

Pro Photographer



AFC-230 / 210

Non-Mydriatic Auto Fundus Camera





Auto Fundus Camera AFC-230 / 210

Next Generation Non-Mydriatic Auto Fundus Camera offering High Quality Image and Advanced Operation

NIDEK delivers the innovative non-mydriatic digital fundus camera that integrates every function required for easy retinal screening. Customized built-in functions of the NIDEK AFC-230 / 210 improve the quality and efficiency of medical examinations.

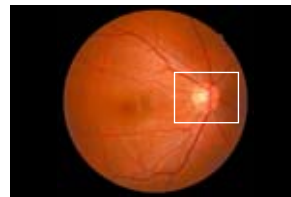


High Quality Retinal Imaging

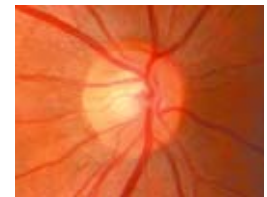
Integrating the innovative imaging optical system, this technologically advanced AFC-230 / 210 realizes digital fundus imaging of high resolution and fine gradation. The fine gradation provides clear and detailed display of the entire fundus image from the light optic disc to a darkened disease area. With noise greatly reduced, the system offers retinal photography with minimum flash exposure allowing quick and efficient fundus photography of both eyes, thereby minimizing patient discomfort.

With advanced optical system with large sensor, the AFC-230 / 210 offers high quality image at true 45° field of view.

* Conventional frame size camera is also attachable by utilizing adapter (factory option) with true 45° field of view.



Full frame size
(36mm x 24mm)



Optic disk(closeup)

First Non-Mydriatic Camera with Auto Tracking & Auto Focus

NIDEK's advanced auto-tracking technology allows easy and accurate capture of the anterior corneal center. Also, the auto focus system provides automatic switching from anterior to retina, realizing high-performance focusing without touching the joystick. Also included is the unique auto-chinrest feature.

Stress Free Photography Management

The AFC-230 / 210's advanced technologies reduce every day problems.

- High resolution Image Photography
- Always in focus
- Cut out retakes
- Patient friendly
- User Friendly

High-Performance Retinal Image Filing System - NAVIS-Lite

The AFC-230 / 210 system incorporates the sophisticated and user-friendly data filing software - NAVIS-Lite - allowing easy patient data management.

Key Features of NAVIS-Lite

- Images that are automatically imported from the AFC-230 / 210 are sorted by patient name.
- Easy-care pathway protocols in place for displaying patient information.
- Sophisticated imaging functions are incorporated, including Image Processing, Drawing, Measurement, and Panoramic Imaging for large field analysis.

Zoom : Images can be zoomed freely

Effects : Sharp, Combination, Edge enhancement

Color control : Grey scale, Contrast RGB, Red-free, Channel split, Color reversal, Brightness, Contrast, Histogram, Gamma control, Selection

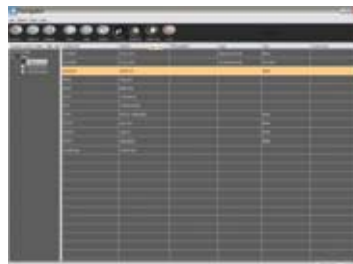
Rotate / Reverse : Image can be rotated / reversed at any angle

Measurement : C / D ratio, Disc HV, Two point separation, Selected occlusion area

Drawing : Text / objects can be inserted to the image

- Flexible print layout display for patient reports
- Data back-up function
- Images easily exported
- Email function is accessible allowing message text with image file attachment
- The data can be transferred to a DICOM (Digital Imaging and Communications in Medicine) 3.0 compatible server (Optional).

Sample Screens



Patient List



Patient Data



Image Editing



Full-Screen Display

Various System Configurations

1 | Stand-alone-Module



Easy connection with a Laptop or PC using USB2.0 interface.
Quick and easy install to a Laptop or PC using NAVIS-Lite installer.
OS requirement: Windows XP or later version

2 | Communication with Existing Modules

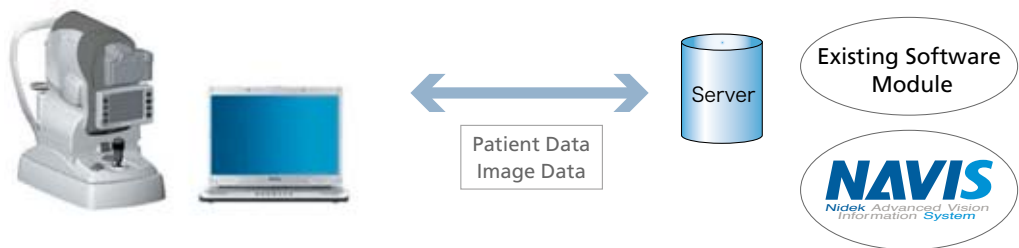
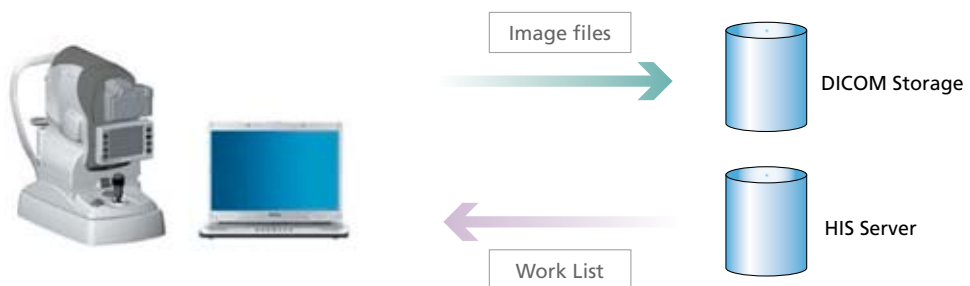


Image files and XML files can be automatically / manually exported to a designated folder. XML files include information that links the patient data and image files, allowing data export to NAVIS and other existing software modules.

3 | DICOM Connection (Optional)



DICOM connection can be achieved. Downloading work lists from the HIS Server is also possible.



Features of AFC-230 / 210

Accurate Anterior Eye Observation before Photography

The AFC-230 / 210 integrates the 5.7-inch TFT LCD (640 x 480) monitor in addition to the special optic system, CCD camera and high resolution monitor for anterior eye observation, allowing accurate confirmation of the anterior eye status (blepharoptosis, in-growing eyelashes, nystagmus, cataract, corneal disorder, etc). This assures high quality retinal photography.



Flexible Field Angle

Without an adapter, the AFC-230 / 210 can provide detailed image of smaller field of view in high quality by utilizing full frame 35mm in 45° field of view.

Unique Blink Control

With the automatic blink detection, the AFC-230 / 210 automatically stops the photography when the patient blinks.

Anterior Eye Photography Mode

When pressing the button for anterior eye photography, the AFC-230 / 210 automatically switches its mode and provides clear anterior eye photography.

Smaller Pupil Diameter Mode

In addition to the regular minimum Pupil Diameter \varnothing 4.0 mm, the AFC-230 / 210 is also highly capable of detecting a smaller Pupil Diameter - Minimum 3.7 mm. When the patient's Pupil Diameter is detected to be smaller than the required 4.0 mm, the AFC-230 / 210 automatically switches its mode to the \varnothing 3.7 mm smaller Pupil Diameter mode.

Stereo Mode*

Stereo fundus photography is also possible.

*Requires stereo viewer (optional).

High-Speed Image Transfer to a PC

Connection to a PC through USB 2.0 allows quick and easy transfer of the images. The data can also be saved in an outside electronic chart system through the NAVIS-Lite.

Ergonomic Design for Easy Operation in Darkened Room

Layout of buttons, the lever and the dial is ergonomically designed to allow intuitive operation. These allows the operator to take a photograph easily even in a dark room.



Compact Body

All necessary functions are integrated into this compact body, offering greater portability.



AFC-230 / 210 Specifications

	AFC-230	AFC-210
Main Body		
Type	Non-Mydriatic Auto Fundus Camera	←
Picture angle	45° (in smaller pupil diameter mode: 37°)	←
Working distance	45.7 mm (from camera lens to cornea)	←
Minimum pupil diameter	ø4.0 mm (in smaller pupil diameter mode: ø3.7 mm)	←
Display	5.7-inch TFT color LCD	←
Dioptric compensation for patient' eyes	-33 to +35 D total -33 to -7 D with minus dioptric lens -12 to +15 D with no dioptric lens +11 to +35 D with plus dioptric lens	←
Focusing method	Infrared split bright target coincidence (Auto / Manual, in -12 to +15 D range)	←
Light source		
For observation	Halogen lamp 12V 50W with infrared filter	←
For photography	Xenon Flash lamp (Max. 300 Ws)	
Illumination adjustment	17 levels : F1 (F4.0 + 0.7 EV) to F17 (F22 + 0.5 EV) 0.5 EV increments	←
Internal fixation target	LED (70 points)	←
External fixation target	Free-arm (optional)	←
Horizontal movement	40 mm (back and forth) 85 mm (left and right)	←
Vertical movement	32 mm	←
Chinrest movement	62 mm (up and down, motorized)	←
Auto Tracking	X-Y-Z Direction	Y Direction
Interface	USB 2.0	←
External camera	High resolution digital SLR camera	←
		←
Power supply	AC 100-240 V ±10% 50 / 60 Hz	←
Power consumption	Normal 150 VA, Max. 300 VA	←
Dimensions / Weight	280 (W) x 505 (D) x 507 (H) mm / 25 kg 11.0 (W) x 19.9 (D) x 20.0 (H) " / 55 lbs.	←
Standard accessories	Power cord (x1), USB cable (x1), Dust cover (x1), Chinrest paper (x1 pack), Chinrest paper pins (x2), Objective lens cap (x1), Camera body cap (x1), Blower brush (x1)	←
Optional accessories	NAVIS-Lite, External fixation target, Stereo viewer, Conventional frame size camera adapter (Factory Option)	←

*Manufacturer
NIDEK Co., LTD.
34-14, Maehama, Hiroishi, Gamagori, Aichi 443-0038, Japan

Caution : U.S. Federal Law restricts this device to sale, distribution and use by or on the order of a physician or other licensed eye care practitioner.



Eye & Health Care
NIDEK CO., LTD.

HEAD OFFICE
34-14 Maehama, Hiroishi
Gamagori, Aichi 443-0038, Japan
Telephone : 81-533-67-6611
Facsimile : 81-533-67-6610
URL : <http://www.nidek.co.jp>

TOKYO OFFICE
(International Div.)
3F Sumitomo Fudosan Hongo Bldg.,
3-22-5 Hongo, Bunkyo-ku, Tokyo,
113-0033 Japan
Telephone : 81-3-5844-2641
Facsimile : 81-3-5844-2642
URL : <http://www.nidek.com>

NIDEK INC.
47651 Westinghouse Drive
Fremont, CA 94539, U.S.A.
Telephone : 1-510-226-5700
: 1-800-223-9044 (US only)
Facsimile : 1-510-226-5750
URL : <http://www.usa.nidek.com>

NIDEK SOCIÉTÉ ANONYME
Europarc
13, rue Auguste Perret
94042 Créteil, France
Telephone : 33-1-49 80 97 97
Facsimile : 33-1-49 80 32 08
URL : <http://www.nidek.fr>

NIDEK TECHNOLOGIES SRL
Via dell'Artigianato, 6 / A
35020 Albignasego (Padova), Italy
Telephone : 39 049 8629200 / 8626399
Facsimile : 39 049 8626824
URL : <http://www.nidektechnologies.it>



*Specifications and design are subject to change without notice for improvement.



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