HaeHong

Neptune™
Standalone Multi-Spectral Imaging System

Description

The Neptune - Unispectral's standalone imaging system is a versatile and user-friendly camera with advanced imaging features like real-time visualization of algorithms, built-in models, and tagging tools. It's perfect for POC, suitable for a wide range of applications in fields like food quality, agriculture, biomedical, and recycling analysis. With its portable design, data processing application, internal battery and a built-in illumination, it can be used in both indoor and outdoor inspections.

Key Features

- Portable spectral NIR Camera
- Integrated broadband NIR illumination
- Easy data collection: auto-exposure, integrated ROI indicator and under/over-saturation indicator
- Realtime visualization of algorithms
- Application development toolbox including tagging tool and built-in models
- Touch screen operation
- Internal battery
- Portable inspection for indoors and outdoors

Applications

- Food quality
- Agriculture
- Biomedical
- Recycling
- Pharmaceuticals
- Art analysis
- Forensics

Specifications

Optics

F/#	4.7
EFL	4.98 mm
H-FOV, V-FOV, D-FOV	31.5º, 25.5º, 39.8º
Sensor Resolution	1280 x 1024
Preview Mode	60 FPS
Gain	X1 ÷ X10
Exposure Time	1 ÷ 500 ms

Filter

Wavelength FWHM	40nm ± 10, @ Image Center
Spectral Response	690-935nm
Spectral Band Range	705-920nm
Spectral Band Accuracy	± 2.5nm
Angular dependency [nm/deg]	-1.1nm/deg, @ 30º FOV

Illumination

LED 24 wavelengths	650-960nm
Power	24 Watt/Image

System

Input Voltage	12 Vdc
Power Consumption	<35W (peak)
Touch Screen	5.5 inch
Battery	6600 mAH (2/8 hours w/w.o flash)
CPU	RK3588
Ram	8G
Flash	64Gb (SD extension)
Wireless	Wifi6, 4G(Optional)
Platform	Linux
Interface	USB- C
Working modes	Spectral cube/Single frame
Saved Format	ENVI (Raw) & PNG

Working

Operating Temperature	0º-70 ºC
Humidity	<90% (None condensing)
Size	239x109x107mm

Development Platform

Python/C API for Linux	