

## USE YOUR SMART PHONE AS A ZOOM WEBCAM

Be seen and recognized, at zero cost, during Zoom Meetings

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I've seen it happen in many **Zoom Meetings**. About a third of the participants appear only by name, with no video image. I got to wonder why those participants make that choice.

At the same time, although I have the Zoom app installed on my tablet and phone, experience with those apps and small screens has taught me that I prefer to participate in Zoom meetings using my laptop or desktop computers. The larger screen makes it easier to recognize acquaintances in the Zoom Gallery view.

So I thought: for those participants who do not share their video image, perhaps some do not own a webcam.

Almost every adult owns a smart phone, and smart phones have built in cameras. Perhaps a smart phone could become a webcam at low cost. With Google and a few minutes, I found the answer. Yes, it is possible. And the cost is zero.

The first thing you need to know is that, least for Windows personal computers, using a smart phone as a webcam requires both an app on your phone and a compatible computer application. Think of the two as a pair.

I found a widely used Webcam app for Android phones, installed it on my smart phone, installed the paired Windows application on my Windows 10 computer, and very quickly had proof that the computer could use the phone as a webcam. Shortly after that I tested the phone webcam in **Zoom for Windows**, and it worked as a webcam for **Zoom**. Details appear below.

I found other webcam apps for iPhones and iPads. For those devices, search for *Webcam* in the App Store.

### THE PAIR: ANDROID APP AND WINDOWS APPLICATION

The freebie Android app I installed is **Droidcam**. Its corresponding Windows 10 application is **Droidcam client**, which is a freebie download.

Installation of the Android app is typical for a smart phone app. Inside the Google Play Store screen, tap the Install button. That starts the download; after the download completes, installation takes little time. The button in the Google Play Store then changes to Open, making it possible to Open the **Droidcam app** immediately.

The web site [www.dev47apps.com](http://www.dev47apps.com) provides the download for installing the Windows **Droidcam client**.

The downloaded installer goes into the Window 10 Downloads folder. Open that folder to find the **Droidcam client setup exe** file. I set Windows File explorer to display Details, and sort on the Date column so that the most recent downloads appear at the top. That makes the most recent appear at the very top, easy to find.

Run that **Droidcam client setup** exe file, and the brief installation process includes the usual Windows questions (answer Yes and Run when asked), and then a brief Installer dialog box.

After installation, when I ran the **Droidcam client**, I found that the **Droidcam client** claims to support *two different ways* of connecting the smart phone to the computer. One is Wi-Fi, and the other is USB. The default is Wi-Fi, and that is what I tested first.

## CONNECTION VIA Wi-Fi

**STEP 1.** The **Droidcam app** on the Android phone first displays a **Help screen** that explains how to collect network connection info from the app itself and provide that info to the Droidcam client. See that screen in **Illustration 1**.

The info includes an Internet Protocol (IP) address, and a port number.

Tap the **Got It** button on the bottom of the screen.

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### < Help

To use as a PC webcam (eg. for Skype):

1. Go to [www.dev47apps.com](http://www.dev47apps.com) on your PC. Download and install the DroidCam client (same for DroidCamX and DroidCam). This will install the client as well as the Webcam and Microphone drivers onto your system.
2. Make sure both PC and Mobile device are on the same Wifi network. Start the PC client and the app.
3. Enter the IP address and DroidCam Port number displayed in the app into the PC client. Click Start/Connect.

To use as a network web camera, open the displayed <http://...> URL in a web browser (eg. Chrome or FireFox) on any device connected to the same WiFi network (LAN).

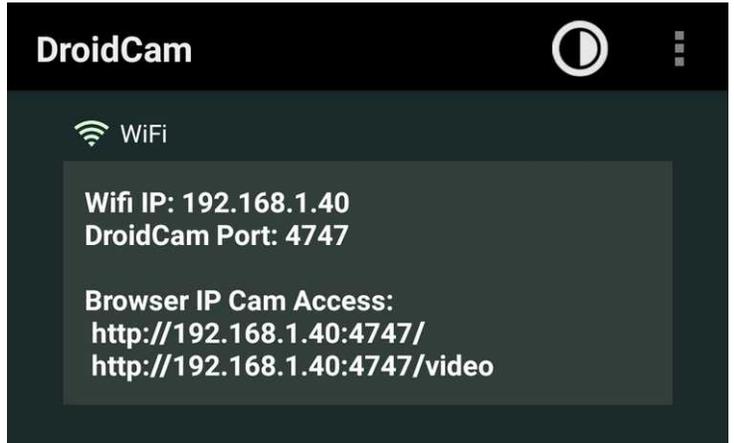
Got It

**Illustration 1**

**STEP 2.** The **Droidcam app** displays the smart phone's IP address, and the port used by the **Droidcam app**. That turns out to be the main screen of the **Droidcam app**. See the top of that screen in **Illustration 2**.

In this *example*, the IP address is 192.168.1.40. The port number is 4747.

The IP address on your phone will almost certainly not be the same as this example.

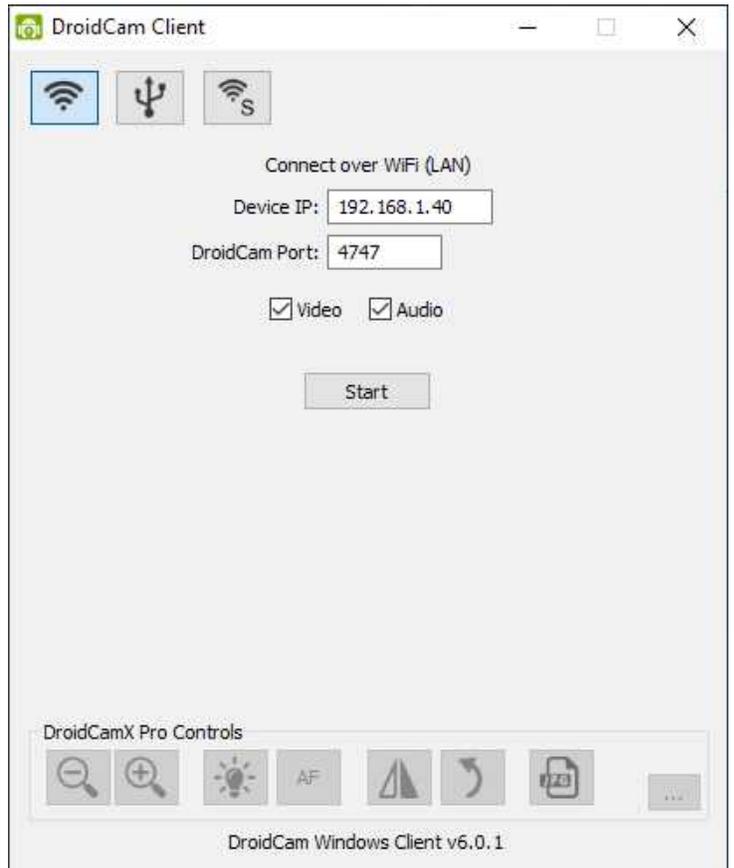


**Illustration 2**

**STEP 3.** On the PC, run the **Droidcam client**, and copy that IP address and port info displayed by the **Droidcam app** to the **Droidcam client entry fields**.

See an example of the Droidcam client with data entry fields completed in **Illustration 3**.

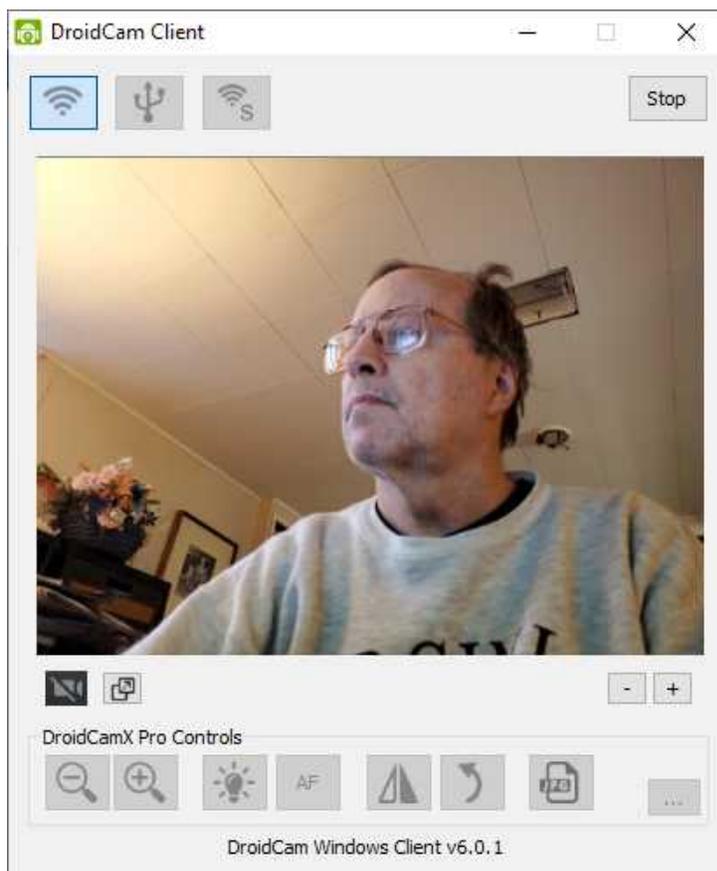
Then, in the **Droidcam** client on the PC, click on the **Start** button.



**Illustration 3**

**STEP 4.** A video image from the smart phone appears very quickly in the **Droidcam** client window. **Illustration 4** shows what I saw.

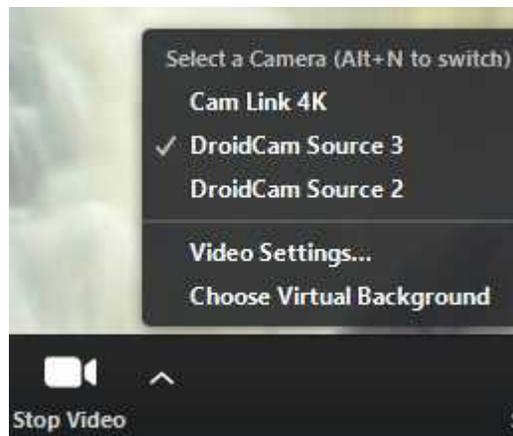
I found that the app used one of the three cameras on the back of my **Samsung Galaxy S10** smart phone.



**Illustration 4**

**STEP 5.** While the **Droidcam** client was displaying the smart phone video image, I started a **Zoom Meeting**. In the meeting window, I made the Zoom task bar visible. I tapped the up-caret (^) next to the task bar **Stop Video** icon, to display the **Select a Camera** menu. There I found two entries: **Droidcam source 2** and **Droidcam source 3**.

I chose Source 3, and my video image appeared in the **Zoom Meeting** window. It turns out that **Droidcam Source 2** displays the same image. You can see the Video Source menu in **Illustration 5**.



**Illustration 5**



### **Illustration 6**

In **Illustration 6**, you see the **Zoom** app displaying my video image from the **Droidcam** app on my phone. This was a solo meeting, initiated by me, simply to test the **Droidcam** app end-to-end.

### **CONNECTION VIA USB – NOT SO EASY**

I found on the [www.dev47apps.com](http://www.dev47apps.com) FAQ that some driver downloads were required, and the phone should be connected to a USB2 port, not a USB3 port. So I did all of that. I rebooted the computer to ensure the drivers were in use. The Droidcam client again consistently said that the USB connection did not work.

Since the Wi-Fi connection method worked, I decided to stick with that method.

### **VIEW VIDEO IN A WEB BROWSER**

It is possible to display the **Droidcam** smartphone camera video in a PC web browser, **without running the Droidcam client on the PC**. The **Droidcam app** apparently provides a micro-Web server capability. It displays two URLs; you can see those URLs in **Illustration 2**. I tried one URL in a web browser, and it worked immediately.

So I wondered if I could use the **Droidcam app** in **Zoom** without having the **Droidcam** client running.

When I started up an Instant **Zoom Meeting**, the **Zoom for Windows** app was unable to use the **Droidcam** video. To make that happen in **Zoom**, the **Droidcam client** must be running.

## LESSONS LEARNED

I learned from this experience that keeping the phone camera running, along with the continuous transmission of video over Wi-Fi, draws phone battery power down rapidly, which of course means that the phone might run out of power during an extended **Zoom Meeting**. I recommend keeping the phone attached to a charger while using it as a Webcam, for **Zoom Meetings** or any other purpose.

As far as I can tell, there is no way to switch between any of the three cameras on the back of my phone or, for that matter, the single front camera. That is the first opportunity for improvement I found in this app. Most phones have at least two cameras; why not make it possible to use either one?

There is a paid version of the **Droidcam app**, with more features and no ads. Possibly that version supports switching cameras.

## A SMALL TRIPOD FOR A SMART PHONE

During these tests, it occurred to me that having a smart phone tripod would be useful. So I looked for those on Amazon. There are several, some costing less than \$10. Try searching *Tripod for Smart Phone*. All include clamps to grip the phone securely.