3nethra is available in 2 versions - The 3nethra classic and the 3nethra royal.

**Specifications**

- **Picture angle**: 40 - 45 degree
- **Working distance**: 30 mm (from camera lens to cornea)
- **Optical Resolution**: 20 microns
- **Minimum pupil diameter**: 4.0 mm
- **Horizontal movement**: 60 mm (Black and Forth), 80 mm (Left and Right)
- **Vertical movement**: 80 mm (Up and Down)
- **Interface**: Universal Serial Bus 2.0
- **Image Sensor**: 1 Megapixel CMOS
- **Power supply**: AC 100-250 V. 50/60 Hz
- **Power consumption**: 5-10 Watts
- **Dimensions / Weight**: 380 (W) x 498 (D) x 620 (H) mm / 15.4 kg

**Software Applications**

- Image Storage and Retrieval
- Patient Records Management
- Automatic Analysis for Disease Detection
- Print Ready Report Generation

**Features**

- Diabetic Retinopathy
- General (Glaucoma, Cataract, Staining)

**Prerequisites**

- For capturing retina images: MS Windows XP (or newer) based Laptop or a Desktop Computer
- For Telemedicine: Internet connectivity
- For Power: Uninterruptible AC Power Supply for 5V DC Adaptor
- For Report Generation: Microsoft Office 2003 or newer

*Although every attempt is made to meet or exceed the performance standards, Specifications are subject to change without notice.*

Forus Health Pvt. Ltd.
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The Problem

Every five seconds, someone, somewhere in the world goes blind. Every minute, one more child goes blind – and 60% of these children will die within a year.

There are up to 45 million blind people in the world today. Without effective intervention, this is set to rise to 76 million by 2020. More than 90% are in the developing world. India suffers a worrisome 12 Million of this number. Cataract, Diabetic Retina, Glaucoma, Cornea and Refraction problems constitute 90% of blindness.

Over 80% of this blindness is needless and can be prevented or treated. The issue goes beyond health – it affects the livelihoods of individuals and the economic well-being of communities. A vicious circle of poverty and reduced resources play havoc with these lives, impacting the well being of the nation as a whole.

Research estimates the global savings from tackling avoidable blindness could be as much as US$223 billion over 20 years.

The Constraint Today

Only 14000 ophthalmologists practice in India and a mere 800 ophthalmologists graduate every year. Ophthalmologist to patient ratio is approximately 1: 6000. This is much worse in the rural scenario.

Only around 7-10% of people at various stages of blindness are screened and treated as of today.

In Ophthalmology, Screening for a problem is the biggest constraint. Current system needs expensive diagnostic devices for screening (single device for every problem) coupled with the availability of high skilled ophthalmologist during screening. This increases cost of service substantially and hence limits scalability. This has resulted in a grossly under serviced rural market.

The Solution

3nethra – The world’s first single, portable, Intelligent, non-invasive, non-mydriatic eye pre-screening device that detects 5 major ailments of eye automatically – cataract, glaucoma, diabetic retina, cornea problems. It also provides accurate refractive index measurements.

- Decision making is carried out by the device through Automatic Screening algorithms and provides “OK-See a Doctor” Report.
- Connectivity through communication infrastructure including mobile and broadband to enable remote diagnosis
- Datacenter solutions that will create improved service offering from all players in the eye care ecosystem

In fact we have not created just another device. It is a unique concept assisting you in the mission of eradicating avoidable blindness.

3nethra incorporates the latest in optical technology, intelligent software and appropriate ergonomic design to make it the most versatile mobile aide for an ophthalmologist. It is literally an effective extension to the doctor in acquiring vital Visual Health information for people & society he/she is serving.

The versatile ophthalmic aide

Salient Features

- **Affordable, highly mobile and portable** - Can be easily assembled and used by a non-technical person with minimum training
- **Easy to use** - It is completely non-invasive and hence can be operated by a minimally trained technician. Operator needs to be familiar with basic eye anatomy, with minimum operational computer knowledge and basic soft skills to communicate in local language.
- **Auto screening & reporting** – Can detect with fair accuracy, five different ailments of the human eye and generates a detailed Pre-screen report containing demographics, images and “OK-Go see a Doctor” report.
- **Needless blindness detection** - It can detect problems at a very early stage when patients do not experience visible symptoms. It can be operated continuously any number of times to serve masses. This device can play a significant role in identifying needless blindness in rural India.
- **Digital solution** – All digital information (Grayscale images taken in Infra Red(IR) light, color images taken in White light, Electronic Medical record etc) are transmitted electronically enabling telemedicine solutions using 3nethra images. These images help in detection of common eye ailments by an ophthalmologist even from a remote location.
- **Low power needs** - Requires extremely low power to operate comfortably in rural areas where extreme conditions may prevail.

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