays information such as patient ID, name, age, gender, ethnicity, eyesight (refractive index), operator and doctor in charge.
- 3 Outputs inspection list on the selected patient. Moves to the Analysis Screen of the selected inspection when double clicked.
- 4 In case of the inspection that is transmitted from and in progress in the equipment "Loading..." message is displayed. Inspection that is being transmitted and in progress gets completed, and when the Loading message disappears, it is possible to move to the Analysis Screen.
- 5 When the mouse is placed on top of the inspection list, URL copy icon that enables immediate move to the applicable inspection and delete inspection icon is activated.
- 6 Outputs summary information on the selected inspection. Moves to the Analysis Screen when 'Analyze' button is clicked on.
- 7 Only the inspection measured today is output when 'Today' button is clicked on. Able to add patient when 'Add Patient' button is clicked on.
- 8 By clicking the Refraction button, processed examination list will be shown. And it can be saved as its patient's own examination. The button is shown when choosing patient.
- 9 Information on the software version is displayed. When user icon is pressed on, ID loggedin currently is displayed, and it is possible to log-out when log-out button is pressed on.

### Patient Add-on Screen

1 Click on the 'Add Patient' button to add new patient. When button is clicked on, pop-up for adding in a patient appears, and click on the 'Save' button after inputting information on the patient in the input space.

HUVITZ	Q			✓ Today + Add Patient			
HOVITZ           10         0           NEW00001         33.965850           00001         Test.AH           199604054263         SH-30504901           SH-30504901         SH-9558833           SH-19058833         SH-30504931	Name s NUW Patient s namikung An Heyo Sahro Salad BI S JY J MJ K HIGL	Birth Date         2           1999 01 01         1           1337 03 08         2           2018 02 02         2           1974 10 16         1           1996 04 05         1           1995 01 01         1           1996 04 05         1           1996 04 05         1           1996 04 01         1           1990 01 01         1           1970 01 01         1	Last Visit . 2019 06 27 12 2019 06 20 11 2019 06 17 14 2019 06 17 14 2019 06 14 11 2019 06 14 14 14 2019 06 14 14 14 2019 06 14 14 2019 14 14 2019 14 14 2019 14	Vootay     Add Patient  Patient ID  Name Patient ID  Name Prot Birth Date 1999-01-01 Eth Refraction  Operator  Physician  Description	Exam + Refraction	Tomo / Pachy  Tomo / Pachy  Schwichy  Schwichy  Schwichy  Schwichy  DELETE  Caucasian  Caucasian	ver.2.13
SM 26017552 SM 25436312 SM 28514773 SG 30907393 SM 6620003 SH5G 12954943 SM 22314241	HUS JHB CYL SKH MJP HUO HRL	1956-01-01 1951-01-01 1957-01-01 1970-01-01 1962-01-01 1977-01-01 1984-01-01	2019-04-19-12 2019-04-19-12 2019-04-19-12 2019-04-19-12 2019-04-19-11 2019-04-19-105-1 2019-04-19-105-1	Cance	<i>It</i> Save	.08/3dmm	Andyte

2 New patient was added on.

() HUVITZ	Q				🗸 Today	+ 40	ld Patient	Exam	+ Refraction	+ Tono / Pachy		ver. 2.1.3
ID 0 NEW00001 31965850 00001 Test AH	Name © NEW Patient s namkung	Birth Date         \$           1969-01-01         1           1937-03-08         2           2018-02-02         1           1974-10-16         1	Last Visit ÷ 2019-06-27 19:48 2019-06-20 11:24 2019-06-17 14:05 2019-06-14 16:07	2	Patient ID NEW00001 Refraction	3 0.0	Name NEW Patient Operator		Gender <sup>®</sup> M Physician	Birth Date	Ethnicity	Segment, Retina Scan Size Scan Length Date Time Fixation Image Quality
199604054263 SH-30504901	Sahro Salad	1996-04-05 1956-01-01	2019-06-14 11:04 2019-04-19 14:19		OD/OS \$	Date \$		Measurement	\$	Detail 0	DELETE 📌 EDIT	Color Fundus
SM-6050912 SH-9958833 SM-31015931	HK L MJ K	1951-01-01 1949-01-01 1970-01-01	2019-04-19 13:59 2019-04-19 13:30 2019-04-19 13:06					No data availa	ible in table			
SM-26017552 SM-25436312	лн в	1956-01-01 1951-01-01	2019-04-19 12:59 2019-04-19 12:31									Analyze
SM-28514773 SG-30907393 SM-6620003	CY L SK H MJ P	1957-01-01 1970-01-01 1962-01-01	2019-04-19 12:11 2019-04-19 11:49 2019-04-19 11:31									
SHSG-12954943 SM-22314241	HJ O HR L	1977-01-01 1984-01-01	2019-04-19 10:51 2019-04-19 10:41	•								

#### Move to Analysis Screen

Able to move to Analysis Screen by clicking on the ' $(1 \rightarrow 2 \rightarrow 3)$ ' in this order. Moves first to Macular 3D Analysis Screen.

() HUVITZ	Q			✓ Today + Add Patient Exam + Refraction + Tono / Pachy	ver.2.1.3
ID 0 SG-24329973 SG-19148864 SG-32928833 SG-32827320 SG-30358643	Name C	Birth Date         \$           1959-01-01         1950-01-01           1997-01-01         1997-01-01           1959-01-01         1959-01-01           1964-01-01         1964-01-01	Last Visit ÷ 2018-10-23 11-33 2018-10-23 11-34 2018-10-23 11-14 2018-10-23 10-56 2018-10-23 10-34 2018-10-23 10-17	Patient ID         Name         Gender         Birth Date         Ethnichy           01 10 2018         drissi mehdi         *M         1986-02-04         Caucasian           Refraction         Operator         Physician             ©         0.0         ©         0.0              Description                  EDIT            EDIT	Macular 3D Segment, Retina Macular 3D Scan Size S12266 Scan Length 9:0mm Date 2018-10-17 Time 15:14:05 Fisation Macular Image Quality 6 Color Fundus No
SG-3824618 01-10-2018	WK P drissi mehdi	1950-01-01	2018-10-23 09:53 2018-10-17 15:34	00/05 : Date : Measurement : Detail :	
2222 00119	manop Jorge	1977-10-17 1956-10-17	2018-10-17 11:03 2018-10-17 10:58	00 05 2018-10-17 15-26-33 € Macular 3000 512:06(95:4mm 00 05 2018-10-17 13:07:50 ★ Anterior Radial 1034:12(96:4mm	
00118 333333	sursk k Cam	2018-10-17	2018-10-17 10:52 2018-10-17 10:48	2010         2011.10.17.13.01.43         ** Anterior Radial         1024x12/6x6mm           2010         2011.10.17.13.00.15         ** Anterior Radial         1024x12/6x6mm	Analyze
00116 00114hs	eurico	1986-10-17 1969-01-17	2018-10-17 10:42 2018-10-17 10:28	20         30         2018-10-17-12-56-29         — Anterior Line(0)         103442/s00mm           20         30         2018-10-17-12-56-29         — Anterior Line(0)         103442/s00mm	(3)
199407318188 198603304604	Matilda Markusson Frida Johansson	1994-07-31 1986-03-30	2018-10-15 17:40 2018-10-15 17:34	2012         2014         10         11         12-55-54         Terminetan Hollandi         102/442/1600mm           2013         2018         10         11         12-55-54         — Anterior Line(H)         102/442/1600mm	
19870403	lovisa bergstrom	2018-10-15	2018-10-15 17:29	000 057 2018-10-17 12:48:45 ★ Anterior Radial 1024x12/6x6mm	

### **Analysis Screen Overview**



- 1 Summary: Shows summary information on the results of measuring one eye. This tab is selected by default.
- 2 OU: Able to carry out comparative analysis on the measurement data on the both eyes.
- 3 Progression: Able to carry out comparative analysis with the various previous data using the currently selected data as the standard.
- 4 Comparison: Able to carry out comparative analysis on the data of the measurement part that is the same as that of the currently selected data using a different date.
- 5 3D: Shows 3D modeling image using image of measured result.
- 6 URL that can move immediately to the current inspection is copied.
- 7 Export the current inspection data as zip.
- 8 Displays the screen where Comment can be input. When Enter button input, menu modification and COMMENT button are pressed once again, Comment is saved. Input contents are output to the comment category at the report's lower part.
- 9 Report on the result displayed currently is saved as pdf or jpg.
- 10 Current screen is saved as pdf.
- 11 Recalculate the current inspection data



#### Macular 3D Analysis Screen – Summary (1)

- 1 Dates with current patient's inspection history are displayed.
- 2 This the selected date's right eye (OD) inspection list in case of current patient's 1.
- 3 This the selected date's left eye (OS) inspection list in case of current patient's 1.
- 4 Fundus image is displayed.
- 5 Thickness ETDRS chart and Thickness Average chart can be analyzed.
- 6 Thickness Map, Deviation Map, Normative Map and Enface image are displayed.
- 7 B Scan image for the yellow scan line (horizontal) shown on ④ is displayed.
- 8 B Scan image for the blue scan line (vertical), shown on ④ is displayed (HD image fixation).

## A PATIENT LIST Burlitz Demony Test DEDE 00-200/1108:13/ 05 / Macudar 3D(h)/51206 / 9:0mm/ 550 DATE Summay OU Pogression Comparison 3D Discopie Summay Ou Pogression Comparison 3D Discopie Summay Ou Pogression Comparison 3D Discopie Summay Ou Pogression Comparison 3D Addition of the pogression Addition of the pogresion

#### Macular 3D Analysis Screen – Summary (2)

- 1 Button that displays scan path (No. ①) on top of the Fundus image or makes it disappear.
- 2 Button that displays Thickness Map on top of the Fundus image or makes it disappear.
- 3 Button that displays Thickness chart on top of the Fundus image or makes it disappear.
- 4 Button that displays Enface image on top of the Fundus image or makes it disappear.
- 5 Button that displays deviation from Normative data on top of the Fundus image or makes it disappear.
- 6 Thickness can be selected to ILM-RPE / ILM-IPL. Images displayed on (3~5) and Thickness chart are displayed differently depending on the thickness selection.
- 7 Button that displays Normative Map on top of the Fundus image or makes it disappear.
- 8 Able to amplify and view Fundus image.
- 9 Ensure that IR Fundus is displayed in the Fundus domain.
- 10 Displayed on the list when the button is pressed on when there is the Fundus image that can be displayed.
- 11 Fundus image is displayed. Basically, Color Fundus images that were filmed on the same day are displayed. If none, IR Fundus image is displayed. B Scan image moves to the positon that is the same as that of the scan line when the handle at the end of the scan line on top of the Fundus image is drafted with mouse to move or it is possible to move immediately by clicking any part of the square with mouse (1-Point-Magic function). After clicking the mouse, it is possible to see that the thickness value is displayed on top of the Thickness Map while position is displayed on the Enface image.
- 12 Moves Thickness ETDRS Chart Center to the center of the scan domain.
- 13 Moves Thickness ETDRS Chart Center to the detected Fovea position.



#### Macular 3D Analysis Screen – Summary (3)

#### 1 Displays Thickness chart.

Displayed differently depending on the selected Thickness (ILM-RPE/ILM-IPL) domain.

• ILM-RPE

Diameter of 6mm is divided into 9 domains, and the ETDRS Chart that displays average thickness by each domain is displayed.



GCC Chart that displays average by dividing thickness Width diameter of 4.8mm and length diameter of 4mm for oval shape into six domains is displayed (the part in the above shown image that is displayed in red square)

- 2 Normative data's legend is displayed
- 3 Selected Thickness Average Chart is displayed.
  - ILM-RPE

•

- Total average thickness for the diameter of 6mm domain is displayed.
- ILM-IPL Average thickness is displayed by dividing width diameter of 4.8mm, length diameter of

4mm for oval shape to higher and lower parts (the part in the No. ① image that is displayed in blue square)

- 4 ILM-IPL Thickness Map is displayed. Applicable position's thickness can be seen when the top of the image is clicked on with the mouse (1-Point-Magic function)
- 5 ILM-RPE Thickness Map is displayed. Able to use 1-Point-Magic function.
- 6 Enface image is displayed. Able to use 1-Point-Magic function.



#### Macular 3D Analysis Screen – Summary (4)

- 1 Button that can adjust B Scan image's Brightness/Contrast.
- 2 Able to designate the number of B Scan images that are displayed on one screen. Displays up to the number of (Line x row).
- 3 Able to measure the length by clicking the mouse at the inside of the B Scan image. After activating by clicking on this button, click on the mouse on the B Scan image to move the cursor up to the desired length. Then, click again to display length information.
- 4 Displays by applying Color Map in the B Scan image.
- 5 B Scan image is displayed in Monochrome.
- 6 B Scan image is displayed in Monochrome after reversal
- 7 HD (high definition) B Scan image is displayed.
- 8 B Scan image is displayed by amplifying.
- 9 Download a currently displayed Bscan as jpg
- 10 Displays the direction of the Scan that is currently on display in the B Scan image.
- 11 Button that displays information of seven segmentations in the B Scan image. Able to select the segmentation among the seven that display (multiple selection enabled) 7 Among the segmentations, selected ones and each is displayed in different colors.
  - Types of segmentations displayed ILM, NFL, IPL, OPL, IOS, RPE, BRM
- 12 B Scan image can be subjected to browsing. Animation effect is displayed when pressing on the up/down button.

#### Macular 3D Analysis Screen – OU

User is able to carry out comparative analysis on patient's both eyes through OU.



- Displays Fundus image. Basically, Color Fundus image measured on the same day is displayed, but if none, then IR Fundus image is displayed. When the end of the scan line, displayed on top of the Fundus image is dragged with mouse, B Scan image displayed on No. (5) moves to the position that is the same as that of the scan line. When clicked on top of the Fundus image with mouse, then it is possible to use the 1PM (1-Point-Magic) function.
- 2 Thickness Chart and Thickness Average for the selected Thickness are shown on the upper part of No. (6).
- 3 Selects the measurement data for the comparative analysis.
- 4 Thickness Map, Deviation Map and Normative Map are displayed.
- 5 B Scan image is displayed.
- 6 Thickness Chart and Average difference of the two sides are displayed according to the selected Thickness.

#### Macular 3D Analysis Screen – Progression (1)

User can analyze patient state trend through Progression. Seven past data are displayed including selected measurement.

	Huvitz_Demo / Test 2018-09-20 / 11:08:19 / OS / Macular 3D(H) / 512x96 / 9x9mm / SSI:6	URL EXPORT COMMENT REPORT SCREEN DUMP RECALC
DATE	Summary OU Progression Comparison 3D	
2018-09-20	Eluis Edit (Thiokness 🕜 114 695 - ) 🚳 🚯 😒 🔅	
2018-05-20 OD Macular Wide(H) 512-06 Macular Wide(H) 512-06 Macular 30(H) 512-06 Autorior 10(H) 512-06	2016-09-20/102/1-54 2016-09-20/11-57-15 2016-09-20/11-57-15 2016-09-20/11-56:19	
Anterior Radial 1024x12 Color Fundus		
OS Macular Wide(H) 512x96		5
Macular Wide(H) 512x96		
Macular 3D(H) 512x96		
Macular 3D(H) 512x96		
Anterior Line(H) 1024x1	30	
Anterior Radial 1024x12	220 100 100 100 100 100 100 100 100 100	
Color Fundus		

- 1 Able to select measurements subjected to comparative analysis independently through Progression.
- 2 Able to select Thickness. (ILM-RPE or ILM-IPL)
- 3 Thickness Map is displayed on top of each Fundus image.
- 4 Thickness Chart is displayed on top of each Fundus image.
- 5 Enface is displayed on top of each Fundus image.
- 6 Deviation information with the Normative data is displayed on top of each Fundus image.
- 7 Normative Map is displayed on top of each Fundus image.
- 8 Trend for each ETDRS domain for the listed measurement is displayed.
- 9 Trend for each GCC domain for the listed measurement is displayed.



#### Macular 3D Analysis Screen – Progression (2)

- 1 Click to select the measurements to compare through Progression.
- 2 Patient measurement information is displayed in the form of a list. Check measurement subjected to comparative analysis and click on the 'Save' button.

#### Macular 3D Analysis Screen – Comparison

User can carry out comparative analysis on the measurement data for the diagnosed patient's same area through Comparison. Function is the same as that of the <u>Macular 3D Analysis Screen</u> <u>– OU</u>.

A PATIENT LIST	Huvitz, Demo / Test 2018-09-20 / 11:08:19 / OS / Macular 30(H) / 512:e96 / 9x9mm / 551:6	URL EXPORT COMMENT REPORT SCREEN DUMP RECALC
DATE	Summary OU Progression Comparison 3D	
2018-09-20	IR         Fundus         O.S. 2018/09:20/1108/129           Modular 20 / S12:045 Bidrum         Image: State of the state o	• R Fundus •
2018-09-20		
OD Macular Wide(H) 512x96 Macular Wide(H) 512x96	1 3 50 59(%) Benefate Becheloto of Kornak	
Macular 30(H) 512x96 Macular 30(H) 512x96 Anterior Line(H) 1024x1 Anterior Radial 1024x12 Color Fundus	Takes Device Name and the second seco	n Kap 
OS Macular Wide(H) 312:96 Macular Wide(H) 512:96 Macular 30(H) 512:96 Macular 30(H) 512:96 Anterior Line(H) 102:41	48/96 HH	
Anterior Radial 1024x12 Color Fundus		

1 Selects the measurement data subjected to comparative analysis.



#### Macular 3D Analysis Screen – 3D (1)

- 1 IR and Color Fundus are displayed. Able to show by moving the Scan Line vertically/horizontally by dragging the mouse.
- 2 B-Scan image is displayed.
- 3 3D modeling image is displayed.
- 4 3D Surface modeling image is displayed.

#### Macular 3D Analysis Screen – 3D (2)



- 1 3D modeling image's vertical/horizontal sides can be viewed.
- 2 3D modeling image's Brightness/Contrast can be calibrated.
- 3 Able to modify 3D modeling image's surface texture.
- 4 3D modeling image's transparency level can be calibrated. Becomes more transparent when closer to 0%.
- 5 Able to select one among the four types of models (volume, ILM, IPL, RPE surface texture) displayed on the 3D modeling image.



#### Macular Wide Analysis Screen

Macular Wide provides Macular, Disc simultaneous Analysis Screen.

Result of the analysis on the below mentioned domain is displayed on No. 2 according to the No. 1 Thickness selection.

- ILM-IPL : Macular
- ILM-RPE: Macular
- ILM-NFL: Disc

Able to analyze by modifying the domain, same for OU, Progression and Comparison according to the Thickness selection.

A PATIENT LIST	Hunitz, Demo / Test 2018-09-20 / 10-38:00 / OD / Macular Line(H) / 1024x1 / 9x0mm / SS:7
DATE	G Summary OU Comparison
2018-09-20	R Fundas • 🚻 👔 🚺 0
2018-09-20	
OD USE PASIE(1) JILAAT Color Fundus Disc 3D(H) 512x96 Disc Circle 1024x1	
Macular Line(H) 1024x1 Macular Cross 1024x10 Color Fundus	
OS Macular Wide(H) 512:06 Macular Wide(H) 512:06 Macular 30(H) 512:06 Macular 30(H) 512:06 Anterior Line(H) 1024:1 Anterior Radial 1024:12 Color Fundus	

#### Macular Line Analysis Screen – Summary

1 Fundus image is displayed. Basically, Color Fundus image, measured on the same day is displayed. But if none, IR Fundus image is displayed.

Scan path is displayed on top of the Fundus image line.

Thickness can be selected to ILM-RPE / ILM-IPL. No. ③ Thickness graph are displayed differently depending on the thickness selection.

- 2 B Scan image is displayed.
- 3 Thickness for B Scan image is displayed in graph.
- 4 B Scan image's Brightness / Contrast can be calibrated.

- 5 Able to display by applying measurement of the distance between the two points of B Scan image, Color Map Overlay, Monochrome, and Monochrome reverse function.
- 6 Able to display seven Segmentation information on the B Scan image.

#### Macular Line Analysis Screen – OU

User can carry out comparative analysis of the data on the measurement of the patients' two eyes through OU.



- 1 Fundus image is displayed. Basically, Color Fundus image, measured on the same day is displayed. But if none, IR Fundus image is displayed.
- 2 B Scan image is displayed.
- 3 Thickness is displayed as a graph.
- 4 Thickness graphs of the both eyes are compared and displayed.

#### Macular Line Analysis Screen – Comparison

久 PATIENT LIST	Huvitz_test/ 2018-07-05 / 17:48:29 / OD / Macular Line / 1024x1 / 9x0mm / SSL8	URL EXPORT COMMENT REPORT SCREEN DUMP RECALC
DATE	Summary OU Comparison	
2018-07-05	R Fundus • OD 2018-07-65/17-38-29 Macular Line / 1004-11 Sudmm Extern • OD 2018-07-65/09:11-53 Macular Line / 1004-11 Sudmm	• IR Fundus •
2018-07-05		
OD Macular Radial 1074c12 Macular Radial 1074c12 Macular Cross 1074c10 Macular Line 1070c1 Macular Line 1070c1 Macular Line 1070c1 Color Fundus Disc 30 512c96		
OS Disc Circle 1024x1 Disc Ratter 51224 Disc Radiol 1024x12 Macular Radiol 1024x12 Macular Radiol 1024x12 Macular Cross 1024x10 Macular Line 1024x1		

- 1 Measurement data that serves as the standard for comparison.
- 2 Able to select the measurement data that serves as the standard for comparison.

### Huvitz\_Demo / Test 2018-09-20 / 10:36:30 / OD / Macular Cross / 1024x10 / 9x9mm / SSI:7 (5) 🖹 🖆 💻 🖓 ひ đ Fundus 😅 📑 📑 0

#### Macular Cross Analysis Screen – Summary

1 Fundus image is displayed. Basically, Color Fundus image, measured on the same day is displayed. But if none, IR Fundus image is displayed. Scan path is displayed on top of the Fundus image line.

Thickness can be selected to ILM-RPE / ILM-IPL. No. ③ Thickness graph are displayed differently depending on the thickness selection.

- B Scan image is displayed. Horizontal and vertical scans are displayed on the left and right, 2 respectively.
- 3 Thickness for the B Scan image is displayed as a graph. Likewise, left side is the horizontal scan while the right side is the vertical scan.
- B Scan image's Brightness / Contrast can be calibrated. 4
- Able to display by applying measurement of the distance between the two points of B Scan 5 image, Color Map Overlay, Monochrome, and Monochrome reverse function.
- 6 Able to display seven Segmentation information on the B Scan image.



#### Macular Cross Analysis Screen – OU

- Fundus image is displayed. Basically, Color Fundus image, measured on the same day is 1 displayed. But if none, IR Fundus image is displayed.
- 2 B Scan image is displayed.

- 3 Thickness graph is displayed.
- 4 Thickness graphs of the both eyes are compared and displayed.

#### Macular Cross Analysis Screen – Comparison

A PATIENT LIST	Huvitz_Demo / Test 2019-07-02 / 09-40:20 / OD / Macular Cross / 1024x10 / 9x9mm / SSI:8	URL EXPORT COMMENT REPORT SCREEN DUMP RECALC
DATE	Summary OU Comparison	
<b>2019-07-02</b> 2018-09-20	R         Fundus         •         2015 07 02 /0046202         EX 897         •         2019 07 02 /004620           Macalle Cross / 1004:103 holmen         Ex 897         •         0.0         2019 07 02 /004620	R Fundus +
2019-07-02		
OD Disc Circle 1024x1 Disc Rader(H) 512x24 Disc Radial 1024x12 Macular Radial 1024x12 Macular Radial 1024x12 Macular Radial 1024x12 Macular Line(H) 1024x1	x 3/10 x • Q x • Q x • Q x • Q x • Q	· ·
OS No data avaitable in table		

- 1 Measurement data that serves as the standard for comparison.
- 2 Able to select the measurement data that serves as the standard for comparison.



#### Macular Radial Analysis Screen - Summary

- 1 Fundus image is displayed. Basically, Color Fundus image, measured on the same day is displayed. But if none, IR Fundus image is displayed. Able to use 1-Point-Magic function.
- 2 Thickness Map for the selected Thickness is displayed. Thickness chart, Average information is displayed. Able to use 1-Point-Magic function.
- 3 B Scan image's Brightness / Contrast can be calibrated.
- Able to designate the number of B Scan images displayed on one screen. Able to display up to the number of (lines x rows).
   Able to display by applying measurement of the distance between the two points of B Scan

image, Color Map Overlay, Monochrome, and Monochrome reverse function.

5 B Scan image for the yellow scan line is displayed.

- 6 B Scan image for the blue scan line is displayed.
- 7 Thickness graph for the yellow scan line is displayed.
- 8 Thickness graph for the blue scan line is displayed.

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#### Macular Radial Analysis Screen – OU

- 1 Fundus image is displayed. Basically, Color Fundus image, measured on the same day is displayed. But if none, IR Fundus image is displayed.
- 2 B Scan image for the yellow scan line is displayed.
- 3 Thickness graph for the yellow scan line is displayed.
- 4 Thickness graphs of the both eyes are compared and displayed.

#### Macular Radial Analysis Screen – Comparison

오 PATIENT LIST	Huvitz_Demo / Test 2019-07-02 / 09:40:52 / OD / Macular Radial / 1024x12 / 9x9mm / SSI:7	URL EXPORT COMMENT REPORT SCREEN DUMP RECALC
DATE	Summary OU Comparison	
<b>2019-07-02</b> 2018-09-20	R         Fundure         2013 07 02 / 024-0252         Thickness         EM HER         2013 07 02 / 024-025           Macadar Radual / 1024-12 Softman         Em Here         0         2019 07 02 / 024-025         Macadar Radual / 1024-12 Softman	ann R Fundus r
2019-07-02		
OD Disc Circle 1024x1 Disc Roster(H) 512x24 Disc Roster(H) 512x24 Macular Roster(H) 512x2 Macular Roster(H) 512x2 Macular Circos 1024x10 Macular Line(H) 1024x1		
OS No data available in table		

- 1 Measurement data that serves as the standard for comparison.
- 2 Able to select the measurement data that serves as the standard for comparison.



#### Macular Raster Analysis Screen – Summary

- 1 Fundus image is displayed. Basically, Color Fundus image, measured on the same day is displayed. But if none, IR Fundus image is displayed. Able to use 1-Point-Magic function.
- 2 Thickness Map for the selected Thickness is displayed. Thickness chart, Average information is displayed. Able to use 1-Point-Magic function.
- 3 Scan image's Brightness / Contrast can be calibrated.
- Able to designate the number of B Scan images displayed on one screen. Able to display up to the number of (lines x rows).
   Able to display by applying measurement of the distance between the two points of B Scan image, Color Map Overlay, Monochrome, and Monochrome reverse function.
- 5 B Scan image for the yellow scan line is displayed.
- 6 B Scan image for the blue scan line is displayed.
- 7 Thickness graph for the yellow scan line is displayed.
- 8 Thickness graph for the blue scan line is displayed



#### Macular Raster Analysis Screen – OU

- 1 Fundus image is displayed. Basically, Color Fundus image, measured on the same day is displayed. But if none, IR Fundus image is displayed.
- 2 B Scan image for the yellow scan line is displayed.
- 3 Thickness graph for the yellow scan line is displayed.
- 4 Thickness graphs of the both eyes are compared and displayed

#### Macular Raster Analysis Screen – Comparison

A PATIENT LIST	Huvitz_Demo / Test 2019-07-02/19941:19 / OD / Macular Raster(H) / 512x24 / 9x9mm / SSI:6	URL EXPORT COMMENT REPORT SCREEN DUMP RECALC
DATE	Summary OU Comparison	
2019-07-02 2018-09-20	R Fundus - 2019-31/22 / 02x41:39 Thickness Extra - 2019 31/22 / 02x44.54 Submit	R Fundas *
2019-07-02		
OD Disc Circle 1024x1 Disc Raster(H) 512x24 Disc Raster(H) 512x24 Macular Raster(H) 512x2 Macular Cross 1024x10 Macular Cross 1024x10		
OS No data available in table		

- 1 Measurement data that serves as the standard for comparison.
- 2 Able to select the measurement data that serves as the standard for comparison



#### **Disc 3D Analysis Screen – Summary**

1 Fundus image is displayed. Basically, Color Fundus image, measured on the same day is displayed. But if none, IR Fundus image is displayed. List up the list by clicking on the button when there is Color Fundus image that can be displayed. Able to use 1-Point-Magic function.

Thickness map and Enface image that are displayed on top of the Fundus image according to the Thickness (ILM-RPE/ILM-NFL) selection are displayed differently. Auto center and restore center buttons below the Fundus image that moves position of the RNFL Chart to Disc position or to the center of the scan domain position.

- 2 Disc and Cup domain's measurement information is displayed.
- 3 Displays diameter of 3.45mm ring's Thickness Profile by stacking with the Normative data.
- 4 Displays diameter of 3.45mm ring's B Scan by synthesizing.
- 5 Displays diameter of 3.45mm ring's Thickness with the average for each T-S-N-I domain.
- 6 Displays each T-S-N-I domain of No. (5) by segmenting into three parts.
- 7 B Scan image is displayed for the yellow scan line (horizontal) displayed on No. ①.
- 8 B Scan image for the blue scan line (vertical) displayed on No. ① is displayed (HD image fixation)
- 9 Scan image's Brightness / Contrast can be calibrated.
- 10 Able to designate the number of B Scan images displayed on one screen. Able to display up to the number of (lines x rows). Able to display by applying measurement of distance among the two points of the B Scan image, Color Map Overlay, Monochrome and Monochrome reverse function.
- 11 Thickness Map and Enface image are displayed. Able to use 1-Point-Magic function.
- 12 Other functions are the same as those of the <u>Macular 3D Analysis Screen Summary</u>.



#### Disc 3D Analysis Screen – OU

- 1 Displays diameter of 3.45mm ring's Thickness Profile stacked with Normative data along with the two eyes.
- 2 Difference value of ① is displayed as candle chart.
- 3 Measurement information figure for the Disc domain for both eyes is displayed together.
- 4 Other functions are the same as those of the Macular 3D Analysis Screen OU.

오 PATIENT LIST	Huvitz, Demo / Test 2018-09-20 / 11:24:01 / OD / Disc 3D(H) / 512:06 / 6x6mm / SSI:7	
DATE 2018-09-20 2018-09-20 OD Cofor Fundus Disc 30(4) 512-56 Macalar Wel(4) 512-56	Summary         OU         Progression         Comparison         20           I Lut Edit         Indoess         ILM ML •         If         If<	
Macular Wide(19) 312:06 Macular 30(19) 512:06 Macular 30(19) 512:06 Macular Wide(11) 512:06 Macular 30(19) 512:06 Macular 30(19) 512:06 Macular 30(19) 512:06 Anterior (nag) 102:41 Anterior Radial 1074:12 Color Fundus	RNTL Quadrant Graph Crop Data Graph Complexity and	B Candor U N

#### **Disc 3D Analysis Screen – Progression**

- 1 RNFL-4 value trend for the listed measurement is displayed in graph.
- 2 Cup/Disc Ratio trend for the listed measurement is displayed in graph.
- 3 Cup/Disc Area trend for the listed measurement is displayed in graph.
- 4 Able to select measurements subjected to comparative analysis individually through Progression



#### Disc 3D Analysis Screen – Comparison

- 1 Measurement data that serves as the standard for comparison.
- 2 Able to select the measurement data that serves as the standard for comparison

#### Disc 3D Analysis Screen – 3D

Function is same as that of the Macular 3D Analysis Screen – 3D.





#### **Disc Radial Analysis Screen – Summary**

- 1 Fundus image is displayed. Basically, Color Fundus image, measured on the same day is displayed. But if none, IR Fundus image is displayed. Able to use 1-Point-Magic function.
- 2 Thickness Map for the selected Thickness is displayed. RNFL-4 Chart and RNFL-12 Chart are displayed. Able to use 1-Point-Magic function.
- 3 B Scan image for the yellow scan line is displayed.
- 4 B Scan image for the blue scan line is displayed.
- 5 Thickness graph for the yellow scan line is displayed.
- 6 Thickness graph for the blue scan line is displayed.

#### Disc Radial Analysis Screen – OU

久 PATIENT LIST	Huwitz, Demo / Test 2018-09-20 / 10-55-40 / OD / Disc Radial / 1024x12 / 6x6mm / SSI-5	URL EXPORT COMMENT REPORT SCREEN DUMP RECALC
DATE	Summary OU Comparison	
2018-09-20	R Fundia OD 2018/99-201/1054-00 Toto And I T	· R Finds ·
OD Macular 30(H) 512-06 Anterior Line(H) (10/4x1 Anterior Radial 10/24x1 Color Fundus Macular Wide(H) 512-06 Disc Raster(H) 512-24		
OS Macular Wide(H) 512x96 Macular Wide(H) 512x96 Macular 30(H) 512x96 Macular 30(H) 512x96 Anterior Line(H) 8024x1 Anterior Radial 1024x12 Color Fundus		

- 1 Fundus image is displayed. Basically, Color Fundus image, measured on the same day is displayed. But if none, IR Fundus image is displayed.
- 2 Thickness graph for the yellow scan line is displayed.
- 3 Thickness graphs of the both eyes are compared and displayed.



#### Disc Radial Analysis Screen – Comparison

Able to carry out comparative analysis by selecting the list on the measurements of the 1 same area.



#### **Disc Raster Analysis Screen – Summary**

- 1 Fundus image is displayed. Basically, Color Fundus image, measured on the same day is displayed. But if none, IR Fundus image is displayed. Able to use 1-Point-Magic function.
- Thickness Map for the selected Thickness is displayed. RNFL-4 Chart and RNFL-12 Chart 2 are displayed. Able to use 1-Point-Magic function.
- B Scan image for the yellow scan line is displayed. 3
- 4 B Scan image for the blue scan line is displayed.
- 5 Thickness graph for the yellow scan line is displayed.
- 6 Thickness graph for the blue scan line is displayed.
- 7 Able to designate the number of B Scan images displayed on one screen. Able to display up to the number of (lines x rows). Able to display by applying measurement of the distance between the two points of B Scan

image, Color Map Overlay, Monochrome, and Monochrome reverse function.



#### Disc Raster Analysis Screen – OU

- 1 Fundus image is displayed. Basically, Color Fundus image, measured on the same day is displayed. But if none, IR Fundus image is displayed.
- 2 Thickness graph for the yellow scan line is displayed.
- 3 Thickness graphs of the both eyes are compared and displayed.



#### **Disc Raster Analysis Screen – Comparison**

1 Able to carry out comparative analysis by selecting the list on the measurements of the same area.



#### **Disc Circle Analysis Screen – Summary**

- 1 Fundus image is displayed. Basically, Color Fundus image, measured on the same day is displayed. But if none, IR Fundus image is displayed.
- 2 B Scan image filmed along the yellow circle is displayed.
- 3 Thickness graph for the B Scan is displayed.
- 4 Able to display by applying measurement of the distance between the two points of B Scan image, Color Map Overlay, Monochrome, and Monochrome reverse function.

오 PATIENT LIST	Husitz, Demo / Test 2018 09-20 / 10-41:06 / OD / Disc Circle / 1024x1 / 4x4mm / SSL5	URL EXPORT COMMENT REPORT SCREEN DUMP RECALC
DATE	Summary OU Comparison	
2018-09-20	R Concentration	. R Funds .
2018-09-20		
OD Contribution Discular Welch(1) 512:06 Disc Radial (1024:12 Disc Ratier(1) 512:04 Color Fundus Disc 3D(1) 512:06 Disc Circle 1024:1		
OS Macular Wide(H) 512:06 Macular Wide(H) 512:06 Macular 30(H) 512:06 Macular 30(H) 512:06 Anterior Line(H) 1024x1 Anterior Radial 1024x12 Color Fundus		

#### Disc Circle Analysis Screen – OU

- 1 Fundus image is displayed. Basically, Color Fundus image, measured on the same day is displayed. But if none, IR Fundus image is displayed.
- 2 Thickness graph for the yellow Circle scan line is displayed.
- 3 Thickness graphs of the both eyes are compared and displayed.



#### **Disc Circle Analysis Screen – Comparison**

1 Able to carry out comparative analysis by selecting the list on the measurements of the same area.



#### Anterior Radial Analysis Screen – Summary

- 1 Fundus image is displayed. Basically, IR Fundus image is displayed. Scan path is displayed on top of the Fundus image.
- 2 Selects Thickness to display on top of the Fundus image.
- 3 Thickness and curvature measured according to the selected Thickness domain is displayed into height through Color Map.
- 4 B Scan image for the yellow scan line is displayed.
- 5 B Scan image for the blue scan line is displayed.
- 6 Thickness graph for the yellow scan line is displayed.
- 7 Thickness graph for the blue scan line is displayed.
- 8 Able to designate the number of B Scan images displayed on one screen. Able to display up to the number of (lines x rows).

Able to display by applying measurement of the distance between the two points of B Scan

image, Color Map Overlay, Monochrome, and Monochrome reverse function.

옷 PATIENT LIST	Huvitz, Demo / Test 2018-09-20 / 10:59:57 / OD / Anterior Radial / 1024x12 / 6x/6mm / SSI:6	URL EXPORT COMMENT REPORT SCREEN DUMP RECALC
DATE	Summary OU Comparison	
2018-09-20	R         Fundus         OD         2018/99-20 / 105/927         Thickness         UPV-IND         •         OS         2018/99-30 / 105/927           •         •         •         •         •         •         •         •         •         •         •         OS         2018/99-30 / 105/927           •         •         •         •         •         •         •         •         •         •         •         •         •         0.5         2018/99-30 / 105/923         • <th>m • R Fundas •</th>	m • R Fundas •
2018-09-20		
OD Macular 30(H) 512:56 Anterior Radial (2024) Anterior Radial (2024) Color Fundus Macular Wide(H) 512:66 Disc Radial (1024:12 Disc Raster(H) 512:24		
OS Macular 30(H) 512:06 Anterior Line(H) 102:4c1 Anterior Radial 102:4c1 Color Fundus Macular Wide(H) 512:06 Disc Radial 102:4c1 Disc Raster(H) 512:o24		

#### Anterior Radial Analysis Screen - OU

- 1 Fundus image is displayed. Basically, IR Fundus image is displayed.
- 2 Thickness graph for the yellow scan line is displayed.
- 3 Thickness graphs of the both eyes are compared and displayed.

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A PATIENT LIST	10012_Demo / Test 2019-07-02 / 11:08:36 / OD / Anterior Radial / 1024x12 / 6x6mm / SSI:6	URL EXPORT COMMENT REPORT SCREEN DUMP RECALC
DATE	Summary OU Comparison	
2019-07-02 2018-09-20	R         Fundus         OD         2019 07 02/11:08:36 Anterior Radial / 1024:12 Grimm         Enterior         Patho         OD         2019 07 02/11:08:59 Anterior Radial / 1024:12 Grimm	R Fundas •
2019-07-02		
OD Anterior Radial 1024x12 Anterior Radial 1024x12 Anterior Line(H) 1024x1 Anterior Line(H) 1024x1 Disc Circle 1024x1		
Disc Raster(H) 512x24 Disc Radial 1024x12		
	🖬 · Q	
OS No data available in table		

#### Anterior Radial Analysis Screen – Comparison

- 1 Able to carry out comparative analysis by selecting the list for the measurement of the same part.
- 2 Function is the same as that of the <u>Anterior Radial Analysis Screen OU</u>.

# R PATIENT LIST Note: Disc. Disc. Del O / List. Le / O / Atteleior Line(H) / 10244.1 / Golmin / SSL5 Disc. Disc.

#### Anterior Line Analysis Screen – Summary

- 1 Fundus image is displayed. Basically, IR Fundus image is displayed. Scan path is displayed on top of the Fundus image.
- 2 B Scan image's Brightness / Contrast can be calibrated
- 3 Able to display by measuring the angle and length within the B Scan, Color Map Overlay, Monochrome, and by applying Monochrome reverse function.



#### Anterior Line Analysis Screen – OU

- 1 Fundus image is displayed. Basically, IR Fundus image is displayed.
- 2 Bscan for the both eyes are displayed.

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#### Anterior Line Analysis Screen – Comparison

- 1 Able to carry out comparative analysis by selecting the list for the measurement of the same part.
- 2 Function is the same as that of the <u>Anterior Line Analysis Screen OU</u>.



#### Anterior Wide Analysis Screen – Summary

- 1 Fundus image is displayed. Basically, IR Fundus image is displayed. Scan path is displayed on top of the Fundus image.
- 2 B Scan image's Brightness / Contrast can be calibrated
- 3 Able to display by measuring the angle and length within the B Scan, Color Map Overlay, Monochrome, and by applying Monochrome reverse function.



#### Anterior Wide Analysis Screen – OU

- 1 Fundus image is displayed. Basically, IR Fundus image is displayed.
- 2 Bscan for the both eyes are displayed.

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#### Anterior Wide Analysis Screen – Comparison

- 1 Able to carry out comparative analysis by selecting the list for the measurement of the same part.
- 2 Function is the same as that of the <u>Anterior Line Analysis Screen OU</u>.

#### Angiography Analysis Screen - Summary (1)



- 1 Single: display angio information about only single eye.
  - OU: display angio information about both of eyes.

- Progression: It is easy to check the progress by comparing the eyes taken over several days.

- Compare: compare angio data from two different days.
- 2 Choose one between Basic angio map and Detail angio map
- 3 Select the angiogram in the combo box.
  - Custom: Its signal depth is customized by user. As user set the depth range, angiogram is also changed

Superficial: Its signal depth is from ILM(0um) to IPL(0um).

- 4 Deep: Its signal depth is from IPL (0um) to OPL(0um).
- 5 Outer: Its signal depth is from OPL(0um) to BRM(0um).
- 6 Choriocapillary: Its signal depth is from BRM(15um) to BRM(45um).
- 7 Retina: Its signal depth is from ILM(0um) to OPL(0um).
- 8 Select the image in the combo box.
  - Enface: It represent Enface image.
  - Thickness: It represent Thickness map.
  - Depth coded map: Choriocapillary, Deep, Outer map is overlapped in this image.
- 9 Inform the layer&depth of the displayed image.
- 10 Acquired B-Scan with angiogram. And Tomography can overlap with a red color for a blood probability.
- 11 Able to amplify and view B-scan image.
- 12 B Scan image can be subjected to browsing. Animation effect is displayed when pressing on the up/down button.

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#### Angiography Analysis Screen - Summary (2)

- 1 Select the angiogram in the combo box.
  - Superficial: Its signal depth is from ILM(0um) to IPL(0um).
  - Deep: Its signal depth is from IPL (0um) to OPL(0um).
  - Outer: Its signal depth is from OPL(0um) to BRM(0um).
  - Choriocapillary: Its signal depth is from BRM(15um) to BRM(45um).
  - Retina: Its signal depth is from ILM(0um) to OPL(0um).
  - Custom: Its signal depth is customized by user. As user set the depth range, angiogram is also changed
- 2 Select the image in the combo box.
  - Enface: It represent Enface image.
  - Thickness: It represent Thickness map.
  - Depth coded map: Choriocapillary, Deep, Outer map is overlapped in this image.
- 3 Calculate Blood vessel densities and Flows in each sections.



4 Fovea Avascular Zone



-Area: FAZ area in mm<sup>2</sup>. -Perimeter: FAZ perimeter in mm. -Circularity: FAZ circularity ratio.

-Circularity: FAZ circularity ratio.5 Acquired B-Scan with angiogram. And Tomography can overlap with a red color for a blood probability.



#### Angiography Analysis Screen – OU



- 2 FAZ (1) Screen
- 3 VESSEL



#### Angiography Analysis Screen – Comparison



- 1 Change the standard of single eye.
- 2 FAZ (1) Screen
- 3 VESSEL



#### Angiography Analysis Screen – Progression



- 1 Select data with which you want to compare in the list box.
- 2 Select data with which you want to compare in the list box.
- 3 Select data with which you want to compare in the list box.
- 4 Select the angiogram in the combo box.
  - Superficial: Its signal depth is from ILM(0um) to IPL(0um).
  - Deep: Its signal depth is from IPL (0um) to OPL(0um).
  - Outer: Its signal depth is from OPL(0um) to BRM(0um).
  - Choriocapillary: Its signal depth is from BRM(15um) to BRM(45um).
  - Retina: Its signal depth is from ILM(0um) to OPL(0um).
  - Custom: Its signal depth is customized by user. As user set the depth range, angiogram is also changed
- 5 FAZ, VESSEL : It shows progression with graph.
- 6 FAZ Parameter : Area, Perimeter, Circularity



#### Color Fundus Analysis Screen – Summary (1)

- 1 Displays on the Fundus image by removing RED color (Red-Free button). Displays on the Fundus image by applying Red-Free and Emboss filter (Emboss button).
- 2 Download a currently displayed Fundus as jpg
- 3 Fundus image's reference point is displayed.
- 4 Length, Area mass, Cup/Disc proportion are measured.
- 5 Displays on the Fundus image using selected color.
- 6 User can apply the following values on the Fundus image arbitrarily.
  - Brightness: Brightness control
  - Contrast: Contrast control
  - Hue: Color control
  - Saturation: Chroma control
- 7 Values measured on ④ are displayed.

# R PATIENT LIST Huitz\_Demo/Ted DATE Summary OU Comparison PUBL 00-93 DORS D0 December 2001 12:02:01 D0 December 2001 12:02:01

#### Color Fundus Analysis Screen – Summary (2)

1 Measures the length at the inside of the Fundus. Displays the distance from mouse click to release by measuring the length. Able to calibrate move and length after measurement is completed, by clicking on the measurement point (unit: mm).

- 2 Measures the area mass at the inside of the Fundus. Displays the distance from mouse click to release by measuring the length. Able to calibrate move and length after measurement is completed, by clicking on the measurement point. When segment is clicked on, point is added, and able to modify into polygon (unit: mm2).
- 3 When the button is clicked on, two circles are drawn, and move to the Cup/Disc position for measuring diagram takes place. Proportion is measured by calibrating to suit the size.

#### Color Fundus Analysis Screen – OU

Able to carry out comparative analysis on the Fundus of the both eyes.



1 Able to carry out comparative analysis by selecting the list on other measurement parts.



#### **Color Fundus Analysis Screen – Comparison**

1 Able to carry out comparative analysis by selecting the list on the same measurement parts.



#### **Color Fundus Analysis Screen – Stereo**

1 Able to carry out comparative analysis by selecting the list on the same measurement parts.



#### Color Fundus Analysis Screen – Panorama

- 1 Selects the fundus image that is the target for moving. Selected image is displayed on No. 2 domain, and it is displayed slightly more transparent compared to other images.
- 2 Modify positon by selecting Fundus image.
- 3 Able to modify background color.
- 4 Able to apply redfree effect after Stitch is completed.
- 5 When the stitch button is pressed on after modifying image's position in the No. 2 domain, merged image gets output.



6 Press on the stitch reset button to merge again after modifying the position.

#### **Biometry Analysis screen – Summary**

Biometry OCT module is available as an upgrade to the HOCT system.



1 Screen setting

- Single: display Biometry information about only single eye.

- OU: display Biometry information about both of eyes.
- 2 OD / OS : Indicates which side of eye is showing.
- 3 Full Anterior : Display the measurement results of the Full Anterior (Bscan)
- 4 Anterior Radial results : Display the measurement results of the Anterior Radial (Thickness map)
- 5 Axial Length results : Display the measurement results of the Axial Length (AL)
- 6 Lens Thickness results : Display the measurement results of the Lens Thickness (ACD, LT, CCT)
- 7 Axial Length Bscan Image : Display selected Bscan Image in (5)
- 8 Lens Thickness Bscan Image : Display selected Bscan Image in (6)
| Biomet | ry                     |       |              |                |                                  |                               |           |                     |          |           |             |               |                            |   |
|--------|------------------------|-------|--------------|----------------|----------------------------------|-------------------------------|-----------|---------------------|----------|-----------|-------------|---------------|----------------------------|---|
| 2      | AxialLength / [Phakic] |       |              |                |                                  |                               |           |                     |          |           |             |               | REPORT                     |   |
|        |                        |       |              |                | Singl                            | e                             | 0         | U                   |          |           |             |               |                            |   |
| OD     |                        |       |              |                |                                  |                               |           |                     |          |           |             |               |                            | OS  |
| AL     | 7/2/2020 5:42:57 PM ~  | LT    | 7/2/2020 4:0 | 09:21 PM       |                                  | ×                             | AL        | 7/2/2020 5:40:22 PM | ~ LT     |           | 7/2/2020 3: | 43:20 PM      |                            | ٠   |
| Index  | AL(mm)                 | Index | ACD(mm)      | LT(mm)         | CCT(mm)                          |                               | Index     | AL(mm)              |          | Index     | ACD(mm)     | LT(mm)        | CCT(mm)                    |   |
| #1     | 24.68                  | #1    | 23.099       | 0.000          | 18.446                           | $\sim$                        | #1        | 25.66               | <u>^</u> | 1         | 6.968       | 0.000         | 3.704                      | 1   |
| #2     | 24.75                  | #2    | 8.356        | 0.000          | 3.704                            |                               | #2        | 25.70               |          | 12        | 6.968       | 0.000         | 3.704                      |   |
| #3     | 2/1                    | #3    | 8.356        | 2              | 3.704                            |                               | #3        | 25 E                | 4        | 13        | 6.968       | 20            | 3.704                      |   |
| #4     |                        | #4    | 8.356        | 2              | 3.704                            |                               | #4        | 2.2                 |          | #4        | 6.968       |               | 3.704                      |   |
| #5     | 24.66                  | #5    | 8.356        | 0.000          | 3.704                            |                               | #5        | 25.70               | 1        | 15        | 6.968       | 0.000         | 3.704                      |   |
|        | 24.70                  |       |              | 0.00           | 0.000                            |                               |           | 25.60               | -        |           | 6.07        | 0.00          | 2 704                      | ~   |
| SD     | 24.70                  | SD    | 5 90         | 0.00           | 5.897                            |                               | AVG<br>SD | 25.68               | í í      | AVG<br>SD | 0.00        | 0.00          | 3.704                      |   |
| Range  | 24.66 ~ 24.75          | Range | 8.36 ~ 23.10 | 0.00 ~ 0.00    | 3.704 ~ 18.44                    | 46                            | Range     | 25.64 ~ 25.70       |          | Range     | 6.97 ~ 6.97 | 0.00 ~ 0.00   | 3.704 ~ 3.70               | 04  |
| Full   | 7/2/2020 3:45:17 PM    | ~     | Radial       | 7/8/2020 9:41: | 39 AM ~                          | [PAC]                         | Full      | 7/2/2020 3:45:06 PM | 1        | ÷         | Radial      | 7/8/2020 9:43 | :54 AM ~                   | [PAC]                                     |
| ß      | 3                      |       |              | 4              | 80<br>70<br>60<br>50<br>40<br>30 | 00<br>00<br>00<br>00<br>00 um | a de la   | -7                  | 1 al     |           |             | 8             | 8<br>7<br>6<br>5<br>4<br>3 | 800<br>100<br>500<br>500<br>100<br>800 um |

# **Biometry Analysis Screen - OU**

- 1 Axial Length Results (OD) : Display the measurement results of the Axial Length. (OD) (AL)
- 2 Lens Thickness Results (OD) : Display the measurement results of the Length Thickness. (OD) (ACD, LT, CCT)
- 3 Full Anterior Results (OD) : Display the measurement results of the Full Anterior(OD) (Bscan)
- 4 Anterior Radial Results (OD) : Display the measurement results of the Anterior Radial (OD) (Thickness map)
- 5 Axial Length Results (OS) : Display the measurement results of the Axial Length. (OS) (AL)
- 6 Lens Thickness Results (OS) : Display the measurement results of the Length Thickness. (OS) (ACD, LT, CCT)
- 7 Full Anterior Results (OS) : Display the measurement results of the Full Anterior(OS) (Bscan)
- 8 Anterior Radial Results (OS) : Display the measurement results of the Anterior Radial(OS) (Thickness map)



# **Topography Analysis Screen - Summary**

- 1 Information : Display basic information for exam.
- 2 Basic/Detail Display : Choose one between Basic Topography map and Detail Topography map
- 3 Topography map : Display Topography map.
- 4 Cornea View : Display Cornea Image.
- 5 Summary Table : Display Summary data table for analysis.
- 6 Bscan Image : Display Bscan for Topography.



# **Topography Analysis Screen - Detailed**

1 Basic/Detail Display : Choose one between Basic Topography map and Detail Topography map.

- 2 Topography map : Display Topography map.
- 3 Summary Table : Display Summary data table for analysis.
- 4 Change unit : Change the unit of curvature data.
- 5 Change unit scale : Change the unit scale of the data.
- 6 Change overlay display : Change the overlay display item

Topography				
C TopoTest /				REPORT
	Single	OU Compare	Progression	
OD 6/11/2020 9:57:58 AM / 16x10	24 / 8x8mm / SSI: 7		9:56:07 AM / SSI: 7	~ <b>OS</b>
Axial (Anterior) ~	Central Keratometry - SimK	4	~ A	xial (Anterior)
66.00	OD		OS	500
60.00 57.00 54.00	Anterior	Anterior	6 5 5	000
48.00	Kf 44.93D@18° Min K	45.10D@66° Kf 45.30D@	172° Min K 46.38D@65°	1.00
45.00	Ks 45.27D@108° Avg K	44.76D Ks 46.57D@	32° Avg K 45.68D	500 200
3900 3400 3100	Cyl 0.33D@18°	Cyl 1.27D@1	72*	
3000	< • • • •		••••	
Axial (Posterior)		5 Difference	A	xial (Posterior)
-9.75			4	175
425	Anterior	Posterior		23
-825 -775	Kf -0.37D@-153° Min K	-1.28D@1° Kf 0.04D@-17	4° Min K 0.23D@-23°	
-725	Ks1_31D@26° Avg K	Ks0.27D@5°	Ανσ Κ 0.11D	25
4.8				25
-525	Cyl -0.94D@-153°	Cyl -0.23D@-17	'4°	25
43		• •	>	
-175				175

# **Topography Analysis Screen - OU**

- 1 Data list box: Select data to compare in the list box.
- 2 Topography Map (OD) : Display Topography map. (OD)
- 3 Topography Map (OU) : Display Topography map. (OU)
- 4 Summary list box : Select summary table to compare in the list box.
- 5 Difference : Display comparative data.

Тородгарну		
CopoTest /		C. REPORT
	Single OU Compare Progress	ion
6/11/2020 9:57:58 AM / 16x1024 / 8x8mm / S	si: 7 ← <mark>2</mark> 5/11/2020 9:57:49 AM /	SSI: 7 ~
Axial (Anterior)	<ul> <li>Difference Map</li> </ul>	Axial (Anterior) ~
400 400 400 100 400 100 400 100 1	1200 100 1000 1	400 5 5 5 5 5 5 5 5 5 5 5 5 5
Central Keratometry - SimK	<ul> <li>Difference Summary</li> </ul>	Central Keratometry - SimK ~
Anterior 6	Anterior 7	Anterior 8
Kf 44.93D@18° Min K 45.10D@66°	Kf 3.39D@-143* Min K 2.33D@-13*	Kf 41.54D@162° Min K 42.77D@79°
Ks 45.27D@108° Avg K 44.76D	Ks 2.62D@36* Avg K 2.62D	Ks 42.64D@72° Avg K 42.14D
Cyl 0.33D@18°	Cyl - <b>0.77D@-143*</b>	Cyl <b>1.10D@162°</b>
< • • • • • >	< • • • • • • >	< 0000

# **Topography Analysis Screen - Comparison**

- 1 Information : Display basic information for exam.
- 2 Data list box : Select data to compare in the list box.
- 3 Topography map : Display topography map of the selected exam.
- 4 Difference map : Display the difference in topography map between the selected and the compared exam.
- 5 Topography map : Display topography map of the compared exam.
- 6 Summary Table : Display selected exam's summary data table for analysis.
- 7 Difference Summary Table : Display the difference between selected exam with compared exam.
- 8 Summary Table : Display compared exam's summary data table for analysis.

Topography			
C TopoTest /			REPORT
	Single OU	Compare Progression	
(1) 6/11/2020 9:57:58 AM / 16x1024 / 8	3x8mm / SSI: 7		
6/11/2020 9:56:49 AM / SSI: 7 ~	6/11/2020 9:57:26 AM / SSI: 7 ~	6/11/2020 9:57:49 AM / SSI: 7 ~	Axial (Anterior) ~
5	4	3	2
Central Keratometry - SimK	Central Keratometry - SimK	Central Keratometry - SimK	Central Keratometry - SimK ~
Anterior 9	Anterior 8	Anterior 7	Anterior 6
Kf 42.90D@4* Min K 44.75D@101*	Kf 39.04D@176* Min K 43.15D@87*	Kf 41.54D@162* Min K 42.77D@79*	Kf 44.93D@18* Min K 45.10D@66*
Ks 44.72D@94° Avg K 43.86D	Ks 43.29D@86° Avg K 40.97D	Ks 42.64D@72° Avg K 42.14D	Ks 45.27D@108° Avg K 44.76D
Cyl <b>1.82D@4*</b>	Cyl 4.25D@176*	Cyl 1.10D@162*	Cyl 0.33D@18*
< • • • • • >	< • • • • • >	< • • • • • >	<
11) 100.0 60.0 42.90 39.04 40.0 20.0 20.0 0.0	41.54 44.33	10 Anterior Kf Min K A	Ks Cyl <b>&gt;</b> vg.K

## **Topography Analysis Screen - Progression**

- 1 Information : Display basic information for exam.
- 2 Topography map : Display topography map of the selected exam.
- 3 Topography map (1) : Display topography map of the compared exam.
- 4 Topography map (2) : Display topography map of the compared exam.
- 5 Topography map (3) : Display topography map of the compared exam.
- 6 Summary Table : Display selected exam's summary data table for analysis.
- 7 Summary Table (1) : Display compared exam's summary data table for analysis.
- 8 Summary Table (2) : Display compared exam's summary data table for analysis.
- 9 Summary Table (#) : Display compared exam's summary data table for analysis.
- 10 Graph setting : Select the analysis data to be displayed on the graph.
- 11 Summary Graph : Display selected data in (10).

### 1. Topography map

- I. Axial map
  - This map is useful for understanding the overall curvature distribution of the cornea.
  - Calculate the vertical distance from the corneal surface to the central optical axis as the radius of curvature.
  - The radius of curvature always ends at the central optical axis.



- For example, the curvature of points P1 and P2 on the measurement surface is 6.5 and 7.5, respectively.
- Also known as sagittal map.

#### II. Tangential map

- This map is useful for understanding the partial curvature changes of the cornea.
- Calculate the instantaneous curvature of each position independent of the central optical axis.
- A more accurate curvature value can be identified for a particular position. But noise can
  occur as sensitive to change.
- III. Refractive Power
  - This map displays the refractive power of the cornea.
  - Calculate the curvature using the Focal Length obtained by Snell's law.

HUVITZ Integrated Image Server, HIIS-1



- Kerato map and Axial map display curvature of the front and use the Refractive index 1.3375 and 1.3376, respectively.
- Posterior map displays the rear curvature.



• Total map uses a ray tracing technique that tracks the movement of light through the cornea. The most accurate refractive power can be calculated by considering the slope of the anterior and posterior cornea, the thickness of the cornea, the difference in refractive index between the air and the corneal tissue and the vitreous body.

### VII. Net Power

- This map displays the refractive power of the cornea.
- Total refractive power is the sum of the front and rea refractive power. The refractive power uses the curvature obtained by sagittal method.
- Use corneal index (1.376) for front refractive power calculations and Vitreous index(1.336) for rear refractive power calculations.



• If the path of incident light is the same as shown above, the Net Power at point Pa is [Reflection at Pa + Reflection at Pp].

VIII. Axial True Net

- This map displays the refractive power of the cornea.
- Calculate the total refractive force by considering the lens thickness and the refractive power at the front and rear. The refractive power uses the curvature obtained by sagittal method.
- Use corneal index (1.376) for front refractive force calculations and Vitreous index (1.336) for rear refractive force calculations.

### IX. Equivalent Keratometer

- This map displays the refractive power of the cornea.
- Use a typical anterior and posterior corneal curvature ratio (0.822) and a simulated curvature ratio (0.8976).
- Equivalent Keratometer is designed to identify corneal refractive power in corneal surgery patients.

#### X. Elevation

- Assume the ideal circle that best fits the measured corneal data and calculate the difference between that circle and the measured data to make a map.
- XII. Height
  - Calculate the height difference between each part of the cornea and the cornea peak to make a map.
- XIII. Pachymetry

Calculate the thickness of the cornea to make a map.

### XIV. Epithelium

- Calculate the thickness of the Epithelium to make a map.
- 2. Topography Analysis Data
  - I. Central Keratometry SimK
    - Displays the simulated Keratometry value of the central area(3mm)
    - Calculate based on Axial map data.
  - II. Keratometry (Meridian)
    - Meridian(bidirectional) Astigmatism information by area(3mm, 5mm, 7mm) is displayed.
    - The minor axis(Ks) is determined in the direction vertical to the major axis(Kf).
    - Calculate based on Axial map data.
  - III. Keratometry (SemiMeridian)
    - Semi-Meridian(unidirectional) Astigmatism information by area(3mm, 5mm, 7mm) is displayed.
    - Calculate the minor axis(Ks) and the major axis(Kf) and the major axis(Kf) is calculated for the right and left side of the eye, respectively.
    - Calculate based on Axial map data.
  - IV. Keratoconus screening
    - Analyze information that can be used as a reference for conical cornea diagnosis.
    - Keratoconus Prediction Index
      - The following index information is analyzed to predict and display the probability of conical cornea.
    - Keratoconus
      - Analyze KPI and the following index information to predict and display the corneal condition.
    - Surface Asymmetry Index
      - For all locations on the map, the average value of the difference in refractive power form the opposite point is displayed.
    - Differential Sector Index
      - Divide the entire area into 8 sectors according to the direction and calculate the average power of each sector.
      - Display the difference by taking the two values with the most difference of them.
    - Opposite Sector Index
      - Divide the entire area into 8 sectors according to the direction and calculate the average power of each sector.
      - Display the most difference by compared with the value in the opposite direction.
    - Central/Surrounding Index
      - Divide the entire area into a central area and an outer area and calculate the average power of each area.
      - Display the difference between the two values.
    - Irregular Astigmatism Index

- Display as a numerical value After calculating the difference between each ring and the surrounding ring.
- V. Pachymetry
  - Display thickness information of cornea.

# **Refraction Screen Overview**

은 PATIENT LIST	00001 / 2019-06-28 / 15:30:52 / / Refraction /			8 🗎				
DATE		Refra	action					
2019-06-28 2019-06-14	REF / KER Select 7	Lensmeter Select 7 •	Subjective Select 7 •	Final Data Select 7 •				
2019-06-13	OD PD64.0 OS No data available in table	OD PD OS No data available in table	OD PD64.0 OS No data available in table	OD PD64.0 OS No data available in table				
2018-02-02								
	2	3	4	5				
	Color 🚯 IOL							
	Comment							
	6							
				9				
				Cancel Save				

- 1 Indicates the dates for the current patient's examination history.
- 2 Indicates measurement data for both eyes. By popup, can check Color, IOL, TFBUT and MEIBO image.
- 3 Indicates measurement date of Lensmeter for both eyes.
- 4 Indicates measurement date of subjective both eyes.
- 5 Based on the values adjusted during the measured, the final measurement data for both eyes are displayed.
- 6 Displays the screen where Comment can be input.
- 7 It displays measurement result from server in descending order. When choosing one from the list, it displays below.
- 8 URL that can move immediately to the current inspection is copied
- 9 Save or cancel the imported measurement data

은 PATIENT LIST	00001/ 2019-06-28/20:21:40	6//Refraction	/									URL
DATE						Refr	action					
2019-06-28	REF / KER	Select	2.	Lensmeter	Select	•	Subjective	Select	•	Final Data	Select	•
2019-06-14		PD64.0			PD64.0			PD64.0			PD64.0	
2019-06-13	+ 5.0	0 SPH	+ 5.00	+02.06	SPH		+ 5.00	Sph(Far)	+10.00	+ 5.00	Sph(Far)	+10.00
2018-02-02	REF +21.0	IO CYL	+21.00	-05.00	CYL		+21.00	Cyl(Far)	+00.11	+21.00	Cyl(Far)	+00.11
	10	AXIS	100	080	AXIS		10	Axis(Far)	10	10	Axis(Far)	10
	+2.0	0 R1	+2.00	-00.09	PRISM(X)		+2.00	Add(Far)	+2.00	+2.00	Add(Far)	+2.00
	KER +2.0	0 R2	+2.00	+00.67	PRISM(Y)			Hor. Prism(Far)	-		Hor. Prism(Far)	
	mm ⊧ +2.0	0 Axis	100	00.00	ADD1	22.22		Vert. Prism(Far)	-		Vert. Prism(Far)	
	Color	4 🚸	IOL 2	п.п	ADD2	33.33		Va(Far-OU)	-		Va(Far-OU)	
	TFBUT	1 💮 🛛		100/100	UV/BLUE	005/030		Va(Far)	-		Va(Far)	
							-	Sph(Near)	-		Sph(Near)	
	Comment							Cyl(Near)	-		Cyl(Near)	
								Axis(Near)	-		Axis(Near)	
								Hor. Prism(Near)	-		Hor. Prism(Near)	
								Vert. Prism(Near)	-		Vert. Prism(Near)	
								Va(Near-OU)	-		Va(Near-OU)	
								Va(Near)	-		Va(Near)	
											Cancel Save	(5)

# **Refraction Analysis Screen**

- 1 It creates the latest measurement data for the selected patient.
- 2 Click the list button to import patient's measurement data
- 3 Confirm the measurement data.
- 4 Confirm Color, IOL, TFBUT, MEIBO values if REF/KER data exists. The numbers besides Color, IOL, TFBUT, MEIBO displaying on Refractor Image, indicate number of images for each examination. By click the button, it shows a image.

Refracto	r Image					
	• Color	<b>4 %</b> IOL	2	TFBUT 1	MEIBO	1
OD			OS			
			Q		••	Q
						Cancel Save

5 Save all measurement data

	PatientID / Chalse Hures Grace Myopia Management		SCREEN DUMP
Patient ID		Myopia Management	
Name	Axial Length 00 05 Relative = List Edit	Curvature 00 05 Relative	
Chalse Hures Grace	(Diopter) 00 05 (1 19 26 13 250 (25 54mm) (1	mm) (Diopter) 00 05 05 05	(mm)
Gender Femail		45.20	7.81
Birth Date		25.53	
2012-01-12	14.50 (23.17mm)14.500 (23.17mm)14.500 (23.17mm)	23.17	
Refract OD 0.0 / OS 0.0	15.00 15.000 (72.64mm) (15.000 (72.64mm) ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ;	22.64	
Ethnicity	15.00	22.64	
Caucasian	15 000 (22.56mm)	43.250 (7.60mm)43.25D (7.60mm)	
Physician None	15.00 2022-02-22 2022-02-22 2022-03-06 2022-03-06 2022-03-06 09.50:15 17:13.41 16:12:45 16:13.06 16:13.32	22.56 43.25 2022-03-06 2022-03-06 2022-03-06 2022-03-06 2022-03-06 2022-03-06 2022-03-06 2022-03-06 2022-03-06 13.27.19 13.27.57 13.28.03 13.28.19 13.28.42 13.28.47	- 7.80
Operator None	SPH EQ 00 05 Relative	OD Asl Date/Time 2022-02-22 09:50:15 * Ref Date/Time 2022-03-08 1	
	(Diopter) 00 - 05	43200	
	5530 5530		
	-5.33	5.40	
	-5.51 -5510 -5510 -5510	43.200 HALL	
	-5.50	OS 8 +43.200	
	-5.47 -5.470		
	5.450 -5.450	-5.500	
	-3-45 2022-03-68 2022-03-68 2022-03-68 2022-03-68 2022-03-68 2022-03-68 13-27-19 13-27-57 13-28-03 13-28-19 13-28-42 13-28-47	-3.500 -200 -200 -100 100 200 3	1D 40D

# **Overview of Myopic Management Analysis Screen**

- 1. Display patient information.
- 2. It shows the Axial Length (AL) data of the right eye (OD) and left eye (OS) by date in a graph.
- 3. The graph shows the average curvature data of the right eye (OD) and left eye (OS) by date.
- 4. It shows the SPH EQ data of the right eye (OD) and left eye (OS) in a graph by date.
- 5. It shows the AL, curvature, and SPH EQ data of the right eye (OD) and left eye (OS) for a specific date at once.

() HUVITZ	Q			✓ Today	+ Add Patient			(2)	Myopia Wo
1 44									
ID ¢	Name 0	Birth Date 0	Last Visit 🗘	Patient ID	Name		Gender	Birth Date	Ethnicity
ност	ABC00200XYZ	1979-02-22	2022-03-30 15:56	PatientID	First Mid	dle Last	•м	1972-01-01	Asian
PatientID	First Middle Last	1972-01-01	2022-03-08 17:04	Refraction	Operator		Physician		
				OD/OS © Dat	e \$	Measurement	¢ Deta	o lie	PEDIT
				00 05 202 00 05 202 00 05 202	2-03-08 16:13:32 2-03-08 16:13:06 2-03-08 16:12:45	Axial Length Axial Length Axial Length	1024 102 1024	x1/4.5x0.0mm x1/4.5x0.0mm	ĺ
				00 0S 202 00 0S 202	2-03-08 13:14:20 2-03-07 11:50:25	Refraction	512x	96/9.0x9.0mm	

## How to use the Myopia Management Analysis Screen

1. Receive Axial Length and Refraction or Topography measurement data from the device.

2. If you select a patient with Axial Length, Refraction, and Topography measurement data, A button called "Myopia" is created on the upper left.

Click the "Myopia" button to enter the myopia management analysis screen.



1. Click "OD" button to show/hide right eye data. You can show or hide the left eye data by clicking the "OS" button.

2. Information of graph data can be displayed as Absolute and Relative. If the information of data by date is similar, it is easier to check it with Relative.

PatientID / Myopia Mar	ïirst Middle Last agement		
Axial Len	th op os Relave = List Ec	dit Curvature OD OS Absolute 🗮 List Edi	
( Diopter ) 13.25	00 08 13.250 p5 5fem)	(mm) (Diopter) 00 03	
13.25	11,20 (25.53mm)13,20 (25.53mm)	SPH EQ List	
14.50		2022-03-08 13:27:19	
15.00		2022-03-08 13:27:57 8:20 (7.61mm)(3.280 (7.61mm)(3.280 (7.61mm)(3.200 (7.61mm)(3.200 (7.61mm)(3.250 (7.60mm)(3.250 (7.60mm))	
15.00		<ul> <li>✓ 2022-03-08 13:28:03</li> <li>✓ 2022-03-08 13:28:19</li> </ul>	
15.00			
	09:50:15 17:13:41 16:12:45 16:13:06 16:13:32	✓ 2022-03-08 13:28:47 15.27.19 13.27.57 13.28.03 13.28.19 13.28.42 13.28.47	
SPH EQ	OD OS Relative	dit. Aul Date/Time 2022-02-22 09:59:15 * Ref Date/Time 2022-03-08 1	
( Diopter ) -5.53			
-5.53		15.000	
-5.51		Cancel OK E 43.200	
-5.50		<b>6</b> +43.200	
-5.47		5400 E	
-5.45		-100 -100 -100 -100 -100 -100 -100 -100	

1. Click the "List Edit" button to select the date you want to check.

2. If you click the List Edit button, a pop-up window that displays the patient's measurement data list by date appears. Select the date you want to check from the list pop-up window and click the "OK" button to apply it to the graph.



1. Open the two list combo boxes and select the measurement date of the data you want to check.

2. If you select the measurement date of the data you want to check, it confirms which part of the eye the information corresponds to.

3. If you select the measurement date of the data you want to check, the relevant information is classified into right eye (OD) and left eye (OS) and displayed in a graph. The right eye (OD) is shown in green and the left eye (OS) is shown in blue.

4. Captures the current screen and creates a PDF file.





E PatientID_2	0220308_170428_Ch 1 / 1   —	75% +   [	30		Ŧ	Ð
A PATIENT LIST	PatientiD / Chalse Hures Grace Mycpia Management				50	LO.
Palanen Nurris Challer Hums Grace Gender Fennal 301243.12 Nathast CoBAJ (OKBB CBASION Cascalan Honican Honican	Chief Length Color	Elastánt Curvatur (mm) (Degter 2554 43,20 2554 2264 2264 43,20 2264 43,20	е с с с с с с с с с с с с с с с с с с с	C.36 (2 Served) 25 (1 - 2 - 2 - 2 - 2 - 2 - 2 - 2 - 2 - 2 -	E Ust Edit D D Threes (1) D D Threes 2 D Threes 2 D D Threes 2 D	sen ) 81 30
Operator None	STIC         Control         C			<ul> <li>* 2020 00 10 2000 00 00 00 00 00 00 00 00 00 00 00</li></ul>	Rev 282 63 68 137 33	•

# After operation

- 1. HIIS-1 program does not provide an exit button within the program.
- 2. Click the 'X' button in the web browser to close the program.
- 3. The program will be automatically logged out

# **Trouble Shooting Guide**

Should the device function improperly, attempt to correct the problem according to the following table before contacting sales distributors.

Contact a sales distributor after turning off the power when the device does not resume normal operation even after taking the following measures.

Problem	Cause	Solution
Port number duplicated	PostgreSql is already installed	Uncheck PostgreSql when installing the HIIS-1

	A previous version of HIIS-1 is already installed	Delete the previous version and install the latest version
No data is transmitted to HIIS-1 server	Huvitz's equipment and server are not networked	Check that the Huvitz's equipment and HIIS-1 server are on the same network
	IP of HIIS-1 server is not correct.	Check the IP of HIIS-1 server is entered correctly on Huvitz's equipment.
Cannot access from HIIS-1 client to HIIS-1 server	HIIS-1 server and HIIS-1 clients are not networked	Check that the HIIS-1 server and HIIS-1 clients are on the same network
	IP of HIIS-1 server is not correct.	Check the IP of HIIS-1 server is entered correctly on HIIS-1 clients
No data displayed	Data transfer error	Transfer Data to HIIS-1 server again

# 4 Import Cannon fundus Data (EyeScape)

# ■ Import Watcher daemon

1. After running a browser (Chrome is recommended) on the PC, connect to HIIS.

_	HUVITZ	
		Contract Columna Terragoonly HUVITZ
		Login to your account
		LOGIN

- 2. After entering your ID and password, click the LOGIN button to log in.
- 3. On the ADMINISTRATOR screen, click [CONFIGURATION] / [SETUP] to move to the SETUP screen.
- 4. Enter and set appropriate values in the "Import Watcher daemon" field.
- \* EyeScape is a measurement data viewer program in Canon equipment.
- \* You can import patient and Fundus data from EyeScape program.

① USER	ETC
<ul> <li>② CONFIGURATION</li> <li>*SETUP</li> <li>*REPORT</li> <li>③ PATIENTS</li> </ul>	► Al Connection (MediWhale)       UPDATE         User       all         Enable       NO ✓         Host       https://eyeexam.ai         Scheme       huvitz_upload         ID       VIP_3         PW       Szx@9ril         Prefix       Huvitz         Custom Fundus       YES ✓
	Clear EXPORT directory CLEAR
	Enable YES V
	Path D:\Backup
	Delay 10
	Period 60
	Update YES 🗸
	Delete NO V

- Enable : If YES, the data is imported from the EyeScape program according to the set values.
- Path : This is the storage path where data is saved in the EyeScape program.

# 5 Huvitz's equipment connection diagram

# Huvitz's equipment connection diagram



# 6 Setting method for device connection

## ■ HIIS (v2.3.0) HUVITZ Integrated Image Server

1. After running a browser (Chrome is recommended) on the PC, connect to HIIS.

-	HUVITZ	
		Login to your account
		Password C REMEMBER ME
		LOGIN

- 2. After entering your ID and password, click the LOGIN button to log in.
- 3. On the ADMINISTRATOR screen, click [CONFIGURATION] / [SETUP] and set the value for the equipment that needs to be connected among the "Huvitz Connection Port" items.

① USER	Huvitz Connection Port
<b>② CONFIGURATION</b>	You can check data by connecting to Huvitz equipment.
+ SETUP	Step-2- Click the APPLY button. Step-3> Reboot your PC.
+ REPORT	► HLM (Auto Lensmeter) Port : 2100 APPLY
	► HRK (Auto Ref-Keratometer) NO 🗸 Port : 42000 (APPLY)
3 PATIENTS	► HNT (Non-contact Tonometer) NO V Port: 2400 APPLY
	Security Settings

4. If the device that needs to be connected is HLM, change NO to YES and click the APPLY button.

	octview.huvitz.co Successfully updat	om:8080 내용: red.	
USER     CONFIGURATION     + SETUP	You can check Step-1> Set YES Step-2> Click the APPLY button. Step-3> Reboot your PC.	takes effect only after reoc	ioting the server PC.
+ REPORT ③ PATIENTS	<ul> <li>HLM (Auto Lensmeter)</li> <li>HRK (Auto Ref-Keratometer)</li> <li>HNT (Non-contact Tonometer)</li> </ul>	YES         Port:         2100           NO         Port:         42000           NO         Port:         2400	APPLY APPLY APPLY

5. After rebooting the PC, connect to HIIS again.

- HOCT-1/1F, HFC-1 (v1.3.3) Optical Coherence Tomography
- 1. Fill in Server IP and Server Port information on [SETUP]-[System]. (Server IP, it means local IP address, where Web-Viewer has installed.)

11				
Ç	SETUP			€₹
WOR	System	Device Name	HuvitzOCT	^
	Patient	Server IP	172.10.64	
Ť	Measure	Server Port	8080	
DEL	Scan Pattern	Sleep Time	Off 5 min 10 min 30 min	
	Analysis	Auto Data Trans	On Off	
	Report	Touch Keyboard	On Off	
SET	Info	Objective Lens Clean	On	
DIC			< <b>1</b> 2 >	
рісом С			Cancel OK	
				$\sim$

2. Select patients in the Patients List and clicking 'TRANSFER' button, send all of the patient data.

<b>(</b> ٢	€ o	ID, Name, Date				🗸 Today List	⊊ <mark>≓</mark>
WORKLIST	O ID	Name	÷ Gender ÷	Birth Date 🔅	Last Visit 🗘	OD / OS 🔶	^
	huvitz3		•м	1969-01-01	2019-09-30	OD OS	
	huvitz2		M	1969-01-01	2019-09-30	OD OS	
DELETE	huvitz1		•м	1969-01-01	2019-09-30	OD OS	
	< huvitz		M	1969-01-01	2019-09-30	00 05	
SETUP							
DICOM SETUP							
Ċ							
POWER OFF							$\sim$

←	Patient ID huvitz	Name	Gender	Birth Date	Ethnicity
MEASURE	Refraction 0 0.00 0 0.00	Operator	Physician		EDIT
ANALYZE	OD	-	OS		<u> </u>
	Macular 3D (H) Macular 3D (H) 19-09-30 17-45-25		Macular 3D (H) 1	Macular 3D (H) Ma	icular 3D (H)
			19 09 50 114550	15 05 30 11 45.00	0.0010000
					$\sim$

3. Select data in Data List. And Clicking 'TRANSFER' button, send the data.

4. When it succeeded to send data, the following message box popped up on the window.

Patient Transfer
Finished!
ок

- HIS-5000U (v4.04.20) Slitlamp & Imaging System
- 1. Open the Setup window. Fill in WebServer setting and save the setting. (Server IP, it means local IP address, where Web-Viewer has installed.)

Patient List		Print Image		
Since 3 month	✓	Paper Size	A4 (210+297 mm)	~
Initial Period(Update	d at program start)	Left Margin	0.00	(0.0 ~ 4.0 Inch)
From	2018-07-12 👻	Right Margin	0.00	(0.0 ~ 4.0 Inch)
То	2019-07-12	Top Margin	0.00	(0.0 ~ 4.0 Inch)
Patients Max	100 ~	Bottom Margin	0.00	(0.0 ~ 4.0 Inch)
Order By	Regist Date ~	Image Size Ratio	100	(10 ~ 300%)
Sort By	Ascending ~	Horizontal Align	Left	~
Patient Label	Name (Patient ID) 🗸	Vertical Align	Тор	~
Security		Image Display		
Enable Password		🚫 Normal Resize (F	aster)	
Language		<ul> <li>Resample</li> </ul>		
Language	English	<ul> <li>Bicubic (Slower)</li> </ul>		
Comoro & Lighting		Capture File Location		
Camera	5M Camera(USB3.0	C:₩Program Files (x86	))₩Huvitz₩HIS-5000U₩ca	P Change
Liahtina	Halogen	Dicom		
		Save DCM File	NO	$\sim$
Joystick			L	
Serial Port	(Disable) ~	- WebServer ServerIP	172.10.64	
		ServerPort	8080	

2. Select a patient in the Patients List. And using mouse right click, select 'Send WebViewer'. Then, all of the patient data has sent.

Exit Database Privilian	Photographers Diagnosis Setu		
	🔍 🔍 🚺 🚺		GHIS.
ID. Name, Exam Date		Q 🗸 Today	
ID * Name *	Age + Exam Date *	Exam Date * Camera Image	
2547 ex- Huvitz	19-09-30 2019-07-12 / 19:52:00	2019-07-12/19:50:08 L=0/R=0 Photo=3/Video=0 O Multi Select	
1555 Honkz 10284 Honkz1	19-09-00 2019-07-12 / 1951:11 99-19-01 2019-07-12 / 1950:08 Deles Send techniker		199 DI CHIEG, THER, U.S.
		Patient Information	
		Parlett D         Nama           10064         Hu/tz1           Gender         Am           M         89-10-01           Desorbtion	

3. Select data in the Exam Date List. And using mouse right click, select 'Send WebViewer'. Then, all of the data (which had taken in same day) has sent.

Exit	Database Physicians	Photograph	ters Diagnosis	Setup About				
20		\$				<b>†</b> 🖂 💾		G <sub>HIS</sub> .
ID, Nam	e, Exam Date			Q 🗸 🗸	oday			
ID *	Name -	Age +	Exam Date *	Exam Date *		Camera Image		
2547	ex- Huvitz	19-09-30	2019-07-12 / 19:52:00	2019-07-12.7.19-51-11	=0.4.R=0 Photo=0./ Video	-3 🕗 Multi Select		
1555	Huvitz	19-09-30	2019-07-12 / 19:51:11	Send WebViewer			COLUMN 1	
10264	Huvitz1	99-10-01	2019-07-12 / 18:50:08			1) - CHOICE, JANUEL, J		
				Patient Information	_ <i>s</i> ∲ E	DIT		
				Patient ID	Name			
				1555	Huvitz			
				Gender	Age 19-09-30			
				Description				
					-			

4. Select data in the Data List and Using mouse right click, select 'Send WebViewer'. Then, the data has sent.

Exit	Database	Physicians	Photograph	ars Diagnosis	Setup	About									
3	2	0	\$			🗈 🖳	1		Ē			<u>-</u>			GHIS.
ID, Nam	e. Exam Dat	te				Q 🗸	' Today								
ID *	,	Name *	Age +	Exam Date *		Exam Date *				Camera Image	e				
2547		ex- Huvitz	19-09-30	2019-07-12 / 19:52:0	0	2019-07-12 / 19:50:08	L-0/R-0	Photo-3 /	/ideo-0	🕗 Multi Sele	ect				
1555	ŀ	Huvitz	19-09-30	2019-07-12/19:51:1	1							Control 1	1000		
10264	ŀ	Huvitz1	99-10-01	2019-07-12 / 19:50:0	в						. (	0		100	
										[7] C101025_174421_1	12,8-3	81025_174421_44,pg	(7) (181025_17	Eye Side Memo Copy to Clipboard Save as File Select All	>
														Select inverse Deselect	
														Send WebViewer Delete	
						Patient Information			🖋 EDIT						
						Patient ID	Na	me							
						10264	Hu	vitz1							
						Gender	Ag	e -10-01							
						Description									

5. When it succeeded to send data, the following message box popped up on the window.



## ■ HRK-9000A Auto Ref / Keratometer

1. WiFi Network Setting for ref/keratometer.

	ODE 🤶 🕅
DATE & TIME	I WIFI
PATIENT NUMBER	Off On
DISPLAY	TRANSFER TYPE
WIEI	Auto Manual
WIT	HUVITZ 3E 04
HDR IP 1	
HDR IP 2	******** VERIFY
ETC	
< 2/2 ▶	

Select WIFI on SETUP MODE. And turn on WiFi to use transmission function, Set TRANSFER TYPE to set up data transmission method.

	DE		<b>₹</b> "
DATE & TIME	AP List	×	
	SoftAP-EE	at	
PATIENT NUMBER	HLMTEST	al	
DISPLAY	HUVITZ_3F_04	al	
WIFI			
HDR IP 1			SCAN
HDR IP 2	U+NetUA73		
FTO	uplus	al.	VERIFY
EIC	<b>〈</b> 1 / 3	>	
◀ 2/2 ▶			

Press on the AP SSID entry window to enter SSID. When SSID is not known, press SCAN button on the right to select from available AP SSID.

	ODE	<b>? ∥</b>
DATE & TIME	WIFI	
PATIENT NUMBER	Off On	-
DISPLAY		
WIFI	AP Password is okay!	
HDR IP 1	ОК	SCAN
HDR IP 2	******	VERIFY
ETC		
▲ 2/2 ▶		

Press on the AP PASSWORD entry window to enter password. Press VERIFY button on the right to confirm the password. Password verification takes up less than 10 seconds, and the result will be shown on the screen.

2. Web-Viewer Connection Setting for ref/keratometer

	ODE 🤶 🖁
DATE & TIME	IIP Address (1/2)
PATIENT NUMBER	✓ dr-room0 / 192 . 168 . 10 . 16
DISPLAY	dr-room1 / 192.0.0.3
WIFI	dr-room2 / 192 168 10 162
HDR IP 1	dr-room3 / 192 168 0 5
HDR IP 2	dr-room4 / 192 168 0 6
ETC 4 2/2 >	dr-room5 / 192 . 168 . 0 . 7

Select HDR IP 1 or HDR IP 2 on User SETUP Mode page 2. And Enter information for Server IP (where Web-Server is located).

- 🗹 : Select if transfer the data to Web-Viewer.

-	dr-room0				: Ente	: Enter a name for the Web-Viewer.						
-	192		168	].	10	].	16	: Enter the Web-Viewer Server IP address.				

3. Check Network Status

Current WiFi network status can be checked through the icons on the upper right of the screen.

- (1) : Connected to AP normally.
- (2) is Not connected to AP.
- (3) AP connection process is in progress.
- (4) Connected.
- (5) 🍱 : Connection failure.
- (6) Connection process is in progress.

For user convenience, the machine will operate to make attempts to connect to AP automatically while the power is on if it is not connected to AP. Thus, user does not have to go through the AP connection process.

Also, the machine is set to make attempts to connect automatically after connecting to AP.

If there is a connection failure after automated connection attempt or if there is a

connection error during operation, will appear on the bottom of the main measurement mode screen.



Pressing the button will bring up the connection status screen.

4. Transmit the data to Web-Viewer

Click the 'Print' button (E). Then, its data is immediately transmitted to Web-Viewer.

# ■ HRK-Mate (v1.0.12)

1. Open [Transfer Options..] in Setup

ſ	ile Patient	Report	Setup Help	_			
	🗼 Pa	tient	User Options Transfer Options	 e Front	۲	IOL / Color	🚳 Meibo
2	ID / Name	2			atient Ir	nformation	
1	Exam Dat	e ex) 1	3/06/01-13/11/15	Pat.	NO	P00026	]
	🔍 Searcl	h	🗙 Clear	Nam	e		
				Geno	ler (	🔿 👗 Male 🛛 💧 📥	Female
+	18:23:00	P0027		Note			
Ŧ	18:18:00	P0026					

2. Fill in Transfer information (IP, Port), check 'Use Auto Transfer'. And save its setting. (Server IP, it means local IP address, where Web-Viewer has installed.)

Transfer Options × Transfer IP: 172 , 10 , 64 , 000 Port: 8080 Use Auto Transfer Ok Cancel			
Transfer         IP:       172 , 10 , 64 , 000         Port:       8080         Use Auto Transfer         Ok       Cancel	Transfer Opti	ons	×
Use Auto Transfer Ok Cancel	Transfer IP : Port :	172     . 10     . 64     . 000       8080	
Ok Cancel	Us Us	e Auto Transfer	
		Ok Cancel	

Then, it transfers the data to web-viewer, as HRK-Mate program receive the data from HRK device.

# ■ HDR-9000 (v1.1.2) Digital Refractor

1. Clicking Shift button, select Settings on Home Menu. And turn on Connection on Communication tab.

		📛 Jul/09/2019	<b>O PM 08:25</b>	🤶 LM, RK,
Version Info	WIFI CONNECTION			
System Setting	Connection	ON	OFF	
Communication	AP Name(SSID)			Q
Log	AP Password			
		DHCP	○ STATIC	
	IP Address	172 . 10	. 73	. 42
	Subnet Mask	255 . 255	. 0	. 0
	Default Gateway	172 . 10	. 255	. 254
	4	1 2 3	•	
RESET	EXI	PORT	ОК	CANCEL

2. Set 'Send WebViewer' to 'YES'. And Fill in WebViewer IP Address and Port.

		📇 Jul/09/2019	O PM 08:24	
Version Info				
System Setting	I Use Wifi PC Hub	YES	NO	
Communication	PC Hub IP Address	0.0	. 0	0
Log	I Send WebViewer	YES	NO	
	WebViewer IP Address	172 16	. 4	60
	WebViewer Port	8080		
	4	1 2 3	•	
RESET	EXF	PORT	ОК	CANCEL

## HDR-Mate

1. Fill in [Web Viewer Option] in [Options]-[Data Receiving & Transfer]

Huvitz HDR Mate					- 0	ב
	Options	About				
Received	d List >>					
□ No.	DateTime	Patient ID	Exported	Printed	C-Stored	
				R 💽 🖃 E	• 💼 🦚	
Transfer	red List >>					
□ No.	DateTime	Data Number	Туре	Transferred	C-Stored	

	-		
Host			
	-		
Port			
POR			

2. Select patient data in Received List.

Huvitz HDR Mate	[COM? . bps]					-		×
	ect Options	About						
Receiv	ved List >>							
🗖 No.	DateTime	Patient ID	Exported		Printed	C-Stored		
	<pre>//</pre>					) 🗓 🍕	)	
Irans	terred List >>							
□ No.	DateTime	Data Number	Туре	Transfer	red	C-Stored		

3. Click button to send selected data.

## ■ HLM-9000 Auto Lensmeter

## 1. WiFi Network Setting.

BACK SETUP		<b>? ∦</b>
MEASURE	l Wifi	
DISPLAY	On Off	
PRINT	Trans. Type	
COMMUNICATION		0
NETWORK		Scan
ETC	AP PW *******	Verify
INFORMATION	1 2 3	

Select NETWORK on SETUP MODE. And turn on WiFi to use transmission function, Set TRANSFER TYPE to set up data transmission method.

BACK SETUP		<b>₹</b>
MEASURE	AP List ×	
MERCORE	mscho_ap_01	
DISPLAY	HUVITZ_3F_04	
PRINT	uplus 📶	
COMMUNICATION	HUVITZ_3F_02	
NETWORK	uplus	Scan
ETC	HUVITZ_2F_01	Verify
INFORMATION		

Press on the AP SSID entry window to enter SSID. When SSID is not known, press SCAN button on the right to select from available AP SSID.

BACK SETUP		¥ 👼
MEASURE	I Wifi	
DISPLAY	On Off	1
PRINT	AP Password is okay!	
COMMUNICATION		
NETWORK	ОК	Scan
ETC	AP PW *******	Verify
INFORMATION	1 2 3	

Press on the AP PASSWORD entry window to enter password. Press VERIFY button on the right to confirm the password. Password verification takes up less than 10 seconds, and the result will be shown on the screen.

## 2. Web-Viewer Connection Setting

BACK SETUP	÷ ال
MEASURE	✓ dr-room0 / 192 168 11 121
DISPLAY	dr-room1 / 192 168 10 148
PRINT	
COMMUNICATION	dr-room2 / 192 , 168 , 11 , 16
NETWORK	dr-room3 / 192 168 10 14
ETC	dr-room4 / 192 168 15 8
INFORMATION	▲ 1 2 3 ►

Select NETWORK page 2 on User SETUP Mode. And enter information for Server IP (where Web-Server is located).

- 🗹 : Select if transfer the data to Web-Viewer.

-	dr-re	001	m0		: Ente	er a	a name	for the Web-Viewer.
-	192	].[	168	].[	10		16	: Enter the Web-Viewer Server IP address.

3. Transmit the data to Web-Viewer

Click the 'Print' button (😑). Then, its data has immediately transmitted to Web-Viewer.

# ■ HTR-1A Optometry & intraocular pressure

## 1. WiFi Network Setting

Select the [COMMUNICATION] tab in Setup mode. Set the Tcp Out item to ON.

🔒 Setup				Ú	1
MSR COMMON	RS232 Protoc	ol			
REF	V1	V2	EXT	OFF	
VED	Serial BPS				
KER	9600	19200	57600	115200	
NT	Mode				
COMMUNICATION	Mate	Nidek	Topcon	OFF	
IP ADDRESS	I Tcp Out				
SYSTEM	ON	OFF			
PRINT	<	1	2 3	>	

2. WiFi Network Setting

If using WiFi, set "Wifi/Ethernet" to WIFI. If using LAN, set "Wifi/Ethernet" to Ethernet.

🔒 Setup		C	-
MSR COMMON	Wifi/Ethernet		
REF	WIFI ETHERNET		
KED	Transfer Type		
IXEIX	Auto Manual		
NT	Tcp Out RK		
COMMUNICATION	ON OFF		
IP ADDRESS	I Tcp Out NT		
SYSTEM	ON OFF		
PRINT	< 1 <b>2</b> 3	>	

## 3. Go to the 3-tab page.

Press on the AP SSID entry window to enter SSID. When SSID is not known, press SCAN button on the right to select from available AP SSID.

A Setup				Ů (
MSR COMMON	AP SSID			
REF	Huvitz			Scan
KER	AP Password			
KEN	*****			Verify
NT				
COMMUNICATION				
IP ADDRESS				
SYSTEM				
PRINT	<	1 2	3	>

🔶 Setup				U 🖶
MSR COMMON	A	AP List	×	
REF	Huvitz		il	Scan
KER	iptime_c		11	Verify
NT	Huvitz		ai —	Verify
COMMUNICATION	Huvitz		at	
IP ADDRESS				
SYSTEM				
PRINT	<	1/1	>	>

Press on the AP PASSWORD entry window to enter password. Press VERIFY button on the right to confirm the password. Password verification takes up less than 10 seconds, and the result will be shown on the screen.

AP Password is okay!
ОК

4. Web-Viewer Connection Setting

A Setup	Ŭ 📑
MSR COMMON	IP Address
REF	✓ st latop / 172 . 20 . 1 . 173
KER	/ 192 . 168 . 0 . 29
NT	✓ tg / 172 . 10 . 6 . 149
COMMUNICATION	ethernet1 / 192 168 0 26
IP ADDRESS	
SYSTEM	✓ webv / 172 . 10 . 9 . 201
PRINT	< 1 2 >

Select NETWORK page 1 on User SETUP Mode. And enter information for Server IP (where Web-Server is located).

. [	Select if transfer the data to Web-Viewer.										
dr-room0 : Enter a name for the Web-Viewer.											
	192	].[	168		10		16	: Enter the Web-Viewer Server IP address.			

5. Transmit the data to Web-Viewer

Click the 'Print' button (). Then, its data has immediately transmitted to Web-Viewer.

#### HNT-1/1P Non-contact Tonometer

1. Serial COM Port Setting

Select the [Print] on the Setup page.

A Setup				C	-
Measure	Print Mode				
Data	STD	AVG	OFF		
Drint	Auto Print				
· · · · · ·	On	Off			
Result	COM Out				
Time	On	Off			
System					
Message					

- COM Out : Setup of transmission on/off(Communication to other machines)

HNT equipment cannot be directly connected to HIIS. However, data can be transmitted to HIIS with the following procedure.

- Step-1) Connect with the PC where HRK-Mate is installed through the serial port.
  Step-2) Transmit data from HNT device to HRK-Mate SW.
- Step-3) Transmit data from HRK-Mate SW to HIIS.
HUVITZ Integrated Image Server, HIIS-1

- HBM-1 & HTG-1 Standalone Biometry & Topography / Only Topography
- 1. Fill in Server IP and Server Port information on [SETUP]-[Connectivity]. (Server IP, it means local IP address, where Web-Viewer has installed.)

ς.	5		€ <sub>A</sub>					Q 🗸 Today List	
	-		ID ¢	Name	¢	Gender 🗧	Birth Date	Update	^
			00032	David			08-19-2020	06-16-2022	
DELE	TE	$\bigcirc$	00031	Olive steve	Olive steve			05-27-2022	
			00061	Thomas chang	J		08-19-2020	05-24-2022	
			00060	Alexis toms			08-19-2020	04-28-2022	
			00059	Breanna caro	oll		08-19-2020	04-28-2022	
			00020	Kenneth			08-19-2020	04-15-2022	
*	*		00019	Jacob			08-19-2020	04-15-2022	
SETU	SETUP		00018	Matthew			08-19-2020	04-15-2022	
POWER	POWER OFF		00017	Harace			08-19-2020	04-15-2022	$\sim$
Ç	SETU	P		_	-	-	_		
	Syste	em	Network Folder					Reset	
TRAN	Patie	ent	Username					Reset	
DEL	DEL		Password					Reset	
	Connectivity		Web-Viewer Serv	er IP	127	.0.0.1		Reset	
Report		ort	Web-Viewer Serv	er Port	8	080		Reset	
Info.			<ul> <li>Auto Data Trans</li> </ul>	er On		Off			
IOL		<ul> <li>Auto Export</li> </ul>	On		Off				
-K						1			
POWER	R OFF		00017	ALC 8	_	_	C	ancel OK	

2. Select data in Data List. And clicking 'TRANSFER' button, send the data.

PATIENT LIST	<b>0</b> 00000000000000000000000000000000000	Patier 00021	nt ID		Nar 재흥	me 동모		G	ender /I	Birth 08-1	9-2020	Physician	
MEASURE		DATE / TIME		AL	ССТ	ACD	LT	К1	К2	Axis	Lens	Vitreous Body	
TOL		11-29-2022 13:52:01	OD OS		##	##	##				Phakic	Natural	
RESULT	<b>S</b>	01-14-2022 10:15:46	OD OS	22.70 21.85	0.556 0.523	3.09 3.64	3.66 3.16	7.19 7.06	7.34 7.34	8 162	Phakic Phakic	Natural Natural	
DELETE TRANSFER	0	04-14-2022 10:15:46	OD OS	25.30 24.25	0.556 0.523	3.09 3.64	3.66 3.16	7.15 7.13	7.34 7.33	8 162	Phakic Phakic	Natural Natural	
	0	08-14-2022 10:15:46	0D 0S	26.03 25.35	0.556 0.523	3.09 3.64	3.66 3.16	7.69 7.60	7.48 7.44	8 162	Phakic Phakic	Natural Natural	
SETUP	0	05-14-2022 10:15:42	OD OS	26.03 25.35	0.556 0.523	3.09 3.64	3.66 3.16	7.69 7.60	7.48 7.44	8 162	Phakic Phakic	Natural Natural	$\sim$

HUVITZ Integrated Image Server, HIIS-1

## 7 DICOM Setting

1. After running a browser (Chrome is recommended) on the PC, connect to HIIS.



- 2. After entering your ID and password, click the LOGIN button to log in.
- 3. On the ADMINISTRATOR screen, click [CONFIGURATION] / [SETUP] to set the corresponding information.
- 4. Then enter the required information in the "DICOM Settings" field.
- 5. And then click the UPDATE button.

USER     CONFIGURATION     setup	DICOM Settil You can get Worklist inform Step-1>Enter the DICOM set Step-2> Click the UPDATE bu	ngs nation and send DICOM data. ling information. rtton.		
+ REPORT ③ PATIENTS	DICOM Settings UPDAT Server IP Server PORT Server AE Client AE Image Server IP Image Server PORT Image Server AE Image Client AE	E) 127.0.0.1 104 WLM_SCP CALLED_AE 127.0.0.1 106 ONI525 CALLED_AE		Worklist information DICOM Upload information
	Huvitz Conn	ection Port		

HUVITZ Integrated Image Server, HIIS-1

# 8 Specifications and Accessories

### **Standard Accessories**



- User manual is provided as an electronic file (PDF) through manufacturer's web system.

## **Optional Accessories**



- Key is provided as USB.
- Quick Guide is provided with USB.

### Specifications.

Device specifications					
Туре	Web-based software				
List of supported devices	Ref/Keratometer, Refractor, Optical Coherence Tomography, Optical Biometer, Corneal Topographer, etc.,				
Display	Fundus image, OCT image including Anterior, Angio, Biometry and Topograph), Slit lamp Image, Refraction, etc., One exam and 6 exams				
Recommended platform	Server O/S: Windows 7 or greater (Windows 10 recommended) CPU: Intel i5 or greater Memory: 4GB or greater Ethernet: Fast Ethernet (Gigabit Ethernet recommended) Client O/S: Windows 7 or greater (Windows 10 recommended) CPU: Intel i5 or greater Memory: 4GB or greater Ethernet: Fast Ethernet (Gigabit Ethernet recommended) Browser: Chrome (recommended). JE 11 or greater				
Feature	Web-Based, Multi users can be accessible.				

## 9 Information Needed for Service

If the problem is not solved in spite of the settlement according to the contents of chapter 1.6, please contact to Huvitz's agent with the information on the following items.

Year/month/day	
purchased:	 
Client name:	
Client address:	
Client contact number:	
Model number:	
Serial number:	
Hlls-1 version:	

Contact the Huvitz's service department directly by referring to the address and telephone numbers below if you cannot contact the distributor where you purchased the product.

### ■ How to Contact Huvitz Co., Ltd.

### Huvitz Co., Ltd.

38, Burim-ro 170beon-gil, Dongan-gu, Anyang-si, Gyeonggi-do, 14055, Republic of Korea Tel: +82-31-428-9100 Fax: +82-31-477-9022(F/A)

E-mail : <u>svc@huvitz.com</u> website : <u>www.huvitz.com</u>

#### ■ EU Representative

### Medical Device Safety Service GmbH (MDSS)

Schiffgraben 41, 30175 Hannover, Germany

### Canada Representative

AXIS Medical Canada Inc., 9820 Boulevard Du Golf Anjou, QC H1J 2Y7

### U.S.A Representative

### COBURN TECHNOLOGIES

55 Gerber road, South Windsor, Connecticut, 06074, United states

### Brazil Representative

VR Medical R. BATATAES 391, CEP 01423, SÃO PAULO

# Australia Representative

### OPTICARE

118 Adderley St, Auburn NSW 2144

#### UK Representative

Mainline Instruments Unit 2, The Cyclo Works, Lifford Lane, Kings Norton Birmingham, UK, B30 3DY

### Authorized Representative for Switzerland

Laurenzenvorstadt 61 5000 Aarau Switzerland