NanEye
with HDMI output
Evaluation Unit

Revision History:

Version	Date	Modifications	Author
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1 NanEye Fiber Light Demo with HDMI

1.1 Overview

NanEye Fiber Light Demo Kit HDMI is a fully embedded all in one image processing unit that interfaces the NanEye® micro camera head signals and gives out a 1080p/60 format HDMI video signal which can be directly plugged to a display monitor. No additional PC or image processing is required.

The kit unit embeds advanced image processing algorithms to correct sensor fixed pattern noise, construct the colour data from the raw binary stream and displays an output image of 750 x 750 pixels over an HDMI interface. The Kit includes a fiber light source which provides light to the tip of the NanEye Sensor probe via a 0.5mm plastic optic fiber. The fiber and NanEye camera are housed in a 3mm diameter lumen of 1.4m length which can be plugged and unplugged easily from the processing and illumination unit. The illumination intensity is adjustable by a manual dial. The unit is supplied by a 15V wall charger and provides galvanic isolation to the camera head. It can interface to any standard Monitor that provides HDMI input. The compact main body of the kit measures only 40cm x 8cm x 5cm and provides all necessary video processing and display driving plus the adjustable illumination!

Figure 1: NanEye Fiber Demo with HDMI

The Kit is pre-calibrated by AWAIBA to the NanEye® camera head purchased together with the Evaluation unit for optimal FPN correction and colour balancing.

1.2 Who should buy NanEye Fiber Light Demo Kit HDMI

NanoHDMI is the ideal solution for all NanEye® sensor customers that do intend to only display an image with a high quality on a screen with a lean and easy to use solution and wish an all in one evaluation kit providing illumination. Customers who do not have an illumination solution of their own or who require a smaller probe diameter and can accommodate the NanEye® camera head into custom mechanics and illumination should consider the NanoHDMI kit. Likewise, customers who intend to develop their own video processing hardware or who intend to stream unprocessed image data to a PC platform are recommended to refer to one of the other NanEye® development and evaluation boards based on NanoUSB2.2 or NanoUSB3 provided by AWAIBA.

1.3 Kit Content

- NanEye_Fiber_Demo_Optic_Kit_HDMI Processing unit with fiber illumination
- POF fiber in lumen with connector 1.4m length
- 15V wall charger
- HDMI monitor cable

1.4 Purchase separately

NanEye_2D camera head on cable. (All RGB versions can be chosen with this kit, cable length is fixed to 2m. The camera will be mounted in the fiber lumen by AWAIBA on delivery and adjusted to 1.4m length.)

1.5 Ordering Information

Example: **NanEye_fiber_Demo_Optic_Kit_HDMI**

2 NanoHDMI

2.1 Overview

NanoHDMI is a fully embedded all in one image processing unit that interfaces the NanEye® micro camera head signals and gives out a 1080p/60 format HDMI video signal which can be directly plugged to a display monitor. No additional PC or image processing is required.

The NanoHDMI unit embeds advanced image processing algorithms to correct sensor fixed pattern noise, construct the colour data from the raw binary stream and displays an output image of 750 x 750 pixels over an HDMI interface. The unit is supplied by a 12V wall charger and provides galvanic isolation to the camera head. It can interface to any standard Monitor that provides HDMI input. On the sensor side the unit provides an extension cable of 1.4m and a small size interface print which holds the sensors calibration data and connects to the NanEye® cable connector. The NanEye® camera cable can be chosen in different lengths up to 3m beyond this extension board. The compact main body of the kit measures only 13cm x 8cm x 3cm and provides all necessary video processing and display driving!

The NanoHDMI is pre-calibrated by AWAIBA to the NanEye® camera head purchased together with the NanoHDMI unit for optimal FPN correction and colour balancing.

Figure 2: Nano HDMI

2.2 Who should buy NanoHDMI

NanoHDMI is the ideal solution for all NanEye® sensor customers that do intend to only display an image with a high quality on a screen with a lean and easy to use solution, but which have their own illumination solution and fix the NanEye camera module in their own endoscopic mechanics. Customers who do not have an illumination solution of their own or who do not have mechanics to fix the the NanEye® camera head should consider the NanEye_Fiber_Demo_Optic_Kit_HDMI. Customers who intend to develop their own video processing hardware or who intend to stream unprocessed image data to a PC platform are recommended to refer to one of the other NanEye® development and evaluation boards based on NanoUSB2.2 or NanoUSB3 provided by AWAIBA.

2.3 Kit Content

- NanoHDMI Processing unit
- Camera Extension cable with sensor interface board
- 12V wall charger
- HDMI monitor cable

2.4 Purchase separately

NanEye_2D camera head on cable. (All RGB versions and cable length can be chosen with this kit)

2.5 Ordering Information

Example: **NanoHDMI**

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