breeze.

The Complete Software Toolset For Hyperspectral Imaging

Prediktera.

breeze.

Hyperspectral Imaging Software

From exploratory research and feasibility studies, to development of automated workflows and industrial integration, Breeze is the complete software tool for hyperspectral imaging.

The software Breeze can be used effectively for your research and development. When combined with optional add-on modules, it also supports industrial integration and geological analysis.

Speed up research and development of applications

User friendly interface for experts and beginners

For R&D and real-time analysis in industry

Your software - from idea to solution!

Data acquisition

- Record from camera
- Control scanner table
- Import image files

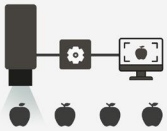
Data analysis

- Explorative analysis
- Model development
- Image segmentation and object recognition

Application development

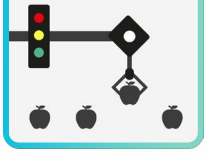
- Develop automated analysis workflows and apply to new data
- Routine analysis

Real-time analysis



- Run applications at high speeds

Industrial integration



- Runtime API
- Interface with external systems using Breeze Runtime API module

- **Easy to use:** Intuitive user interface and workflow optimized for hyperspectral imaging.
- **Efficient:** Fast and robust data processing built for handling large data sets.
- **Powerful:** A complete set of data analysis tools including the latest methods in spectral and image analysis.
- **Compatible:** Supports most cameras and file formats on the market.

- Neural networks
- Chemometrics
- Machine learning
- Python Interface
- Object recognition

Modelling and data analysis.

Classification and Quantification

- Pixel and object analysis

Machine learning

- Auto select, Neural network, Decision tree, Support vector machine, Random forest, Logistic regression, Maximum entropy, Linear Regression

Chemometrics

- PLS, PLS-DA, Hierarchical PLS-DA, SIMCA
- PCA, K-means, Gaussian mixture mode

Similarity based

- Constrained Spectral unmixing
- Spectral angel mapper

Band math

- Vegetation Index and other functions

Neural network ONNX models

- From external software (ex Pytorch)

Python Interface

- Apply your own code

Quantification

Classification

Object identification and image segmentation.

Spectral analysis

- Classification model (ML, chemometrics)
- Band math

Shape based analysis

- Deep learning, YOLO v4/v5/v8/v11, Faster R-CNN, FastSAM, Import ONNX files

Other segmentation

- Manual selection, pixel coordinates, grid, mass center, structure, Python and many more

Supported Cameras

HySpex	HySpex Cameras using HySpex Library SDK - Baldur V-1024 N, S-640i N, S-384 N - Classic VNIR-1800, VNIR-3000 N, SWIR-384 and SWIR-640 - Supports dual camera, scanner table and tripod.
Specim	Cameras using LUMO SDK. SWIR, FX-10, FX-17, FX-50 and more. Supports scanner table.
inno-spec	RedEye 1.7 - Supports scanner table
Resonon	Pika L/XC2/UV, Pika IR (NIR320)/IR+/IR-L/IR-L+
Unispectral	Monarch II
Basler	Cameras using Basler Pylon SDK
IDS	All IDS GigE RGB cameras (e.g., uEye+)
HAIP	BlackIndustry SWIR, NIR
Qtechnology	GSENSE sensor, C-series

Supported file formats:
Image files: ENVI (raw, bil, bsq, bip), mat, hdf, hyspex, pam, sc, sac, hips, jpg, png, tiff, and more.
Other data: asd, csv, txt, xls, spc, mcf, mat, ram, dat, spf, and more.

System requirements:
OS: Windows® (Latest supported Windows version), Linux (Ubuntu 18 or later).
CPU: High performance Intel CPU, 8 core or more recommended. RAM: Minimum 32 GB recommended.

For the latest information on supported cameras, file formats, and system requirements, visit our website.

Version 1.1

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Breeze Suite

A complete software solution for research, analysis, and industrial applications.

Breeze Suite is a flexible software platform for research, application development, routine analysis, and real-time industrial solutions. It includes the software Breeze and optional add-on modules for industrial and geological applications.

- **Runtime API Module**
  Enables integration with industrial systems.
- **Geological Analysis Module**
  Tools for mineral classification and analysis.
- **Core Scanning Module**
  Special features for drill core scanning.

A Trusted Partner In Hyperspectral Imaging

Prediktera develops user-friendly software for hyperspectral imaging, supporting both research and industrial applications. With over 10 years of expertise in data and image analysis, we help customers improve efficiency when working with hyperspectral data. Founded 2015 in Umeå, Sweden, Prediktera is a subsidiary of Norsk Elektro Optikk (NEO) and serves universities, research institutes, and companies worldwide.

We help you succeed!

- Software solutions
- Training
- Application & integration support
- Feasibility studies

Contact us

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