

eyeSPICE

A powerful platform to get the most out of spectral imaging

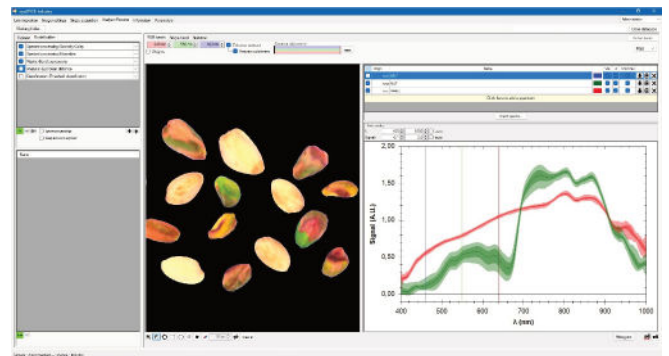
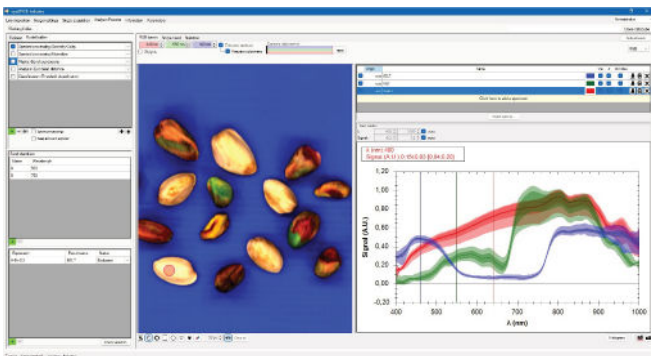
Introduction

eyeSPICE is a powerful spectral imaging software platform behind an intuitive interface providing a full control over both spectral imaging cameras and acquired data.

With a unique versatility, eyeSPICE provides multiple working environments to:

- explore and analyze hyperspectral datacubes or multispectral image stacks
- build reliable interpretation models
- acquire spectral imaging data (eyeSPICE-Pro, eyeSPICE-Industry only)
- execute one or multiple models in continuous online monitoring situations (eyeSPICE-Industry only)

“Hardware” open: a unique feature of eyeSPICE is its ability to control spectral imaging devices from multiple manufacturers. Currently supporting eye4you spectral imaging cameras, several Resonon and HySpex hyperspectral cameras, as well as any spectral imaging camera controlled by Active Silicon frame grabbers, a wider range of spectral imaging devices will be integrated as well in future versions of eyeSPICE.



Details - versions

The eyeSPICE software exists in 3 different versions.

eyeSPICE-Lite: free version of eyeSPICE. Allows opening any ENVI type SI datacube, exploring the spatial and spectral data contained in the datacube and experiment with various SI data processes to extract the most out of any raw datacube.

eyeSPICE-Pro: requires an eyeSPICE-Pro license dongle (to be individually purchased or included with a purchased eyeSPID system). In addition to all the features included in eyeSPICE-Lite, allows controlling spectral imaging devices, perform datacube acquisitions and saving processing chains as interpretation models.

eyeSPICE-Industry: requires an eyeSPICE-Industry license dongle (to be individually purchased). In addition to all the features available in eyeSPICE-Pro, eyeSPICE-Industry introduces the notion of Profiles (Operator / Administrator) and the Line inspection mode. This mode allows a non-stop, continuous acquisition of spectral imaging data together with a simultaneous, continuous and real-time execution of one or several previously saved interpretation models. These features enable using eyeSPICE-Industry as the main tool and user interface in a typical spectral imaging machine vision application.

Features

eyeSPICE feature	Lite	Pro	Industry
Open, visualize and explore SI datacubes (ENVI)	✓	✓	✓
Process SI datacubes, create interpretation models	✓	✓	✓
Manage SI device and set up SI acquisition parameters	✗	✓	✓
Perform single datacube acquisitions, save datacubes	✗	✓	✓
Online SI monitoring: continuous acquisition, execution of saved interpretation models in real-time	✗	✓	✓
Operator and Administrator profiles from	✗	✗	✓

Applications

- Objects classification / detection of foreign objects based on spectral properties
- Mapping of surface composition based on spectral properties
- Online hyperspectral monitoring of conveyed products (eyeSPICE-Industry)
- Control of different spectral imaging devices (one at a time) using eyeSPICE as a single interface (eyeSPICE-Pro, eyeSPICE-Industry)

