



Rudy Winston

Rudy Winston has nearly 20 years experience with Canon USA's Pro Products team, and has been responsible during that time for training Canon's staff on new products, creating presentations for customers and dealers, numerous writing projects, and providing technical assistance to professional and amateur photographers.

What's New: Canon Wi-Fi® Adapter W-E1

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[EOS 7D Mark II](#), [EOS 5DS](#) and [EOS 5DS R](#) users who have longed for a quick and simple way to add Wi-Fi capability to their cameras, rejoice! Canon is introducing a new and affordable way to enable wireless connectivity to compatible mobile devices, and even communicate with Windows® or Mac® computers — the [Wi-Fi Adapter W-E1](#).

This wireless adapter is going to open up new possibilities to users of these cameras — from casual shooters to working professionals. Being able to quickly view and store your DSLR images on a mobile device makes it easier to share images you've just taken with family members, friends, or even professional clients.

This device will be available separately as an optional accessory for owners of any of the above-mentioned EOS camera models. And from Fall 2016 onward, the EOS 7D Mark II will be sold with this Wi-Fi Adapter included in the box. We'll go into detail about that below. First, some basics about this new Wi-Fi unit.

Wi-Fi with EOS 7D Mark II, EOS 5DS, and EOS 5DS R

Wi-Fi connectivity is built-in to many recent Canon EOS camera models, but not into these three cameras. Until now, users who wanted a Canon device to allow Wi-Fi connectivity with those models were limited to the professional [Canon Wireless File Transmitter WFT-E7](#) (known as the "E7A" in the North American marketplace). This is an add-on accessory, which attaches to the bottom of the camera. No question that it adds professional-level Wi-Fi performance and features, starting with its ability to send wireless signals up to almost 500 feet (150m) from the camera.

But this is a relatively costly device for individual photographers who aren't working for news organizations, or who aren't dedicated, full-time studio professionals. And, its size and shape are hardly ergonomic for users needing portability on-location. Canon engineers heard the call for a new Wi-Fi option, and the Wi-Fi Adapter W-E1 is their answer.



Canon's new Wi-Fi Adapter W-E1 is the size and format of a typical SD memory card. But unlike normal SD cards, this contains only the wireless communication hardware necessary for image transfers to mobile devices and computers. The card itself cannot store image files — these must be saved to a CompactFlash card instead.

The W-E1 basics:

This wireless transmitter is in the form of an SD memory card. Installed into the SD card slot in the EOS 7D Mark II, or either version of the EOS 5DS, it easily allows you to:

Communicate with smartphones or tablets, with Canon's free Camera Connect app installed on the mobile device

- View images on the camera's CF card, using the mobile device's screen
- Select and save image JPEG and MP4 files from camera's CF card to the mobile device, via Wi-Fi
- Remote-control the camera, using controls on mobile device screen
- Change camera settings, from mobile device's screen (via Canon Camera Connect app)

Communicate with compatible Windows or Macintosh computers, with Canon's (supplied) EOS Utility software installed on the computer

- Remote shooting ("wireless tethered operation"), using Canon EOS Utility software
- Select and download JPEG or MP4 files from camera's CF card to computer, using EOS Utility software
- Change camera settings from a computer, using EOS Utility software

The Canon Wi-Fi Adapter W-E1 is designed for lightweight and easy wireless communication at up to about 32 feet (10 meters) from the camera, under clear Wi-Fi conditions.

Because of its incredibly compact size — again, the entire device is the size and form factor of an SD memory card — there are some common Wi-Fi features that could not be included. Excluded features: the ability to transfer images from one camera to another; the ability to send image files to a Wi-Fi-enabled printer; the ability to view images on a compatible media player; the ability to directly send images to web services (your e-mail, social media pages, etc.); the ability to record video using a smartphone; and the ability to operate the optional Power Zoom Adapter PZ-E1 via a smartphone.

Furthermore, unlike some Wi-Fi-enabled Canon EOS cameras, the Wi-Fi Adapter W-E1 cannot connect to external devices using NFC technology.

Operation in-camera

This Wi-Fi adapter must be installed into the SD card slot of the host camera — again, an EOS 7D Mark II, EOS 5DS, or 5DS R. These are the only

Canon EOS cameras, as of the introduction of the W-E1, that will be compatible.

The host camera requires a firmware upgrade, available free from Canon web sites, to enable communication with the Wi-Fi Adapter W-E1. This adds new menu items for the wireless features added by this accessory card. (EOS 7D Mark II cameras sold with the Wi-Fi Adapter W-E1 included in the box will have this firmware factory-installed, so no upgrade is needed for those cameras to enable wireless operation. And, beginning in Fall of 2016, newly-made EOS 5DS and 5DS R cameras will roll off the production line with this firmware also factory-installed.)

A very important note: the W-E1 card cannot store image files at all. It solely contains the hardware to perform wireless connection to compatible external devices. Therefore, if the W-E1 card is installed, a CompactFlash memory card must also be installed in the host camera, and this will be the card to which images are stored. There is no work-around to this. If the W-E1 alone is installed, an error message will be displayed on the camera's LCD monitor, informing the user that an incompatible card for storing images is installed.



A rear view of the Wi-Fi Adapter W-E1. This accessory card will add wireless communication features to EOS 7D Mark II, EOS 5DS, and EOS 5DS R cameras, once a firmware upgrade has been installed in the host camera.

Once the appropriate firmware is installed in the camera, users will be able to activate the wireless features with a new entry in the camera's Set-up Menu.

Required in the external device:

Wireless communication with an external device requires that the device has the appropriate Canon software installed.

- ***iOS and Android™ smartphones, tablets, etc.***

Canon Camera Connect app (free download from iOS and Android app sources)

- ***Windows and Macintosh computers***

Canon EOS Utility software (ships on software CD with most cameras, or available as free download from the support area of Canon web sites)

For RAW image shooters

The W-E1 is only able to transmit JPEG still image files wirelessly. If you shoot RAW images in-camera, and then select one (or more) and send them via the W-E1, they are reduced to 1920x1280 JPEG files, which are then sent to your mobile device. Thus, there is no special need to deliberately shoot RAW + JPEG original files. Similarly, there's no need to rely on user-applied, in-camera RAW processing (to create a JPEG copy image on the CF card), unless you wanted to apply some sort of RAW correction — such as changing a white balance setting, lightening or darkening, switching to a different Picture Style, and so on.

Limited video operation

Be aware that while remote shooting of still images is possible via a compatible mobile device or via EOS Utility software with compatible Windows

and Mac computers, video capability is limited with the Canon Wi-Fi Adapter W-E1. Video recording cannot be started or stopped remotely via the W-E1, nor can camera settings be changed remotely when the camera is set for video recording

Also note that video recording must be completely stopped, and the camera switched out of video recording mode altogether, before Wi-Fi communication with mobile devices can be performed.

What video users can do with the W-E1 is browse video files (along with any still images on their camera's installed CF card), and transfer MP4 video files to a mobile device or computer. Larger .MOV files (including any recorded in the camera's "ALL-I" settings) cannot be wirelessly sent to an external device, because of their size.

New EOS 7D Mark II cameras

As we hinted at the start of this article, beginning in Fall 2016, new EOS 7D Mark II cameras will roll out of Canon's factory with W-E1 cards packed in the box — giving the camera, in effect, Wi-Fi capability from the time you receive it. Moving forward, this will be the only way EOS 7D Mark IIs will be sold in most markets around the world.



Beginning in late 2016, new EOS 7D Mark II cameras will be sold with the Wi-Fi Adapter W-E1 included in the box. Both body only, and body with the Nano USM version of the EF-S 18–135mm standard zoom lens will ship this way.

New EOS 7D Mark II cameras will be available in the following ways:

- **EOS 7D Mark II Body**

Includes camera body, with W-E1 card (and all peripheral accessories, such as battery, charger, strap, and so on)

- **EOS 7D Mark II with EF-S 18–135mm f/3.5–5.6 IS USM**

This new standard zoom kit for EOS 7D Mark II includes the super-fast Nano USM version of the popular 18–135mm lens, along with the W-E1 card, and all other peripheral accessories.

The EOS 5DS and 5DS R will continue to be sold without the Wi-Fi Adapter W-E1. However, the wireless adapter card can be added as a separate accessory at any time. It will be available through [Canon USA's on-line store](#), as well as at authorized Canon dealers.

Technical stuff

A few technical specs, regarding the adapter's wireless capabilities:

- Wi-Fi standards

802.11b, 802.11g, 802.11n (20 MHz band only)

- **Transmission range**
Within approx. 32.8 feet (10m), when communicating with smartphone
- **Transmission method**
DS-SS modulation (IEEE 802.11b)
OFDM modulation (IEEE 802.11g, n)
- **Transmission central frequency**
2412 to 2462 MHZ; 1 to 11 ch.
- **Connection method**
Camera access point mode
Infrastructure (Wi-Fi Protected Setup supported)
- **Data Encryption**
(Camera access point) AES
(Infrastructure) WEP, TKIP, AES

Summary

The Wi-Fi Adapter W-E1 is likely to be a welcome accessory for users of these upper-end Canon EOS cameras. With virtually no added footprint, and a relatively modest cost, the W-E1 card transforms the camera into one that now has Wi-Fi capability, suddenly making your mobile device an extension of your camera. And for users who like to work in a slower, more deliberate fashion, the ability to do what amounts to wireless tethered operation to a laptop or studio computer can really ease your workflow. Finally, think of its remote control capabilities — as long as you remain relatively close to the camera, you can shoot still images and even change major camera settings from your smartphone or tablet, viewing through the camera's lens on your device's screen.

Few accessories have potentially offered so much, and with so little impact on the camera or the photographer's wallet. We urge EOS 5DS, 5DS R, and 7D Mark II users to seriously consider adding one of these new adapters to their camera bag.

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