

HOW TO USE A CANON CAMERA AS A WEBCAM

Canon's new beta USB driver makes it happen

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WHY IS A DIGITAL CAMERA USEFUL AS A WEBCAM?

Conventional inexpensive webcams include a fixed focal length lens, with no **optical** zoom capability. Often the lens is very low quality compared to a digital SLR lens. Canon, and other makers of digital SLR lenses, use very high quality glass and coatings so that image capture is highly accurate.

Cameras **with optical zoom** lenses, when used as webcams, can let you transmit video of a wide range of subjects. In non-pandemic times, zoom lenses can be valuable for sending video of a school play or concert or soccer game to out of towners. In teleconferences, you can use the zoom lens to zoom in to feature your face or zoom out so that the view includes say your spouse.

Finally, digital cameras give you much greater exposure control than is possible with conventional webcams, so that you can be seen clearly in normal room illumination or outdoors in sun or shade.

CANON'S NEW USB DRIVER FOR CANON CAMERAS

In late April, 2020, Canon USA released a new USB driver that enables many recent Canon digital SLRs and other Canon cameras to be used as webcams. Before trying the new USB driver myself, I found a few videos on YouTube in which independent third parties demonstrated the use of the driver.

Those videos made clear that the new USB driver provides great performance. The videos showed that the driver delivers *good image quality, good frame rate, and low latency (delay)*, the trio of features by which most webcams should be judged for video conferencing. In addition, the Windows 10 version of the driver is easy to install, so long as you know how to download a file, open that downloaded file, and run the .MSI file within.

Note, because this is a driver, and not an application, there is no visible user interface on the screen after you install the driver. If the term driver is not familiar to you, please look at the bottom of this document for more info.

If you have an older Canon camera with an HDMI output, or any high-definition camcorder with an HDMI output, you can use an **HDMI to USB converter** to connect the camera or camcorder to the computer for use as a webcam.

WHAT CANON CAMERAS WORK WITH THE DRIVER?

On Canon USA's web site, the driver is known as the **EOS Webcam Utility Beta**. Here is the URL for the web page describing that driver, and listing the Canon camera models known to work with the driver:

<https://www.usa.canon.com/internet/portal/us/home/support/self-help-center/eos-webcam-utility/>

The driver is available for Windows 10 and recent versions of the Mac OS.

You might know that EOS refers to Canon SLRs; the company also uses EOS to refer to its mirrorless interchangeable lens cameras (ILC). Canon says the driver also supports certain Canon Powershot cameras. Possibly that list of compatible cameras will be updated from time to time.

I bought a Canon EOS 7D Mark II (7D2) a few months before the USB driver was released. That camera is among those listed. I installed the USB driver and then tested it with the 7D2 and the Zoom video teleconferencing app on my Windows 10 computer.

HOW TO DOWNLOAD AND INSTALL THE DRIVER FOR WINDOWS

In that web page identified above, find the name of the camera you own. Each camera name is a link to the web page providing access to the various drivers, manuals and other downloads available for the camera. Click on the name of your camera. That takes you to a page devoted to your camera.

You can see a portion of the web page for my 7D2 in **Illustration 1**. In the page section called **Drivers and Downloads**, the EOS Webcam Utility is circled. The next step is to click on the SELECT button to the right of the product name.

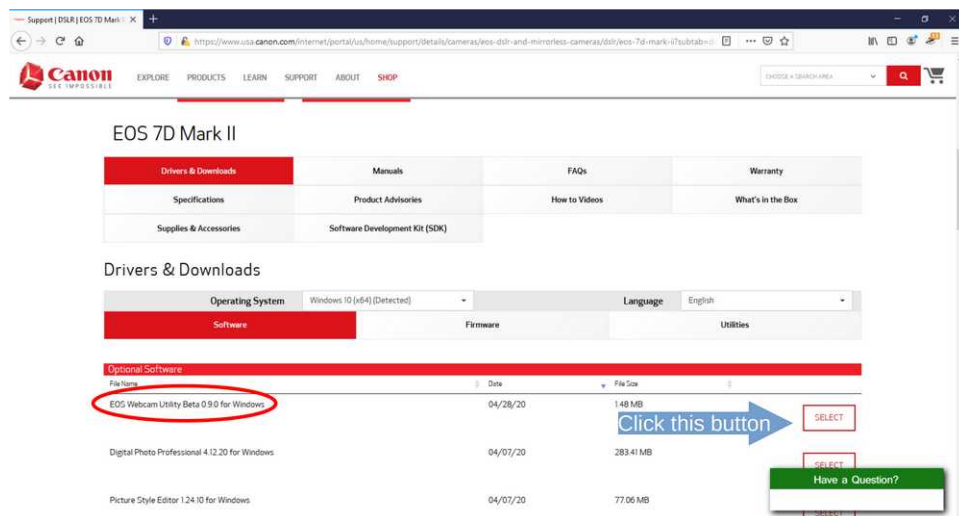


Illustration 1

When you click on the SELECT button, the page expands to show details about the driver, a DOWNLOAD button, and a link to instructions for installation. You can see that in **Illustration 2**. The next step is to click on the DOWNLOAD button.

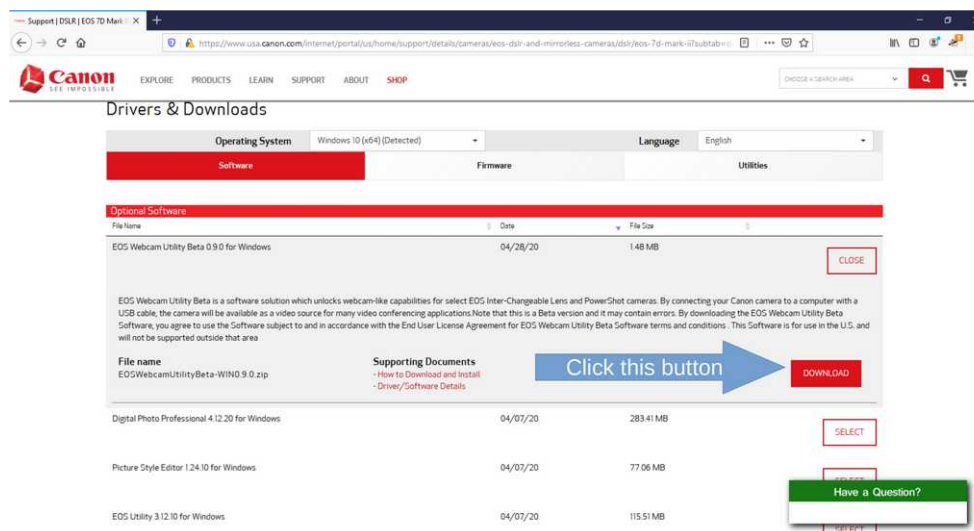


Illustration 2

When you click on the DOWNLOAD button, the browser begins its normal download process. The file downloaded is a ZIP file with no password. The download process details visible to you depend on the web browser you use. The download takes little time with a high speed internet connection.

If you are not using an account with Administrator privileges, then switch to an account with Administrator privileges.

When the download is finished, open the ZIP file. For Windows 10, the file inside has the extension .msi. Double click that MSI file.

Windows may ask you if you want to run the file. If so, then click YES. Windows may also ask you if you want to permit the program to change your hard drive contents. If so, then click YES.

When the program runs, it displays an End User License Agreement and asks you to select either AGREE or NOT AGREE. At that point, select the AGREE button.

The program is small and the installation completes quickly.

The final step is to restart your computer.

USING THE CAMERA WITH THE NEW DRIVER

First, when Windows is up and running again, you must use a USB cable to connect your Canon camera to your Windows computer. As it happens, the 7D2 uses a USB 3 cable with an expanded connector for the camera, although the USB A plug (for the computer) is quite normal. **Illustration 3** shows the camera USB socket, and also the cable USB plug that fits the socket.



Illustration 3

Second, you must set the camera to run in Video mode, instead of Photo mode. **Illustration 4** depicts the switch on the back of the 7D2 camera, set to Video mode by turning the switch so that the white line points at the red video camera icon.



Illustration 4

Third, you must turn on the camera. Note, you do not need to tap the shutter button and record video on your camera. All you need to do is turn the switch as shown in Illustration 4.

You can test the camera and USB driver using the Windows Camera app. I am indebted to Henry Winokur for suggesting this approach. In the Windows 10 Start Menu, find the Apps folder. Open that folder, and run the Camera app. Alternatively, you can use the Search feature at the bottom of the Start Menu: simply type the word Camera to find the app.

If the Canon camera and USB driver are working, then the Camera app window will show you the video signal from the Canon camera. **Illustration 5** shows the Camera app, and also happens to show why I use a Virtual Background for Zoom meetings 😊.

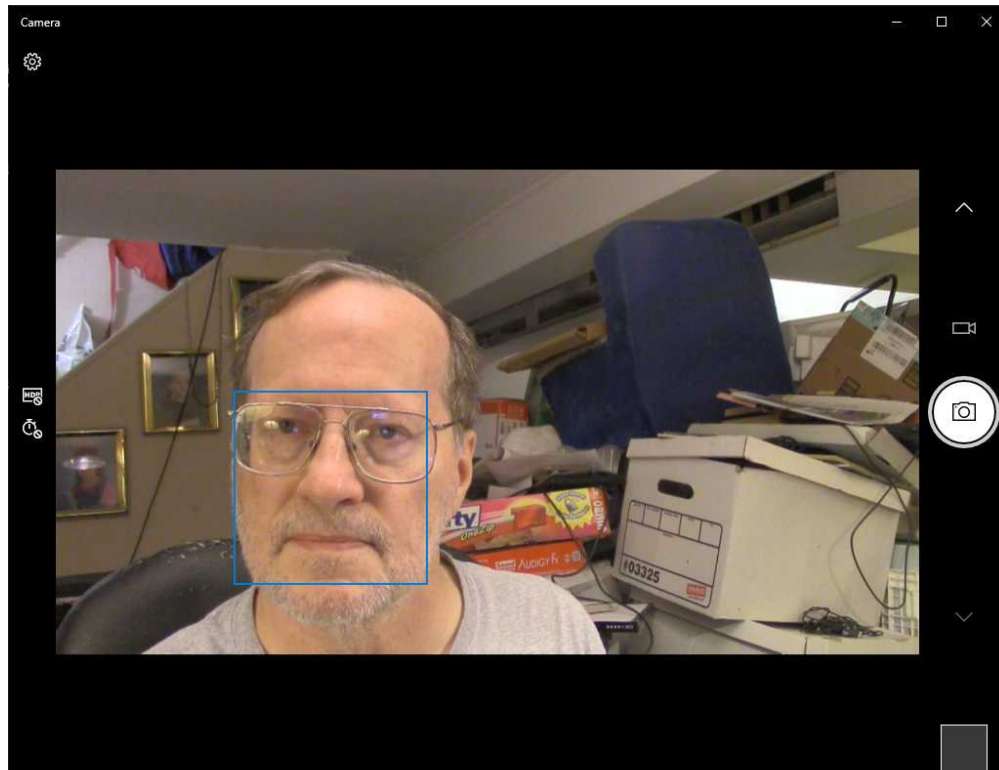


Illustration 5

To use the camera as a webcam for a Zoom teleconference, start the Zoom video teleconferencing app and join a meeting.

For me, the Zoom app did not choose to use this camera initially, even though it was the only webcam attached to the computer at the time, because I had used other cameras as webcams previously.

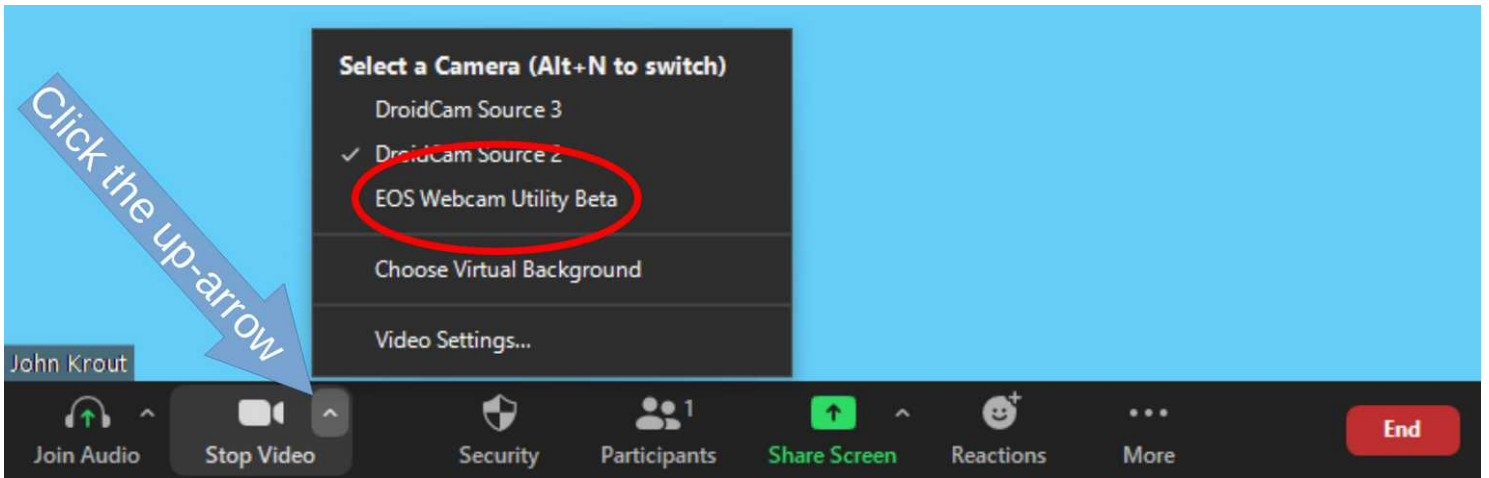


Illustration 6

To tell Zoom to use the camera, move the mouse to make the control bar appear at the bottom of the Zoom Meeting window, and then click on the up-arrow next to the Stop Video icon. That up-arrow click makes a menu appear. All of that is shown in **Illustration 6**. Notice that the menu contains names of webcams, including the EOS webcam utility, which is circled. Select **EOS webcam utility beta** in the menu, and Zoom starts using your camera as a webcam.

While any camera capable of shooting video does have a microphone built in, many users find that connecting an external microphone improves sound quality.

While the *latency* imposed by the EOS webcam utility is very low, it is not zero. If you own a microphone with standard plug for connecting to a camera, you can ensure that sound and video are synced by connecting the microphone to the camera, rather than by connecting the external microphone directly to the computer.

Unlike my webcam experience when using my Canon HF R400 camcorder, Zoom displays no superimposed status icons in the video image produced by the 7D2 camera. If your camera shows such icons in Zoom, take a look at your camera's manual to find the menu item for disabling such superimposed icons. If you have discarded the manual, you can download the PDF version from the same web page where you downloaded the USB driver.

The generic term DRIVER refers to any software that enables your computer to use a specific external device. You have probably installed a driver for a printer in the past. Other types of devices such as flatbed scanners also require installation of drivers. If you install a card for upgraded video or sound, that too often requires installation of a driver. Windows does provide a large library of downloadable drivers, so in some cases your computer will download and install the driver when it detects connection of an external device, without any effort on your part.