Live Capture

Now, this depends on your camera, and whether gphoto2 supports it on your model. To get the capabilities of your camera, use the following command:

```
  gphoto2 --summary
```

Now on my 700D, I see the following:

```
Camera summary:
Manufacturer: Canon Inc.
Model: Canon EOS 700D
  Version: 3-1.1.3
  Serial Number: 46ff2aa38fba41f88d84eccb8eba8ada
Vendor Extension ID: 0xb (1.0)

Capture Formats: JPEG
Display Formats: Association/Directory, Script, DPOF, MS AVI, MS Wave, JPEG, CRW, Unknown(b103),
Unknown(bf02), Defined Type, Unknown(b104), Unknown(b105)

Device Capabilities:
        File Download, File Deletion, File Upload
        No Image Capture, No Open Capture, Canon EOS Capture, Canon EOS Shutter Button

Storage Devices Summary:
store_00020001:
        StorageDescription: SD
        VolumeLabel: None
        Storage Type: Removable RAM (memory card)
        Filesystemtype: Digital Camera Layout (DCIM)
        Access Capability: Read-Write
        Maximum Capability: 31678529536 (30211 MB)
        Free Space (Bytes): 31375130624 (29921 MB)
        Free Space (Images): -1

Device Property Summary:
Property 0xd402:(read only) (type=0xffff) 'Canon EOS 700D'
Property 0xd407:(read only) (type=0x6) 1
Property 0xd406:(readwrite) (type=0xffff) 'Unknown Initiator'
Property 0xd303:(read only) (type=0x2) 1
Battery Level(0x5001):(read only) (type=0x2) Enumeration [100,0,75,0,50] value: 100% (100)
```

Importantly, I see the following section:

Device Capabilities:

File Download, File Deletion, File Upload
No Image Capture, No Open Capture, Canon EOS Capture, Canon EOS Shutter Button

So my 700D does not allow gphoto2 to capture files. There are several methods that you can use to try, and they are:

```
  gphoto2 --trigger-capture
  gphoto2 --capture-image
  gphoto2 --capture-image-and-download
```

gphoto2 –trigger-capture takes a photo and stores it on the SD card. gphoto2 –capture-image takes a photo and stores it on the SD card. gphoto2 –capture-image-and-download takes a photo and stores it on the SD card and downloads it.

So if I list the files on my camera memory card:

```
  gphoto2 --list-files
```

```
There is no file in folder '/'.
```

```
There is no file in folder '/store_00020001'.
There is no file in folder '/store_00020001/DCIM'.
There are 2 files in folder '/store_00020001/DCIM/100CANON'.
#1     IMG_5859.CR2               rd 20815 KB image/x-canon-cr2
#2     IMG_5860.CR2               rd 27070 KB image/x-canon-cr2
There is no file in folder '/store_00020001/MISC'.
```

We can see that there are two photos here (IMG_5859.CR2 and IMG_5860.CR2).

If we use the following command:

```
  gphoto2 --capture-image
```

We can now again check the camera memory card:

```
There is no file in folder '/'.
There is no file in folder '/store_00020001'.
There is no file in folder '/store_00020001/DCIM'.
There are 3 files in folder '/store_00020001/DCIM/100CANON'.
#1     IMG_5859.CR2               rd 20815 KB image/x-canon-cr2
#2     IMG_5860.CR2               rd 27070 KB image/x-canon-cr2
#3     IMG_5861.CR2               rd 25884 KB image/x-canon-cr2
There is no file in folder '/store_00020001/MISC'.
```

We can see that a new imgage (IMG_5861.CR2) has appeared. So this works.
If we use the capture and download command:

```
   gphoto2 --capture-image-and-download
```

I get this output (in the Raspberry Pi terminal)

```
New file is in location /store_00020001/DCIM/100CANON/IMG_5862.CR2 on the camera
Downloading 'IMG_5862.CR2' from folder '/store_00020001/DCIM/100CANON'...
Saving file as IMG_5862.CR2
Deleting file /store_00020001/DCIM/100CANON/IMG_5862.CR2 on the camera
Deleting 'IMG_5862.CR2' from folder '/store_00020001/DCIM/100CANON'...
```

So this indicates that the camera captured and image called IMG_5862.CR2 and downloaded it to the Raspberry Pi, then deleted it.

A simple 'ls' will check the Raspberry Pi folder (remember it will be downloaded to your current directory)

```
ls

IMG_5862.CR2
```

And yes it is there, if we do another check of the camera memory card.

```
  gphoto2 --list-files
```

```
There is no file in folder '/'.
There is no file in folder '/store_00020001'.
There is no file in folder '/store_00020001/DCIM'.
There are 3 files in folder '/store_00020001/DCIM/100CANON'.
#1     IMG_5859.CR2               rd 20815 KB image/x-canon-cr2
#2     IMG_5860.CR2               rd 27070 KB image/x-canon-cr2
#3     IMG_5861.CR2               rd 25884 KB image/x-canon-cr2
There is no file in folder '/store_00020001/MISC'.
```

We can see that the captured image was indeed deleted (which if I am honest, is not what i would want).

On some cameras the takes a photo and stores it on the SD card takes the image, but does not store it on the SD card (like on my 700D) so

you can use gphoto2 –capture-image-and-download and the camera will take the photo and gphoto2 will download it, but it will still not be store on the SD card (does not work on my 700D)

So in summary, I have been able to download files from my camera(s) but not capture from them. So I can make a decent backup solution using gphoto2, but not an intervalometer.

Cameras tested so far:

```
Canon EOS M (the original)
Canon EOS 550D
Canon EOS 700D
Canon EOS 5DMk2
```

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