

ColorIR™ Monarch™ EVK Multispectral Camera

Product cat. No. UNS52000

SW user guide – UNS61400

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1 Overview

SW

This software enables the user to evaluate Unispectral's MEMS technology. By using Unispectral's new EVK, the user will be able to set exposure and gain values, choose specific CWLs, and save the images for further analysis.



2 Main Screen

2.1 Control Options

The left side bar includes four fields related to four control options:

The screenshot shows a control interface with the following elements:

- A power button at the top, currently turned ON (indicated by a green slider).
- A "Camera Control" section containing:
 - An "Exposure" field set to 1/3 [333 ms].
 - A "Gain" field set to 1.00.
 - A list of modes with corresponding color swatches. The mode 790 is currently selected and highlighted in red.
- A "Save" section containing:
 - A "Path" field set to "Documents\SavedImages".
 - A "Name" field with a yellow background.
 - A "Save spectral cube" button.

- **Power Button**
- **Camera Control** – exposure & gain configuration
- **Modes** – supported center wavelengths (CWLs)
- **Save** – save images to drive

2.2 Power Button

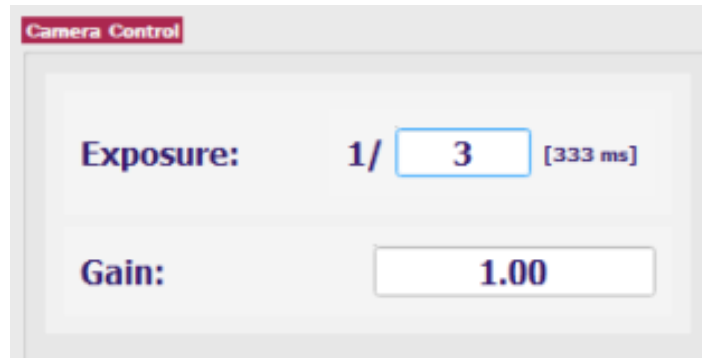
The power button is positioned at the top part of the control bar. When the camera is turned off, the power button's bar will appear red and the screen will be black. By pressing the square button, the camera will turn on and the bar will become green.



WARNING: the user must turn the camera off before disconnecting it from the power cable.

2.3 Camera Control

The Camera Control field allows the user to choose camera settings, i.e. the exposure and gain values of the camera.



2.3.1 Exposure

The user can choose the exposure value manually, by entering a value between 1 and 1000 in the designated **Exposure** text field.

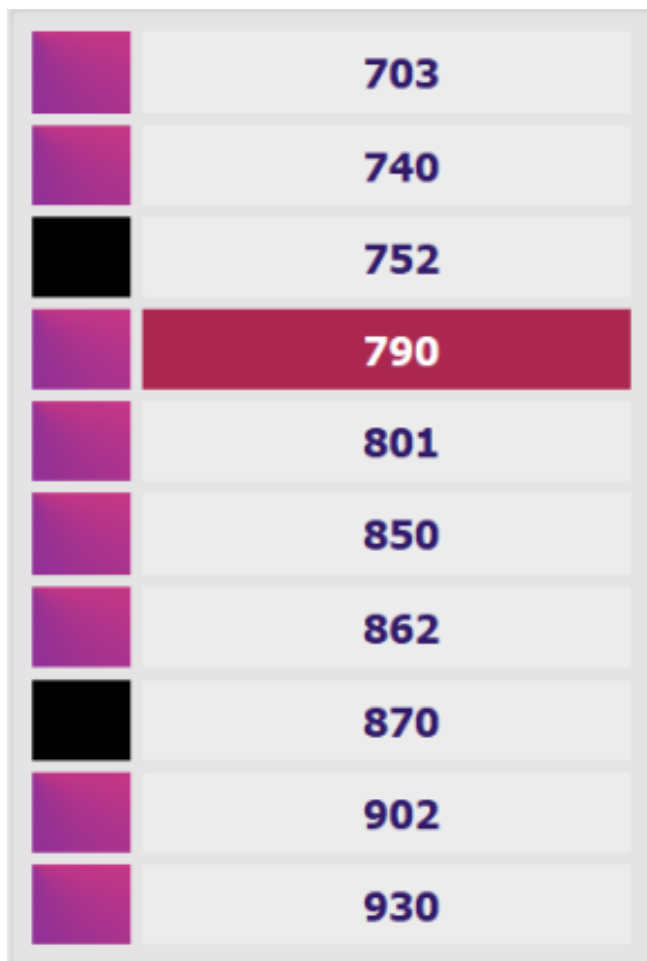
The exposure value is calculated by dividing 1[s] (or 1000[ms]) by the value chosen by the user. The resulting exposure value is shown in the parentheses next to the text field.

2.3.2 Gain

The user can choose the gain value manually, by entering a value between 1 and 15 in the designated **Gain** text field.

2.4 Modes

The Modes field allows the user to choose which of the camera's available CWLs to enable or disable within the spectral cube taken.

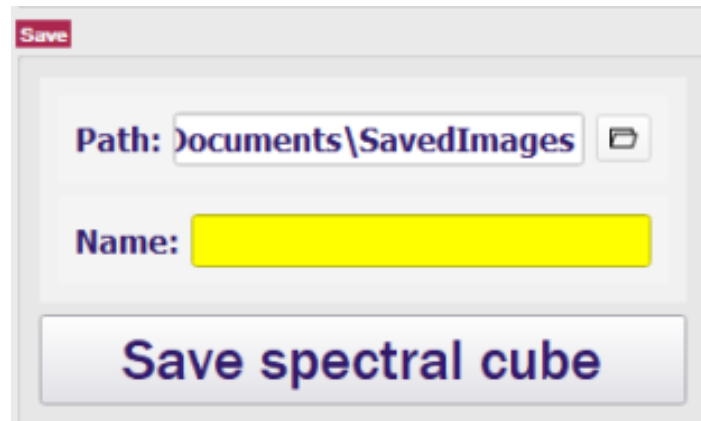


<input type="checkbox"/>	703
<input type="checkbox"/>	740
<input type="checkbox"/>	752
<input checked="" type="checkbox"/>	790
<input type="checkbox"/>	801
<input type="checkbox"/>	850
<input type="checkbox"/>	862
<input type="checkbox"/>	870
<input type="checkbox"/>	902
<input type="checkbox"/>	930

The user can enable or disable a specific CWL by clicking on the square to the left of its value. Once a CWL is disabled, its square will turn black. When enabled, the square will turn purple.

2.5 Save

The Save field allows the user to choose the name and location for saving the spectral cube.



The image shows a 'Save' dialog box with a title bar containing a red 'Save' button. The main area has a 'Path:' label followed by a text field containing 'Documents\SavedImages' and a folder icon button. Below that is a 'Name:' label followed by a yellow text field. At the bottom is a large button labeled 'Save spectral cube'.

The user can choose the spectral cube file's location by either entering it manually in the **Path** text field, or by browsing using the folder button next to it.

The user can enter the spectral cube file's desired name manually in the **Name** text field.

Once the saving setting is determined, the user can save the file by pressing the **Save spectral cube** button.

Once saved, the chosen file name will appear as a folder in the designated path. Within this folder will be a folder containing PNG files, an HDR file, and an ENVI file of the saved spectral cube.