

**Canon**



**CX-1**

Digital Retinal Camera

Mydriatic/non-mydriatic

# Redefining True Versatility

## The multifaceted CX-1

The CX-1 is a Mydriatic Retinal Camera with full Non-Mydriatic functionality. Besides color photography, the CX-1 is equipped with high quality optical filters for FLUO, Red Free, Cobalt and standard even with FAF photography.

The CX-1 can be changed into a NM camera by a simple push of a button. The Non-Mydriatic mode is essential for non dilatable patients such as glaucoma suspects. Children and photosensitive patients will also benefit from the non invasive IRED observation light.

All photography modes can be performed in the MYD and NON MYD mode. This provides exceptional versatility and enables diagnosis, screening and monitoring of all major eye diseases.



## MYD mode

Observation by viewfinder  
Visible observation light



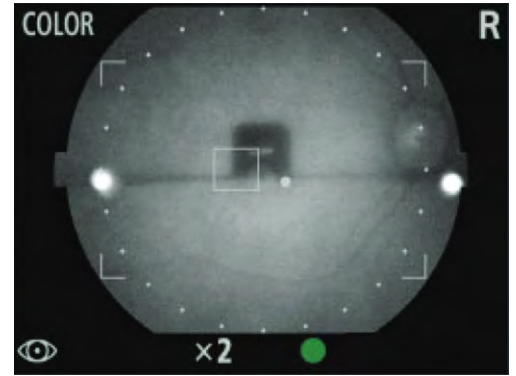
## NON MYD mode

Observation by EOS screen  
Invisible IR observation light



### **Dedicated EOS camera**

Canon has used their expertise in digital camera technology to create a unique digital EOS camera dedicated to ophthalmic photography: Completely integrated with the functions of the CX-1 to assist in easy image acquisition.



### **Vari-angle LCD screen**

For ergonomic observation.



### **Easy panning and tilting**

For working around central obstructions (cataracts, vitreous hemorrhages) and imaging the peripheral retina for creating large mosaic images effortlessly.



# Easy Operation

## Compact device

For maximal patient interaction.  
Easy to observe patient.



Short reaching distance for easy opening  
patient's eyelid.



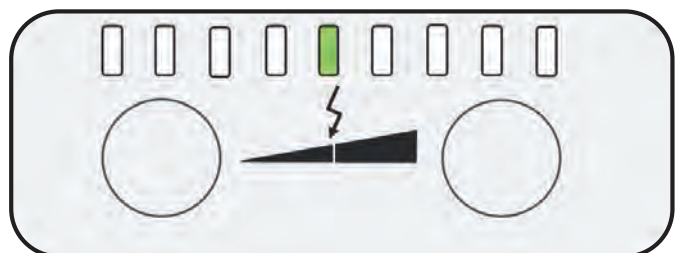
Motorized filters; easy to operate and  
protected from dust.

Motorized chin rest for easy adjustment.



## Automatically optimized flash range

The CX-1 has an automatically optimized  
flash range, adjusted to the different  
photography modes and ISO settings.





# Extensive Photography Modes

## Sophisticated optical filters for highest image quality

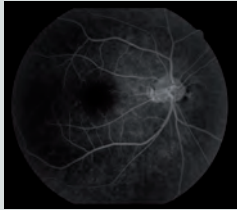
All photography modes are available in MYD or NON-MYD mode.



**Color**  
Base Line



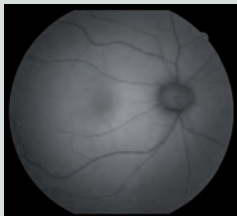
**Cobalt**  
Visualizing Nerve Fiber Layer, important for checking for Glaucoma



**Fluo**  
Checking retinal flow for occlusions and leakages

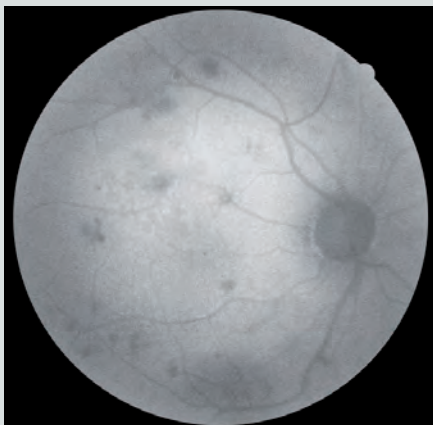


**Red free**  
Useful for checking the condition of the blood vessels, important for detecting Diabetic Retinopathy

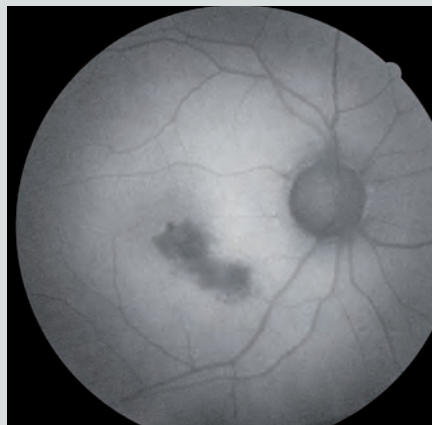


**FAF**  
FAF Imaging for the diagnosis of retinal disease is a relatively new diagnostic technique that provides more information on the health of the retinal pigment epithelium. FAF has proven to be very useful for the early detection of age related Macula Degeneration (AMD), one of the leading causes of visual impairment. Recent studies indicate that FAF Imaging can also aid in the diagnosis of a variety of other diseases and even in the detection of intraocular tumors.

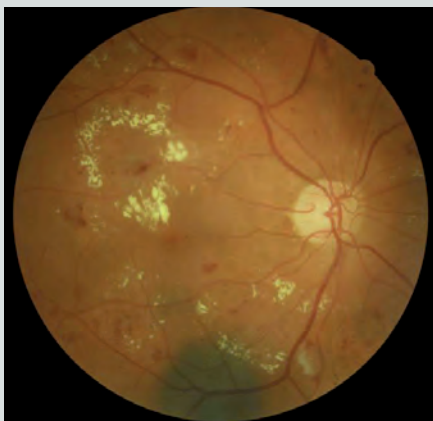
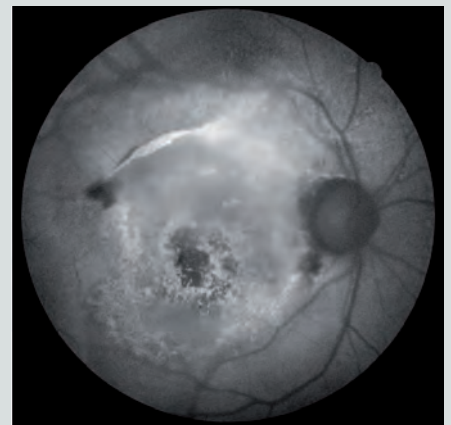
### Diabetic retinopathy



### Occlusion



### AMD

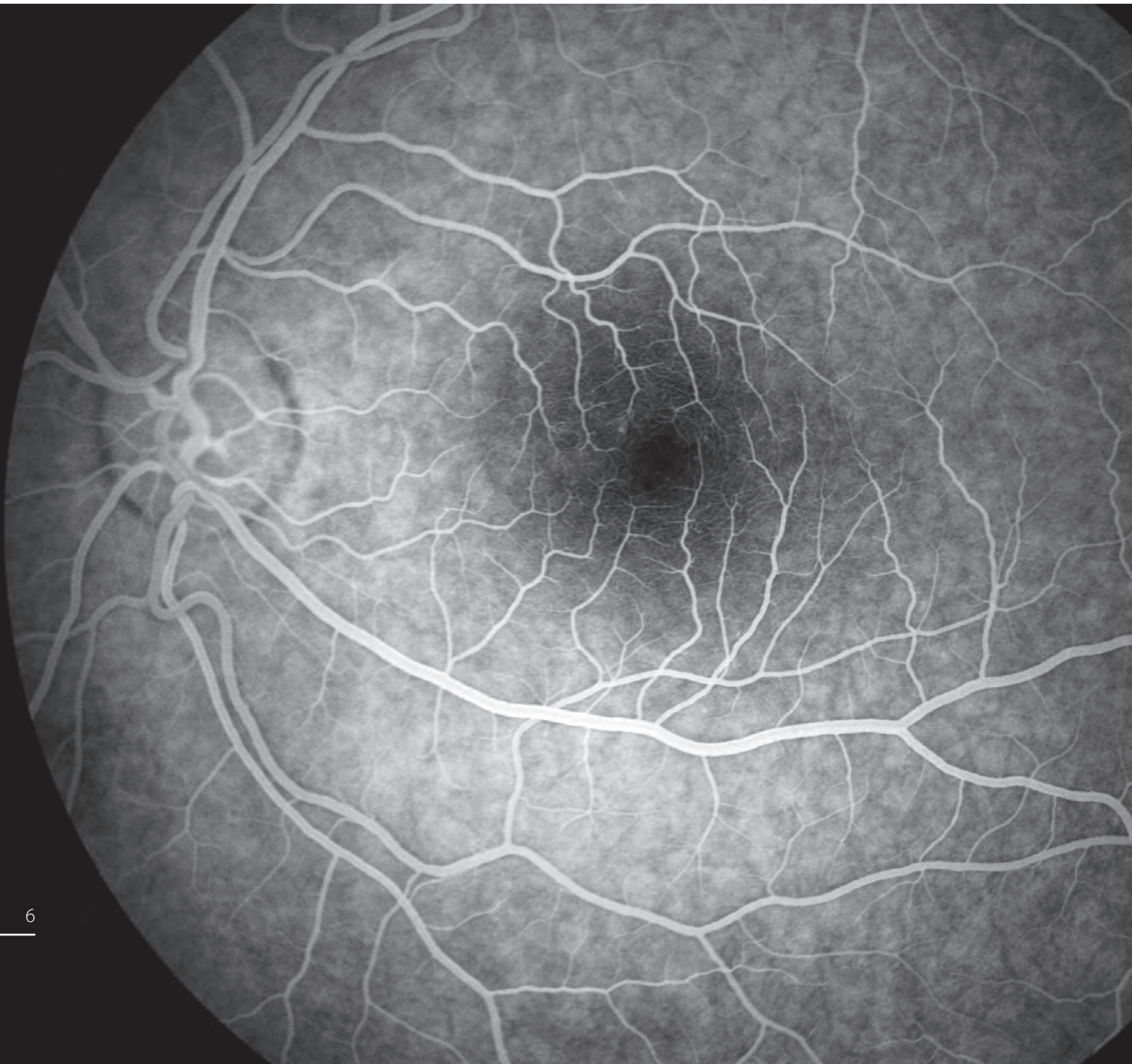


# Unrivalled Image Quality



## **Dedicated 24 Mega Pixel EOS camera**

Canon's own EOS camera technology, with its renowned image processing capabilities, is adapted exclusively for Canon retinal cameras, it provides optimal retinal imaging.





# Canon Opacity Suppression

When obtaining retinal images, ocular opacities can cause several problems. Canon opacity suppression tool is a unique and sophisticated software tool, that based on information from the EOS CMOS sensor will largely suppress the effect of ocular opacities on color images.

## Ocular opacities

- The scattering of the light will make the edges of the blood vessels appear blurred
- The difference in brightness of the retina will be reduced, making it very difficult to distinguish between structures
- A cataract eye will cause images to appear more yellow

## With Canon Opacity Suppression

- The original brightness and color of the retina will be restored
- The blood vessels will appear much clearer

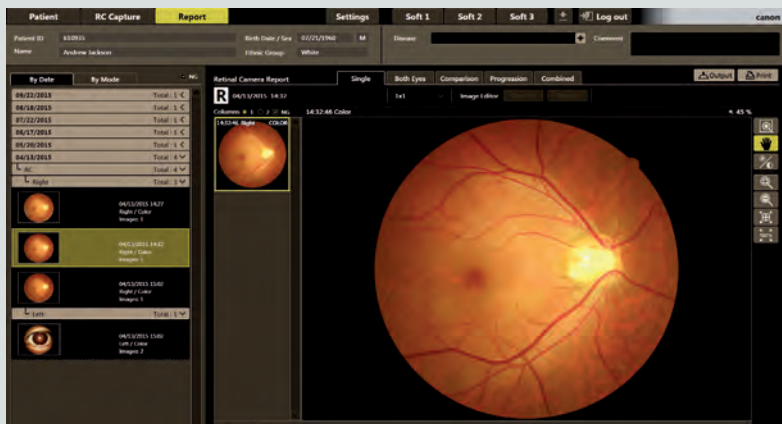


With Canon Opacity Suppression (COS) the effect of ocular opacities will be largely suppressed: previously unsuitable images could now provide you with essential clinical information.

# Canon Retinal Expert software RX

RX

The new software platform for Canon retinal cameras and OCT. Designed for seamless integration and connectivity with patient management systems.



**Extremely intuitive user interface**



**Compare both eyes or studies from different dates**



**Observe progression; select up to 5 past examinations**



# Extensive Software Tools



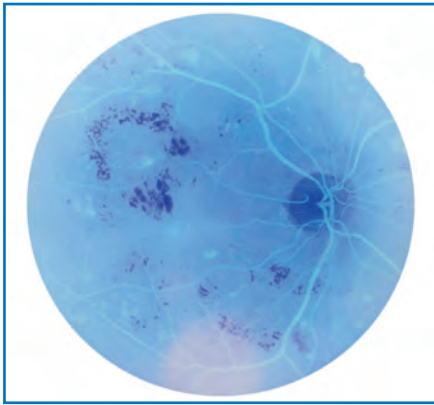
## Emboss Negative

The blood vessels stand out.



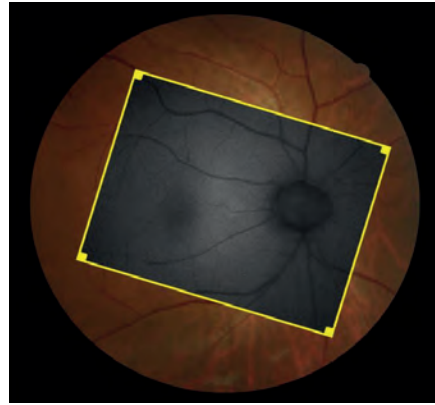
## Emboss Positive

The optic disc stands out.



## Inversion

Inverts the color of an image to assist diagnosis.



## Overlay

Overlay 2 images to see differences and changes in pathology.



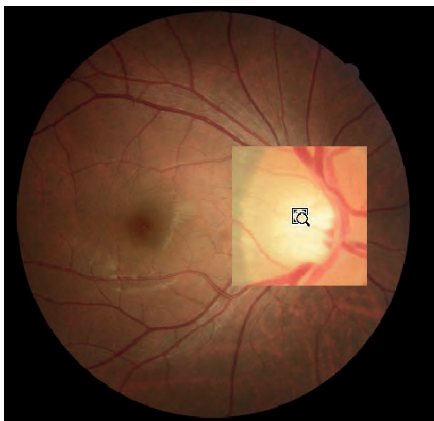
## Annotations

Add shapes and texts to a captured image.



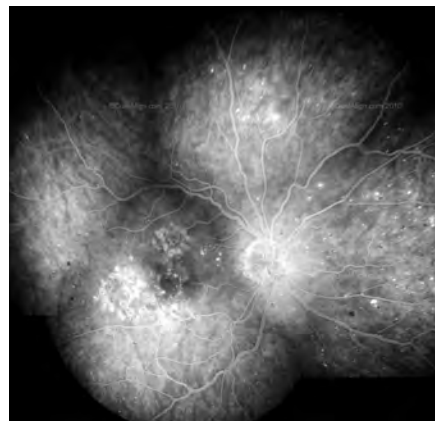
## Cup/disc measurement

Measure the optic nerve papillary area.



## Loupe function

To assist diagnosis.



## Mosaic function

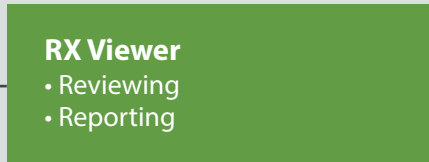
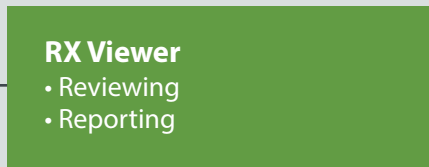
Up to 20 images can be combined (optional feature).

# Canon Retinal Expert Software Platform RX



## Stand alone configuration

All-in one system. Capturing, viewing and database.



### Optional

RX Viewers can be connected over the network and access the database of the device.

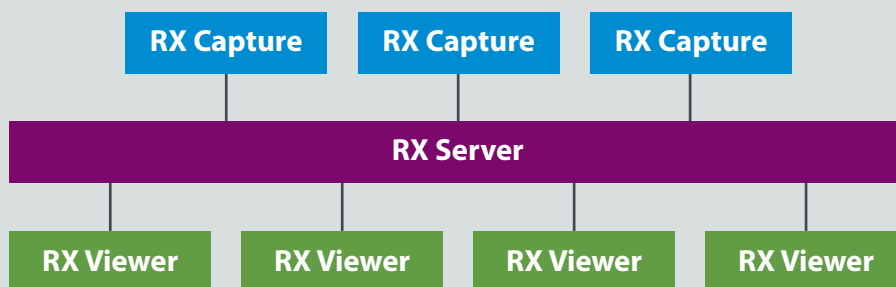
Up to 2 RX viewers can access the database at the same time.

A CX-1 could be added to a Canon OCT in a standalone configuration, sharing the same PC and database. Analysis results of both devices can be combined in one combined report.



## Network configuration

With RX Server up to 5 systems can be connected with maximum 10 concurrent viewers.



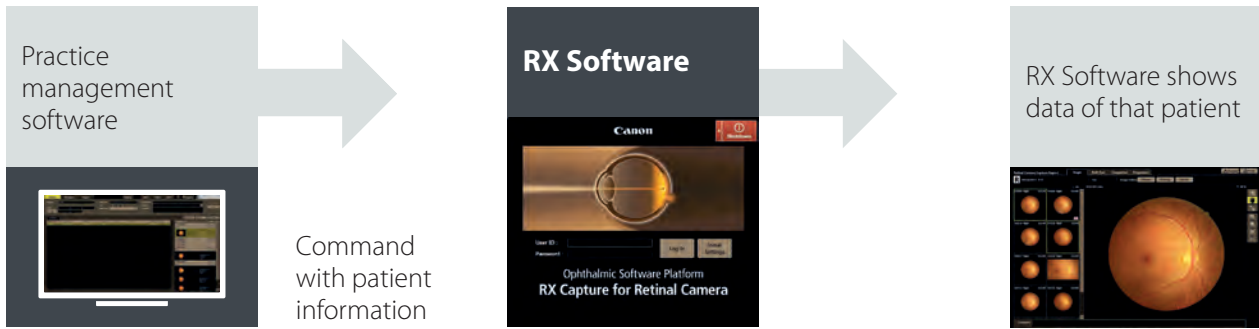
RX server and RX viewers have to be purchased separately.

# Seamless Integration with Patient Management Systems

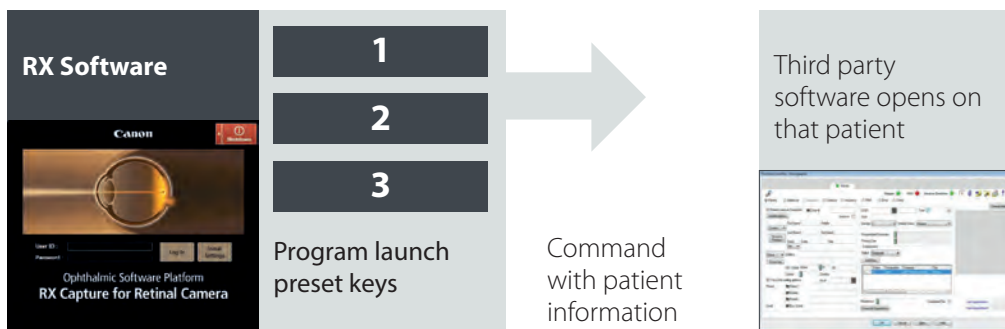


The Canon RX software can automatically start the patient management software on the selected patient and vice versa. (Command Line Interface)

## Third party software can start the Canon RX software



## Canon RX software can start third party software



### Versatile Patient data input possibilities for optimal integration

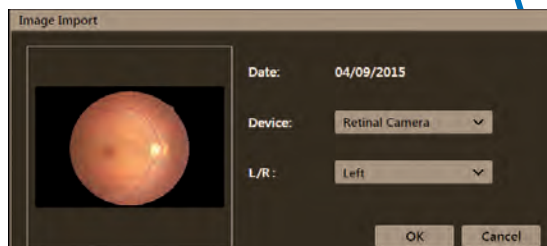
- Input data manually
- Import a list from the practice management system
- Use a Modality worklist (in a DICOM environment)



RX software is fully DICOM compatible

### Image Import

Import images from other devices and save them into the database together with the other diagnostic information of the patient.





## Specifications CX-1

<b>Dimensions</b>	320 W x 531 D x 577 H mm, 26 kg	<b>Focus Adjustment</b>	Split Lines
<b>Angle of view</b>	MYD: 50 degrees, Non-Myd: 45 degrees 2 X magnification (digital)	<b>Working distance</b>	Corneal Reflection dots adjustment
<b>Minimum pupil size</b>	Myd: $\varnothing$ 5.1 mm (SP mode $\varnothing$ 4.3 mm) Non-Myd: $\varnothing$ 4.3 mm (SP mode $\varnothing$ 3.8 mm)	<b>Panning and Tilting</b>	30 degrees to the left and right tilting range 15 degrees up, 10 degrees down
<b>Working Distance</b>	35mm	<b>Light sources</b>	Xenon tube for photography Halogenlamp for observation (Myd mode) IRED LED for observation (Non-Myd mode)
<b>Photography modes</b>	Color /FA /Red Free/Cobalt and FAF	<b>Fixation targets</b>	External Internal LED dot matrix for Non-Myd mode (70 points) Internal fixation target for Myd mode (optional)
<b>Mounted camera</b>	Dedicated digital EOS camera (24 MegaPixel for current model) HDMI Output for external monitor Full HD resolution	<b>Optional accessories</b>	Stereo Unit SU-1 Internal eye fixation (CX-IF) Chin rest paper (500 sheets)
<b>Patient's diopter</b>	-31D ~ -7D, -10D ~+15D (standard) compensation +11D ~+33D		

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