Canon

CR-2 AF
CR-2 PLUS AF

Digital Retinal Camera

Non-Mydriatic cameras

CR-2 AF

Extremely compact and lightweight (just 15 kg) camera: suitable for mobile use.

CR-2 PLUS AF

Non-Mydriatic camera with additional fundus autofluorescence (FAF) capability.

Short reaching distance
The compact design allows the operator to easily keep the patient's eye open with one hand and permits an excellent view of the patient's eye.

Ergonomics
Specially shaped surface to act as grip; easy handling for quick and efficient image capture.

Multifunctional joystick
Up and down movement of optical head (powered) and focus ring.

Vari-angle LCD screen
For optimized viewing angles, so camera can be operated while seated or standing up.

Extensive auto functions

Auto Focus
Fast and accurate automatic focusing.

Auto Shot
Once the alignment, working distance and focus are correct, photography is done automatically.

Auto Switching from Anterior to Retina
When aligned correctly on the pupil, the camera will automatically switch to retinal observation view.

Photometric Auto Exposure
Flash and observation light intensity is set automatically for every examination, based on retina reflectance, for perfect images regardless of pupil size or ethnicity.

Full Control
The auto functions will make the procedure much easier. Nevertheless for patients with ocular opacities, involuntary eye movements, lack of co-operation and small pupils, the possibility of full manual control is crucial.

Manual operation frequently overcomes the limitations of fully automatic cameras!
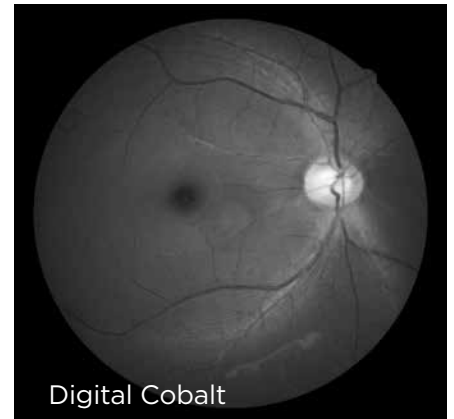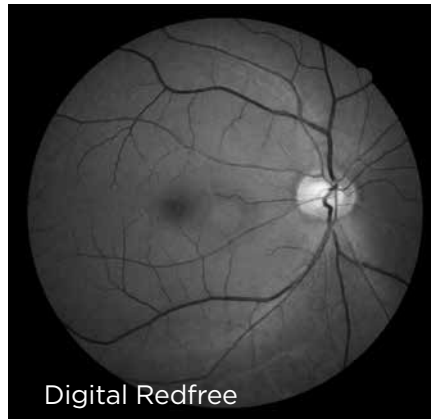
Photography modes

Color
High quality 45 degrees image.
2 X digital magnification.


45 degrees

2 X magnification

Digital Red Free and Digital Cobalt
Automatically created from the original RAW color image. Based on the EOS retina technology and Canon proprietary image processing. Image quality comparable with optical filters.

Digital Redfree

Digital Cobalt

Anterior Photography
Quick and easy anterior segment photography to document the cornea, pupil, eyelid and sclera.
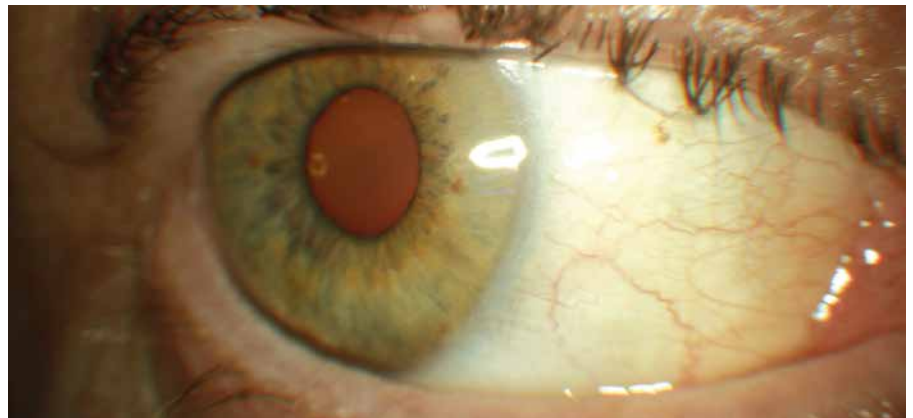
Anterior IR photography
Use the anterior IR photography to check the condition of the Meibomian glands – an important factor related to dry-eye conditions.

This function is only available for the CR-2 AF.

Healthy eye

Dry eye

Fundus Autofluorescence (CR-2 PLUS AF only)

Macular blood

AMD

Wet AMD

CSR

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 Macular Degeneration (AMD), one of the leading causes of visual impairment. Recent studies indicate that FAF imaging can also aid the diagnosis of a variety of other diseases and even detection of intraocular tumors.

Karolinska Institutet

With the extra feature of FAF photography we have discovered retinal changes we have not seen before and which makes us learn more about retinal changes and diseases every day we use the Canon retinal camera.

Rune Brautaset BSc (Hon), Mphil, PhD, Associated professor and Head of Unit and director of studies, Unit of Optometry / Optometry Education, Karolinska Institutet, St Erik's Eye Hospital, Stockholm, Sweden.

Images courtesy of Karolinska Institutet, Stockholm, Sweden.

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.

Resolution

Important factor that contributes to a high image quality is the number of pixels per square mm. When comparing our 24 Megapixel with e.g. a 4 mega pixel camera, the illustration clearly shows the additional information that is gained.
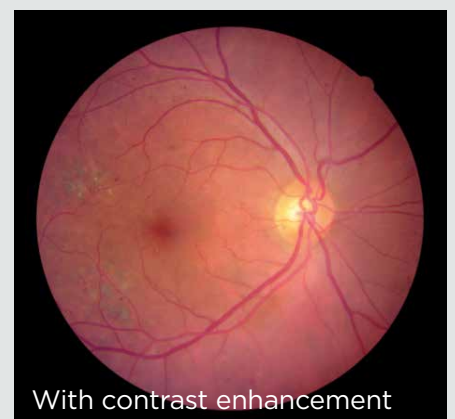

20 MegaPixel

4 MegaPixel
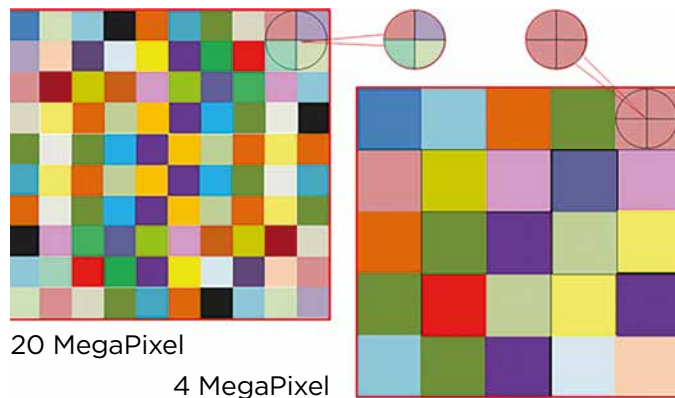
Contrast Enhancement

Utilizing the EOS retina technology, this contrast enhancement function emphasizes the differences in brightness and redness of blood vessels and their surrounding areas, resulting in clear, high-quality images.

Without contrast enhancement

With contrast enhancement

Canon Opacity Suppression

When obtaining retinal images, ocular opacities will cause several problems: 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. And a cataract eye will cause images to appear more yellow.

With Canon's unique and sophisticated opacity suppression tool the blood vessels will appear much clearer; the original brightness of the retina will be restored and any change in retinal color will be compensated.

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!

Original image

Canon opacity suppression

Original image
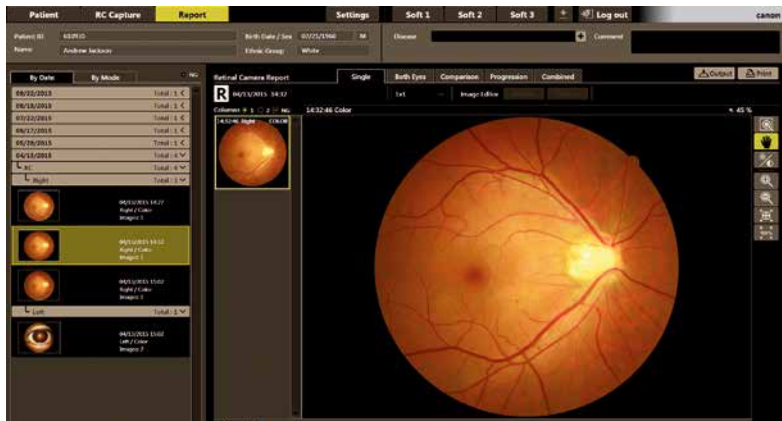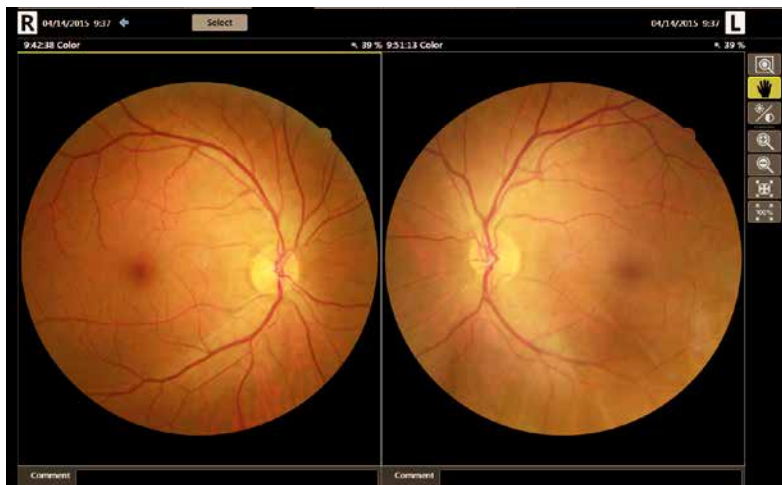

Canon opacity suppression
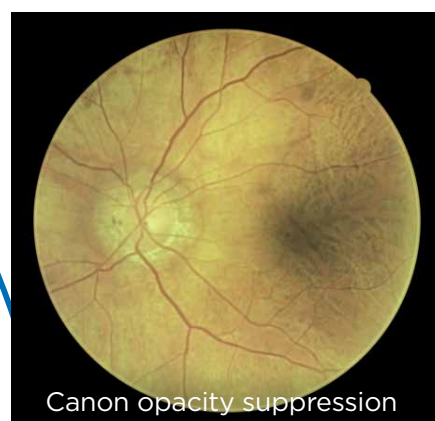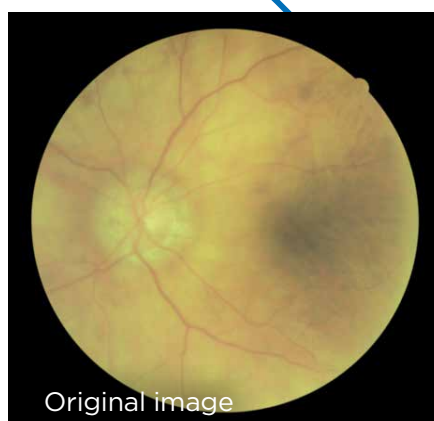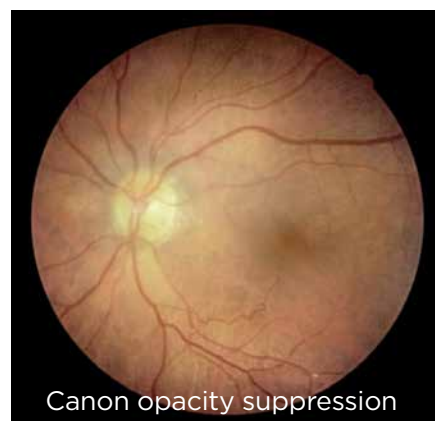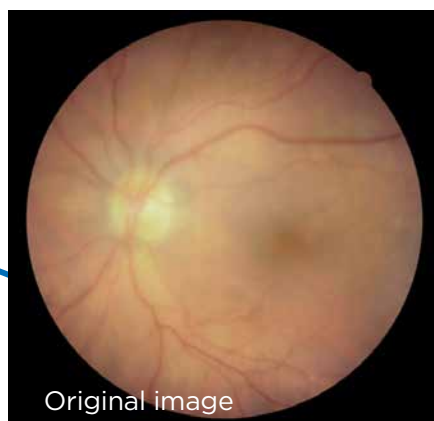
Canon Retinal Expert software RX

RX

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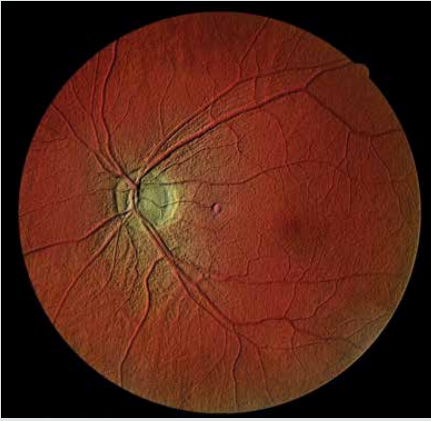

Extremely intuitive user interface

Compare both eyes or studies from different dates
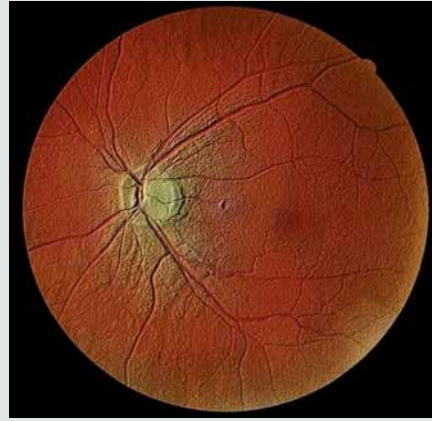

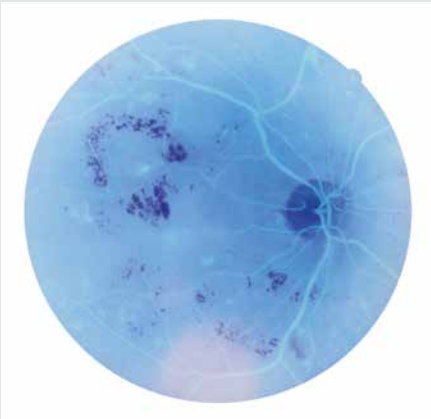**Observe progression; select up to 5 past examinations**
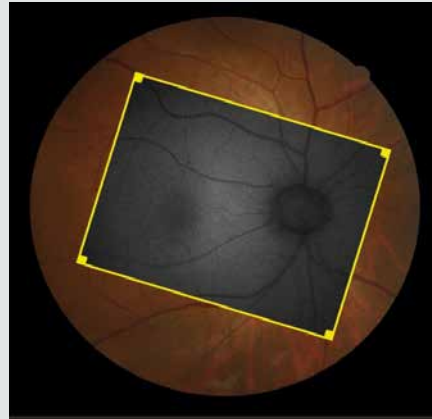
Extensive software tools

Emboss Negative
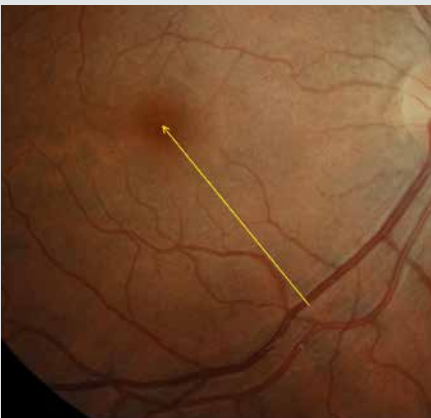The blood vessels stand out.

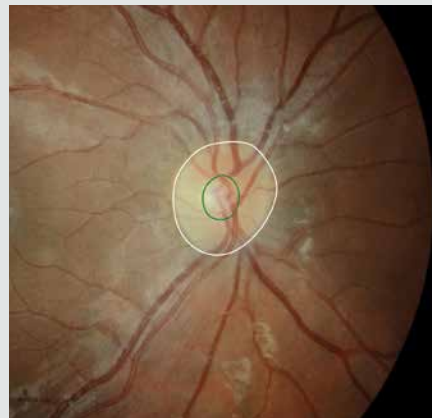
Emboss Positive
The optic disc stands out.

Inversion
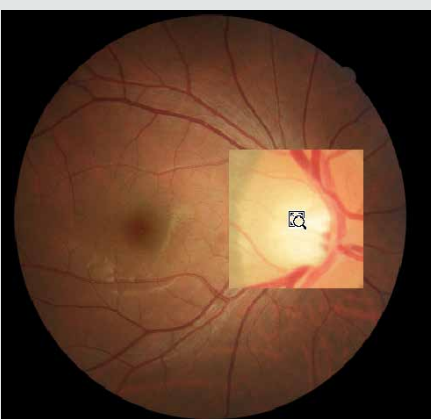Inverts the color of an image to assist diagnosis.

Overlay
Overlay 2 images to see differences and changes in pathology.
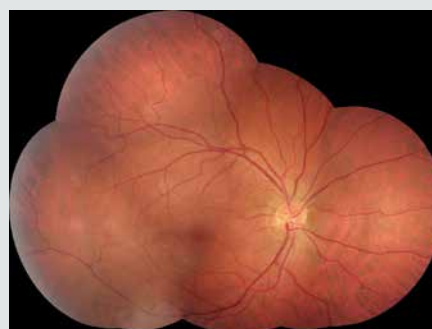

Annotations
Add shapes and texts to a captured image.

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

RX

Stand alone configuration

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

RX Viewer
• Reviewing
• Reporting

RX Capture
• Capturing
• Reviewing and reporting
• Database and archive

RX Viewer
• Reviewing
• Reporting

Optional
RX Viewers can be connected over the network and access the database of the device.
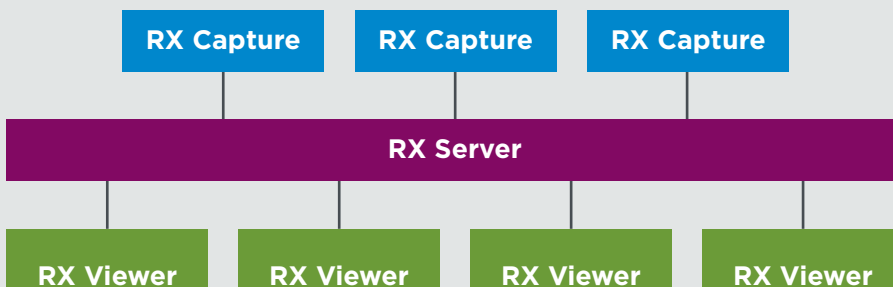
Up to 2 RX viewers can access the database at the same time.

A Canon OCT could be added to the stand alone configuration, sharing the same PC and database.

Network configuration

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

RX Capture   **RX Capture**   **RX Capture**

RX Server

RX Viewer   **RX Viewer**   **RX Viewer**   **RX Viewer**

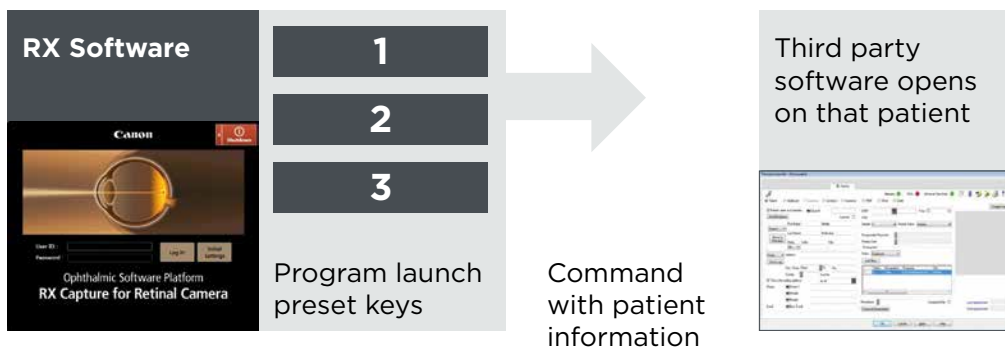RX server and RX viewers have to be purchased separately.

Seamless integration with patient management systems

RX

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

| Practice management software | | RX Software | | RX Software shows data of that patient |

Command with patient information

Canon RX software can start third party software

RX Software	1
	2
	3

Program launch preset keys

Command with patient information

Third party software opens on that patient

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)

DICOM
Digital Imaging and Communications in Medicine

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.

Image Import
Date: 04/09/2015
Device: Retinal Camera
L/R: Left
OK   Cancel
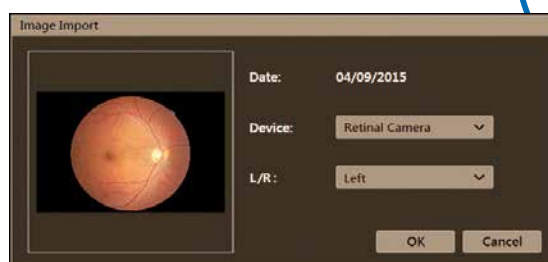
Specifications

Features	CR-2 AF	CR-2 PLUS AF
Resolution in Megapixels	24	24
Color. Digital Red Free, Digital Cobalt	YES	YES
FAF photography mode	–	YES
Anterior photography	YES	YES
Anterior IR photography a	YES	NO
Angle of view	45° / 2 x digital magnification	45° / 2 x digital magnification
Minimum pupil size (SP Mode)	Ø 4,0 mm (Ø 3,3 mm)	Ø 4,0 mm (Ø 3,3 mm)
Working Distance	35 mm	35 mm
low flash mode	YES	YES
Observation light source	IR LED	IR LED
Flash light	LED	Strobo tube
Observation Monitor	3,0 inch LCD Monitor	3,0 inch LCD Monitor
Video output	Full HD on an external monitor	Full HD on an external monitor
Auto Focus	YES	YES
Auto Shot	YES	YES
Auto Switching (from anterior to retina observation)	YES	YES
Auto Exposure	YES	YES
Dimensions: w x d x h (mm)	305 x 500 x 473	305 x 500 x 513
Weight (kg)	15,0	19,9
Optional Accessories	External fixation light (EL-1)	External fixation light (EL-1)

For PC requirements please consult our authorised dealer

Your Canon dealer:

Canon

CANON MEDICAL SYSTEMS EUROPE B.V.

https://eu.medical.canon

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