ONE-PIX
POP!

MAKE YOUR OWN KIT!

COLLABORATIVE KIT

This kit has been developed thanks to a **growing community** of users, industrialists, researchers and academics, with the aim of being assembled in a standard fablab using laser cutting.

You can also build your own ONE-PIX kit using open-source information and files **available in the hardware construction folder available online on the GitHub platform**.

Join us in **enriching this project!**

ONE-PIX
POP!
PHOTONICS OPEN PROJECTS

CONTACT US TODAY

Interested in buying a pre-assembled kit? Looking for help to adapt your ONE-PIX kit to your use case?

Contact us today to explore the world of hyperspectral imaging with the ONE-PIX kit.

Tel. 07 83 41 41 36
contact@photonics-open-projects.com

www.photonics-open-projects.com

ACCESS TO ONE-PIX PROJECT FILES ON GITHUB

Technology under licence from Arvalis / Photonics Bretagne

1 KIT

A PERFECT INTRODUCTION TO HYPERSPECTRAL IMAGING

ACADEMIC APPLICATIONS

COMPRESSIVE HYPERSPECTRAL IMAGING

The ONE-PIX kit is an innovative hardware solution developed by Photonics Open Projects, which **converts a spectrometer into a a hyperspectral camera**.

Designed for applied research, this kit provides an ideal environment for an **introduction to compressive hyperspectral imaging** for indoor applications.

4 ASSETS

MODULARITY
Compatible with **various spectrometers**, offering flexibility of use. Open hardware and software to suit your needs.

EDUCATION & RESEARCH
An educational tool for **teachers and students** exploring unconventional imaging. Experience the latest hardware and software from the **scientific community**. An ideal platform to reproduce and compare the work of your peers.

AFFORDABLE
A cost-effective solution for **production of low-cost hypercubes** and reproducing academic results in the field of robotic vision.

SPECTRAL VERSATILITY
Capture hypercubes in the visible region, with the possibility of extending to the **near infrared**.
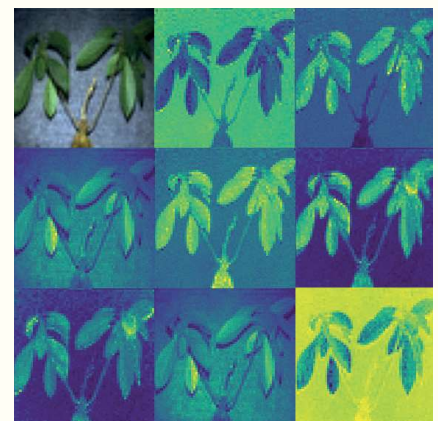
ONE-PIX KIT DEMONSTRATION VIDEO

SPEC. ONE-PIX

CAMERA SPECIFICATIONS

PARAMETERS	STANDARD ONE-PIX KIT	WITH VIS/NIR OPTION
SPECTRAL PARAMETERS		
Spectral range (nm)	400 - 700	400 - 800
Spectral resolution (mean) (nm)	0.6	
Spectral bands	500	666
Spectral SNR	260	250
PROJECTION PARAMETERS		
Throw Ratio	1.96 - 2.5	
Recommended working distance (cm)	50	
Recommended projection dimensions (HxW) (mm)	21 x 25	
ELECTRONICAL AND MECHANICAL PARAMETERS		
Power consumption	300 W (max)	
Connectors	RJ45 or Wi-Fi	
Dimensions (HxWxD) (mm)	220 x 250 x 320	
Weight (kg)	3.6	

TYPICAL PERFORMANCES
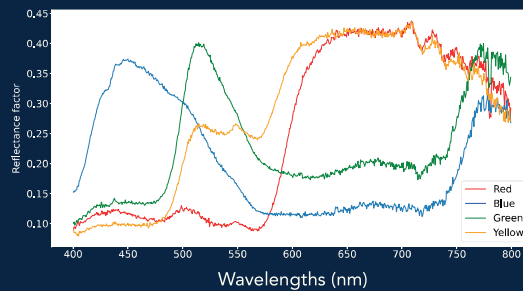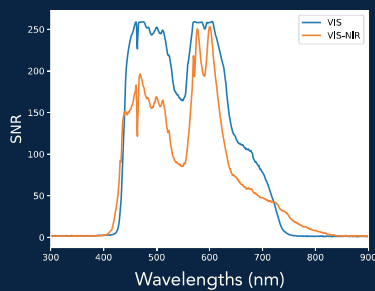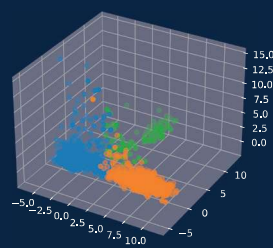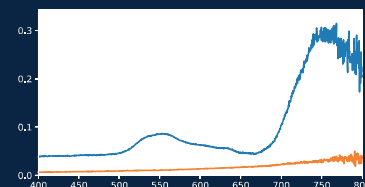

RGB image

VEGETABLE EXAMPLE

RGB image

Segmented image

Analysis and decision-making model

Reflectance spectra