

3nethra NEO

Digital Wide-field Imaging System



The Global Need for Pediatric Imaging

During the course of their intensive neonatal care, 37–54% of preterm babies contract a potentially blinding eye disorder known as Retinopathy of Prematurity (ROP). Unless early intervention is carried out, 7–15% of these babies are at risk of going blind.

> 130 m* babies are born each year

*UNICEF

Approx 15 m are born preterm Of these, >3.5 m preterm births are recorded in India alone

Further, retinoblastoma is the most frequent neoplasm of the eye, accounting for 3% of all childhood malignancies. Globally, nearly 1 in 15,000 children develop retinoblastoma and 8,600 –9,000 children are newly a ected each year.**

The need of the hour is an affordable, wide-field imaging solution to screen, evaluate, and photo-document pediatric ocular diseases.

**wehope.org

SnethraHigh-resolution Imaging
with Greater Field of View

The 3nethra neo is a compact, portable, and easy-to-use mydriatic wide-field digital imaging system used for the photo documentation of ocular diseases that manifest in infant eyes. The ergonomically designed, lightweight handpiece allows for single-handed operation, and captures 120-degree high-resolution images of the

posterior and anterior segments of the eye. The device acquires only digital photographs of the eye and does not provide any analysis or diagnosis. The contact device is easily operated by qualified clinicians and can be deployed in versatile clinical environments such as hospitals, operating rooms, and Neonatal Intensive Care Units (NICU).

Salient Features



Integrated provision for historical data



Intuitive controls and workflow



Compact and ergonomic design

Lightweight and easy to use

Digital Health Platform

Cloud-based platform for secure electronic uploading of high-resolution digital images by operators and remote review by qualified clinicians.

Digital Health Platform availability is subject to local regulatory requirements/infrastructure and therefore varies from country to country.

Innovation in Design



Unique built-in compact warm white LED-based illumination system



Complex and compact optomechanics to make the probe lightweight



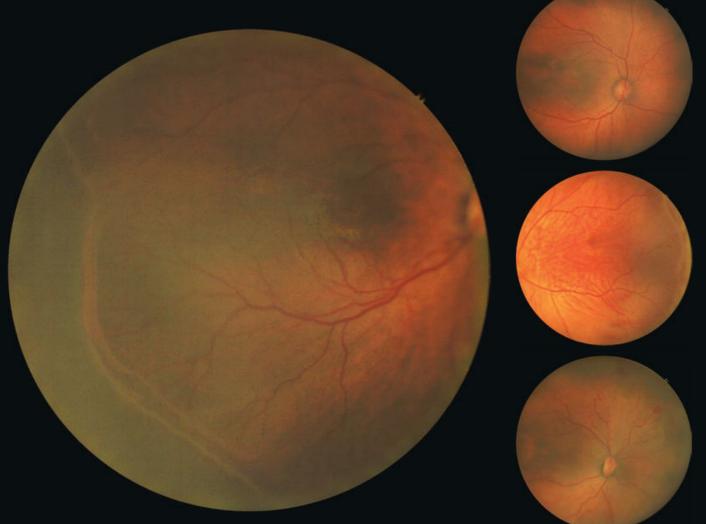
Innovative focusing system that enables noiseless operation



Wide-field imaging at 120 degrees

Lightweight, pen-holder grasp handpiece for single-handed operation

Delivers Objective Evidence



120-degree FOV

Photo-documentation of visual health for medico-legal purposes

Enhances consultation, improving communication with patients

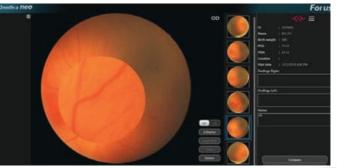
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Photographs captured by 3nethra neo do not provide any pathological analysis or diagnosis for treatment. The device assists clinicians in the evaluation, diagnosis, and documentation of visual health.

Review Software

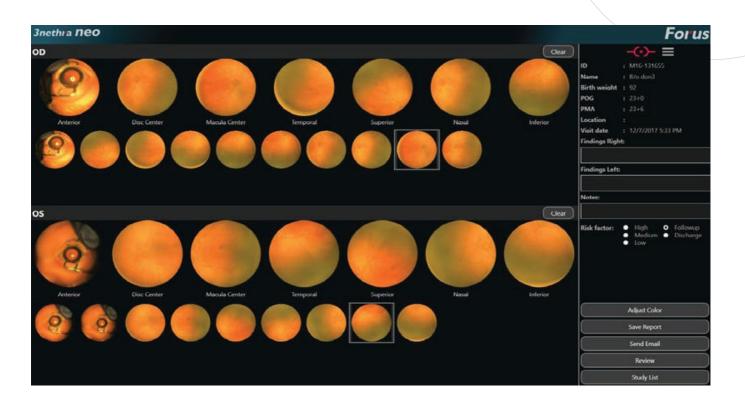


This convenient and full-screen view of the fundus images allows for easier comparison between images taken during different visits. This enables clinicians to evaluate the ocular condition's progression or regression faster.



The magnifier option aids in better analysis of the formation and tortuosity of blood vessels.

Report Generation



The report provides the photo-documentation of ocular conditions along with the findings for each eye to indicate a further course of action. The automatic segmentation of the images to the specific image fields in the report allows the variability of the images to be characterized separately for each eye. The review software enables sharing of the report through email.

Product Specifications

Parameters	Values
Image Resolution	2048 X 2048, 24-bit colors
Minimum Pupil Diameter	4 mm
FOV	120 degrees, when measured from the center of the eye
Adjustments	Intensity, Gain, Balance, Brightness, Contrast, Gamma, and Focus
Imaging	Still images and burst mode images
Compatability	DICOM Export and PACS support, Telemedicine, USB 3.0
Weight of Handheld Unit	340g (720g with cable)
Dimensions of Handheld Unit	210 (L) X 70 (W) X 60 (H) mm
Operating Environment	Temperature: 22–26°C Humidity: 30–70% Atmospheric pressure: 70–106 kPa Altitude: 0–2000 meters Power Supply Input: AC 100– 240V, 50/60 Hz (for DC power adapter 5V/5A)
Minimum System Requirements	The software will work on MS Windows 10 OS(64-bit) or Pro with i3 7th or 8th Generation or above, 2.4 Ghz or higher, 8 GB RAM or higher, 500 GB or more hard disk space (HDD/SSD), at least two USB 3.0 ports, full HD display 1920 X 1080 resolution. Forus Health recommends using a CE marked laptop or desktop. For international markets, Windows OS Pro version is recommended. System specifications are subject to change without notice

This product is available for sale in the US, Canada and Europe.

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Customer Speak

The 3nethra neo has helped us expand our tele-ROP (KIDROP) program wider than before. The portability of the device is an important factor. We are able to transport a single unit across several neonatal units within each zone of KIDROP. The images are of good quality, and with a field of view of 120 degrees, the device helps our trained photographers capture the retinal periphery, a pre-requisite for discharge from screening. Our teams using the cameras are able to complete over 2000 imaging sessions a month in over 127 neonatal units in Karnataka, a state in South India.

- Dr Anand Vinekar, Narayana Nethralaya Eye Institute, Bangalore

For three years, I have been using 3nethra neo, Forus Health's camera for the ROP screening program in Gujarat. Using 3nethra neo we have screened 8,000 babies, and I find the camera quite user-friendly and particularly, being lightweight makes it easier to carry between multiple NICUs. It's easy to use and allows my technicians to capture excellent images, even in the extreme periphery regions. I am very impressed with their telemedicine software where we upload images for remote screening. I feel the camera's image quality is comparable to RetCam camera and would strongly recommend using this relatively a ordable 'Made in India' camera for ROP screening.

> - Dr Alay Banker, Banker's Retina Clinic and Laser Centre, Ahmedabad

Clinical Study

Clinical Validation Report of 3nethra neo: A Novel, Low-Cost, Wide-Field, Infant Retinal Camera, "Neo": Technical and Safety Report for the Use on Premature Infants

Anand Vinekar; Shyam Vasudeva Rao; Seema Murthy; Chaitra Jayadev; Mangat R. Dogra; Anshuman Verma; Bhujang Shetty

Translational Vision Science and Technology; March 2019

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