Redefining true versatility

come and see

CX-1 digital retinal camera
mydriatic & non-mydriatic

Canon

THE MULTIFACETED CX-1

Compact design for maximum patient interaction

Dedicated camera (EOS Retina)
Canon has used their expertise in digital camera technology to create a unique digital EOS camera dedicated to ophthalmic photography : with its dedicated firmware and special filters it will provide optimal retinal imaging
It combines many functions:

- CMOS Image sensor
- IRED observation on the vari-angle LCD screen
- Automatic magnification during focusing
- Stereo photography guides

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

Intuitive central control
All controls are grouped for intuitive and simple operation.

REDEFINING TRUE VERSATILITY

The CX-1 is a Mydriatic Retinal Camera with full Non-Mydriatic functionality. It 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.

Besides color photography, the CX-1 is equipped with high quality optical filters for FLUO, Red Free, Cobalt and standard even with FAF photography.

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

HYBRID CAMERA

Mydiatric

OPTICAL VIEWFINDER
Visible observation light (halogen)

Angle of view 500

Non-Mydiatric

EOS LCD SCREEN
Infrared observation light (LED)

Angle of view 450

Color

FAF

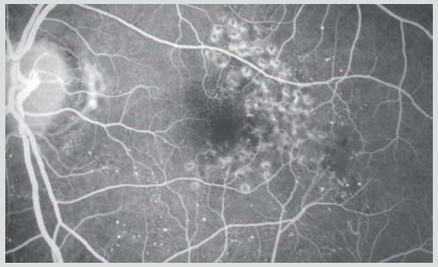
Fluo *

Cobalt

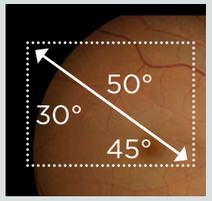
Red free

All photography modes can be performed in either MYD or NON MYD mode.

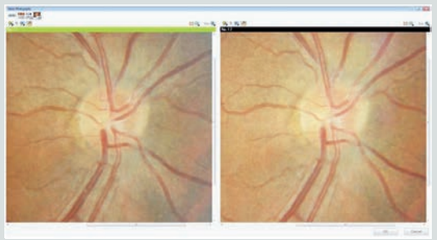
** For fluorescein photography in Non Myd mode, mydriasis will still be required.*



2 X magnification
The superb optical resolution of the CX-1 and EOS camera allows for 2X digital zoom without any loss of quality.



30 degrees mode
The standard 2 X magnification can be set to a factor of 1.6 X, thus creating an angle of 30 degrees which allows participation in studies and co-operation with most screening centers.

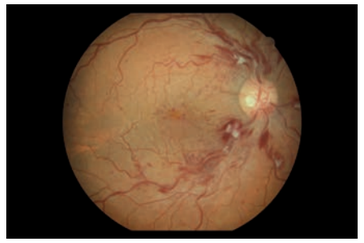


Stereo photography
Two retinal images shifted from the center form a stereo image pair. In the NM mode the EOS LCD screen will assist by displaying stereo guide marks: create a stereo pair in 2 easy steps. In the MYD mode a stereo unit (option) is required.

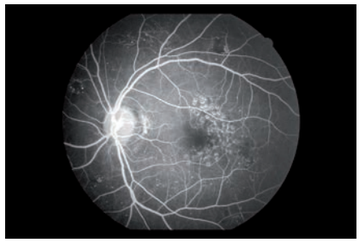
Wide flash range
The flash intensity range will be set automatically for the different modes. ddditionally the CX-1 has up to 9 steps to manually adjust the flash. This results in more than 150 possible flash values to adapt to any situation.

Extreme versatile

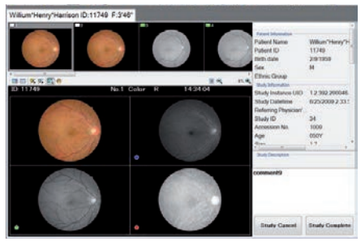
Colour, Red Free, Cobalt, Fluo and Fundus Autofluorescence for wide diagnostic applications. All photography modes can be used either in the Mydriatic or Non-Mydriatic mode.



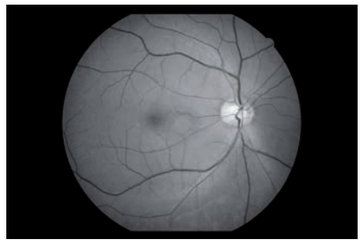
Color
Baseline



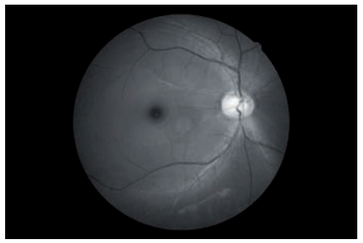
Fluo
Checking retinal flow for occlusions and leakage



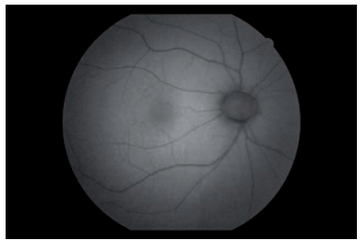
RGB Channel
(display in RICS) Useful for localization of structure



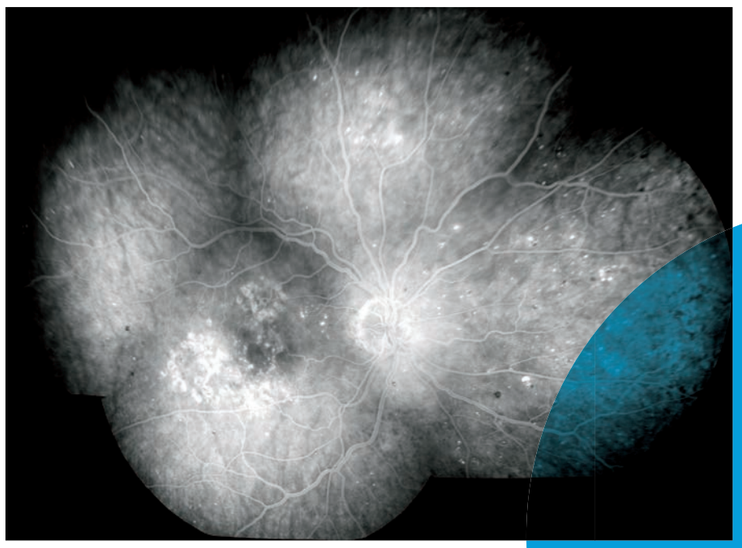
Red Free
(optical filter) It enhances the visibility of the retinal vasculature.



Cobalt
(optical filter) Assessment of the retinal nerve fiber layer



FAF
Checking health of RPE High quality FAF images: sophisticated optical FAF filters and EOS retina with image optimization - effective for cataracts.

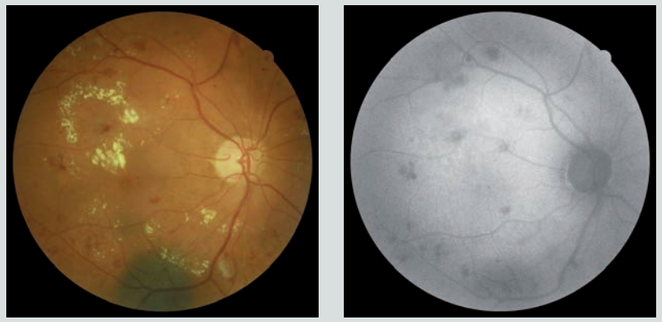


Widefield mosaic image
Can be created with the optional mosaic function in the Canon retinal imaging control sofware (RICS)

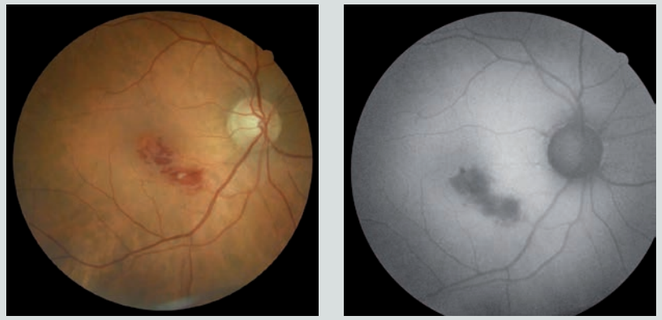
Images courtesy of
- Karolinska Institutet, Sweden,
- Semmelweis University, Hungary
- Máxima Medisch Centrum, Netherlands

Fundus autofluorescence

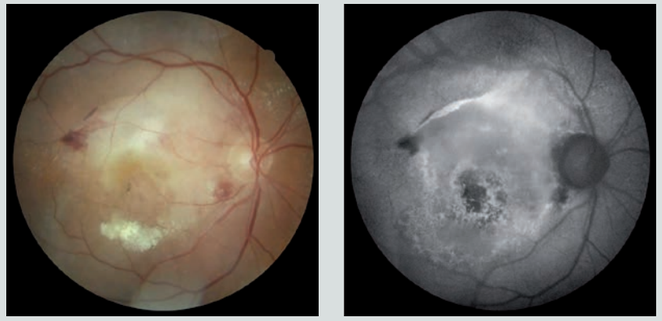
Fundus autofluorescence (FAF) imaging for the diagnosis of retinal disease is a relatively new diagnostic technique that provides more information on the health of the retinal pigment epithelium. FAF has proven to be very useful for the early detection of Age-related Macular Degeneration (AMD), one of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



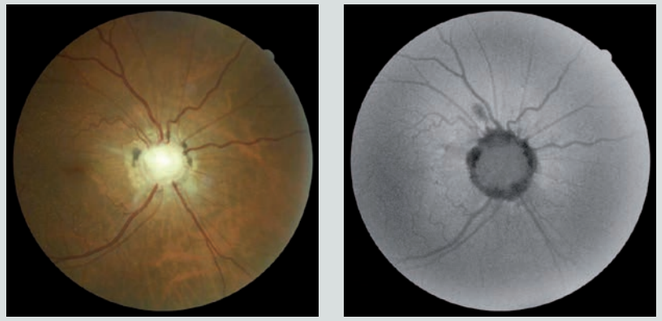
Diabetic retinopathy



Occlusion



AMD



Morning glory

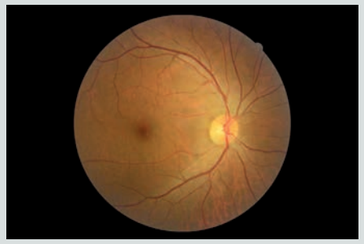
“With the extra feature of FAF photo-graphy, we have discovered retinal changes that we have not seen before, which makes us learn more about retinal changes and diseases every day we use the Canon retinal camera.” Rune Brautaset BSc (Hon), Mphil, PhD, Associated professor and Head of Unit/director of Studies, Unit of Optometry/Optometry Education, Karolinska Institutet, St Erik’s Eye Hospital, Stockholm, Sweden

Retinal Imaging Control Software (RICS)

For full camera control, image optimization, optimized workflow and patient management.

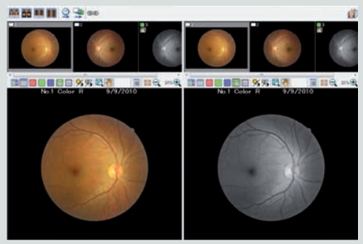
Canon's extensive Retinal Image Control Software comes bundled with the CX-1 . RICS has many features ; working on the background it will control all the important settings of the CX-1; filter selection, correct flash settings, ISO values and automatic image processing, so you can focus on what is important - taking a retinal image. It has extensive features for image processing, comparing, archiving, referencing and the export of data. The Canon Retinal Imaging Control Software allows the CX-1 to be used as a stand-alone system. But it can also be easily integrated with an existing clinic network or even DICOM-compliant network system.

Capture screen
Study Input, capturing and displaying images, inputting comments and disease name. Up to 3 studies can be opened simultaneously. e.g. During long FFA examinations, other examinations could already be started

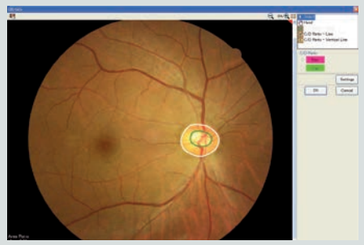


Full-Screen Mode
Offers optimized image review

Loupe Function
The image can be magnified at a selected area.



Comparison studies
Compare between different studies or different images with the same study



Cup-to-disc (C/D) ratio
Measure the the optic nerve papillary area. Besides the C/D ratio, also the drawing information is saved to monitor changes.

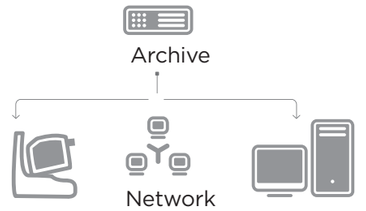
Optional mosaic function
Up to 9 images can be combined in a mosaic. Combined with the CX-1's unsurpassed capabilities to photograph the peripheral retina, an impressive widefield mosaic image can be created.

Extensive Print options
Use any printer , network or local . Order and size of images on print out can be changed easily. Hospital logo can be added on the print out. White mask printing reduces ink consumption.

HDMI monitor ready
The image on the observation monitor can be viewed on a larger external monitor by a means of a HDMI cable.

HDMI™

Viewing studies from other locations
Studies can be reviewed from the archive over the network. Studies can only be reviewed – no actual changes are currently possible.



DICOM standard compliant
Use a modality worklist from HIS/RIS and send images to a central PACS

DICOM

Specifications CX-1

Dimensions	320 W x 531 D x 577 H mm, 26 kg
Angle of view	MYD: 50 degrees, Non-Myd: 45 degrees 2 X magnification (digital)
Minimum pupil size	Myd: ø5.1mm (SP mode ø 4.3mm) Non-Myd: ø4.3mm (SP mode ø 3.8mm)
Working Distance	35mm
Photography modes	Colour /FA /Red Free /Cobalt and FAF
Mounted camera	Dedicated digital EOS camera (18 MegaPixel for current model) HDMI Output for external monitor 720 x 480 resolution
Flash levels	168 steps
Patient's diopter	–31D ~ –7D, –10D ~+15D (standard) compensation +11D ~+33D

Focus Adjustment	Split Lines
Working distance	Corneal Reflection dots adjustment
Panning and	30 degrees to the left and right tilting range 15 degrees up, 10 degrees down
Light sources	Xenon tube for photography Halogenlamp for observation (Myd mode) IRED LED for observation (Non-Myd mode)
Fixation targets	External Internal LED dot matrix for Non-Myd mode (70 points) Internal fixation target for Myd mode (optional)
Optional accessories	Stereo Unit SU-1 Internal eye fixation (CX-IF) Chin rest paper (500 sheets)

Canon has been defining the future with innovative solutions for more than 75 years. In all that time we've constantly strived to improve medical diagnostics in healthcare. Perhaps that's what made us a leading global provider of eye care solutions.

Canon Eco

Our actions are based on honesty and sustainability.

Canon Quality

Safety and quality are an integral component of our actions.

Canon Versatility

Everything we do has to have a significant customer benefit.

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