

GEM®

User Guide

Freedom Scientific, Inc.

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Technical Support

To contact **Technical Support** by telephone, U.S. customers can call **(727) 803-8000**, Monday through Friday, 8:30 AM to 7:00 PM (Eastern Time).

To contact by e-mail, send questions to **Support@FreedomScientific.com**.

To search the knowledge base, visit **www.FreedomScientific.com** and choose the Support link.

Introduction

GEM[®] allows you to view, capture, and save magnified images when using Freedom Scientific cameras and magnifiers with your computer.

Using hot keys or the graphical user interface, you can quickly and easily step through or jump to multiple images captured by GEM. Groups of images can automatically be saved to any designated folder on your computer. These same images are easily identified using either the default or customized base name along with a time stamp. Hot key input directly from your computer keyboard allows you to manipulate camera views, change magnification, select color modes, and control other camera functions on the fly. If OpenBook[®] is installed on the same computer; you can send captured images from the camera to OpenBook for OCR (Optical Character Recognition).

System Requirements

Your computer needs the following minimum system requirements to run GEM.

- Microsoft Windows[®] 10, Windows 8.1, or Windows 7 operating systems
- 1 GHz or faster processor
- 1 GB RAM (32-bit) or 2 GB RAM (64-bit)
- 60 MB available hard disk space for program installation
- DirectX[®] 9.1 graphics device with WDDM 1.0 driver or later
- USB 2.0 port for connection to the desktop magnifier camera

Installing GEM

To install GEM on your computer, do the following:

Important:

Do not connect the TOPAZ XL HD or ONYX Portable HD to your computer until the GEM installation is complete. For more information on using TOPAZ XL HD or ONYX Portable HD, refer to the TOPAZ XL HD or ONYX Portable HD User's Guide.

1. Insert the GEM program disk into your computer.
2. The GEM Setup program starts. Follow the instructions that display on your screen to complete the installation.

Note: If the setup program does not start automatically, go to the Start button, select Run, and type D:\setup. If your disk drive is not D, substitute the correct drive letter.

3. Choose the Typical installation to install GEM to the default location on your hard drive. Select the Custom installation if you want to install GEM in a location other than the default.
4. Once the installation is complete, turn on the TOPAZ XL HD or ONYX Portable HD and connect it to an available USB port on your computer.
5. Start GEM by selecting the GEM icon from the desktop to begin using the application with TOPAZ XL HD or ONYX Portable HD.

Getting Help

Press **F1**, or choose Help Topics from the Help menu to open the help file.

To display context-sensitive help for the item selected in the GEM window, do any of the following:

- Press **SHIFT+F1**
- Right-click the selected item
- Use the Question Mark button in the upper right corner of a dialog box

GEM Hot Keys

A hot key is a keyboard shortcut you can use to perform an action. Hot keys are an alternative to using the GEM user interface with your mouse.

The GEM hot keys use the **F12** modifier, which is the application's default modifier key. You must press the modifier key in combination with the hot key to activate the command. If you change the default modifier key (for example, to **F11**, **Scroll Lock**, or **Print Screen**), substitute the modifier key that you are using when issuing a command. To change the modifier key, choose the Advanced menu and then General Preferences from the GEM menu bar. Next, select a value in the GEM Key list.

Layered Keystrokes

GEM also supports layered keystrokes, which offer another fast and convenient way to perform GEM actions.

To use a layered keystroke, press and release **F12+SPACEBAR**, followed by the keystrokes listed in the Layered Keystroke columns in the following tables.

Screen View

Use these hot keys to select, arrange, and view the magnifier's display screen or the computer display screen.

Description	Hot Key	Layered Keystroke (F12+SPACEBAR)
Select one of three views: Full Screen – Camera view; Full Screen – Computer view; or Split Screen view	F12+V (add SHIFT to move in reverse order)	None

Description	Hot Key	Layered Keystroke (F12+SPACEBAR)
Full Screen – Camera view	F12+HOME	V, HOME
Full Screen – Computer view	F12+END	V, END
Split Screen view	F12+PAGE UP	F8 or V, PAGE UP
Video Select Monitor – moves screen view between multiple monitors	F12+PAGE DOWN	V, PAGE DOWN
<p>Split Screen orientation – toggle the Split Screen view between horizontal and vertical orientation.</p> <p>Use this keystroke in conjunction with F12+F to change camera view locations</p>	F12+P	SLASH, P or SLASH, O
Move Split Screen view – toggle the camera position to move the Split Screen view from top to bottom or from left to right based on screen orientation (F12+P)	F12+F	SLASH, F
Increase Split Screen viewing area	F12+F6	SLASH, EQUALS or SLASH, NUMPAD PLUS

Description	Hot Key	Layered Keystroke (F12+SPACEBAR)
Decrease Split Screen viewing area	F12+F5	SLASH, DASH or SLASH, NUMPAD MINUS
Move GEM user interface to foreground	F12+ENTER	ENTER
Scroll image down or right while in Split Screen mode	F12+F7	I, DOWN ARROW

Capture Image

Use these hot keys to capture and delete images.

Description	Hot Key	Layered Keystroke (F12+SPACEBAR)
Save current image displayed on screen	F12+CTRL+S	F5
Capture image and return to live view	F12+I	I, I
Capture image and remain on screen	F12+TAB	SHIFT+F5 or I, TAB
Capture and Send current image to OpenBook	F12+DASH	F4 or R, 1
Send all selected images to OpenBook	F12+CTRL+DASH	R, A

Description	Hot Key	Layered Keystroke (F12+SPACEBAR)
Delete image	F12+DELETE	I, DELETE
Remove image from Manage Image list	F12+Q	I, Q

View Image

Use these hot keys to open images from the Manage Images dialog box or to display the live camera image. The selected image becomes the current image and displays when using Split Screen view or Full Screen – Camera view.

Description	Hot Key	Layered Keystroke (F12+SPACEBAR)
Jump to live image	F12+0 (zero)	I, 0 (zero)
Next image	F12+RIGHT ARROW	I, RIGHT ARROW
Previous image	F12+LEFT ARROW	I, LEFT ARROW
Jump to image 1 (most recent image)	F12+1	SHIFT+F6 or I, 1
Jump to image 2	F12+2	I, 2
Jump to image 3	F12+3	I, 3
Jump to image 4	F12+4	I, 4
Jump to image 5	F12+5	I, 5
Jump to image 6	F12+6	I, 6
Jump to image 7	F12+7	I, 7
Jump to image 8	F12+8	I, 8

Description	Hot Key	Layered Keystroke (F12+SPACEBAR)
Jump to image 9	F12+9	I, 9
Open image file manager	F12+G	None

Zoom and Focus

Use these hot keys to do the following:

- Zoom in or out when using Split Screen view or Full Screen – Camera view
- Switch Focus Lock on or off. When off, the camera automatically focuses on the closest object. When on, as indicated by the padlock icon on the magnifier's screen, the camera does not adjust its focus.
- Freeze an image and view it using Split Screen view or Full Screen – Camera view

Description	Hot Key	Layered Keystroke (F12+SPACEBAR)
Increase zoom	F12+F2	UP ARROW or I, EQUALS or I, NUMPAD PLUS
Decrease zoom	F12+F1	DOWN ARROW or I, DASH or I, NUMPAD MINUS
Focus lock – cycle between Off, On, and On with Position Locator Beam	F12+D	CTRL+J or I, D
Freeze Frame toggle	F12+Z	CTRL+F or I, Z

Color Modes

Use these hot keys to switch to different color combinations. This is visible when using Split Screen view or Full Screen – Camera view.

Description	Hot Key	Layered Keystroke (F12+SPACEBAR)
Select next color mode – cycles between all available color modes	F12+E	C, RIGHT ARROW
Select previous color mode	F12+SHIFT+E	C, LEFT ARROW
Normal (full color) mode	F12+SHIFT+A	F1 or C, A
User selectable (default is yellow on blue mode)	F12+SHIFT+S	C, S
Black on white mode	F12+SHIFT+D	F2 or C, D
White on black mode	F12+SHIFT+F	F3 or C, F

Color Adjustments

Use these hot keys to change brightness, hue, saturation, and contrast of the live or captured image. This is visible when using Split Screen view or Full Screen – Camera view.

Description	Hot Key	Layered Keystroke (F12+SPACEBAR)
Increase brightness	F12+T	None
Decrease brightness	F12+SHIFT+T	None
Increase hue	F12+H	None

Description	Hot Key	Layered Keystroke (F12+SPACEBAR)
Decrease hue	F12+SHIFT+H	None
Increase saturation	F12+U	None
Decrease saturation	F12+SHIFT+U	None
Increase contrast	F12+C	None
Decrease contrast	F12+SHIFT+C	None

Camera Control

Use these hot keys to control camera settings. The camera is part of the desktop magnifier.

Description	Hot Key	Layered Keystroke (F12+SPACEBAR)
Select camera	F12+S	None
Increase camera brightness	F12+B	RIGHT ARROW or B , EQUALS or B , NUMPAD PLUS
Decrease camera brightness	F12+SHIFT+B	LEFT ARROW or B , DASH or B , NUMPAD MINUS
Turns LED reading lights on and off	F12+L	None
Power selected camera on or off	F12+X	None

Lines and Masks

Use these hot keys to control screen markers such as reading lines and screen masks. These markers can help you maintain your place when reading documents on the screen. These markers are visible in Split Screen view and Full Screen – Camera view.

Description	Hot Key	Layered Keystroke (F12+SPACEBAR)
Screen markers – toggle on or off	F12+K	M, K
Screen marker style – toggle between reading lines or screen masking	F12+Y	M, Y
Screen marker orientation – toggle between horizontal or vertical screen marker orientation	F12+O	M, O
Move reading lines or screen mask down or to the right	F12+N	CTRL+DOWN ARROW or CTRL+RIGHT ARROW or M, DOWN ARROW or M, RIGHT ARROW
Move reading lines or screen mask up or to the left	F12+SHIFT+N	CTRL+UP ARROW or CTRL+LEFT ARROW or M, UP ARROW or M, LEFT ARROW

Description	Hot Key	Layered Keystroke (F12+SPACEBAR)
Increase distance between reading lines or increase amount of image viewable in the masked area	F12+F10	M, EQUALS or M, NUMPAD PLUS
Decrease distance between reading lines or decrease amount of image viewable in the masked area	F12+F9	M, DASH or M, NUMPAD MINUS
Select next reading line color	F12+R	L, RIGHT ARROW
Select previous reading line color	F12+R+SHIFT	L, LEFT ARROW
Increase reading line thickness	None	L, EQUALS or L, NUMPAD PLUS
Decrease reading line thickness	None	L, DASH or L, NUMPAD MINUS