Budget Security Cameras - Foscam, SRICAM, SV3C, Reolink

This article is about budget home security cameras for the home.

**OVERVIEW:**

I wanted inexpensive, easy to use cameras that use the same application. I have purchased only cameras that list ISPY compatibility. The Foscam knockoffs did a reaonable job, but price and technology has left them behind. My next camera was the SRICAM brand, which I find easy to set up and relatively reliable (and inexpensive). ALL SRICAM models I have (sp012,sp016) use the same Android Software (this is a choice as some models may not). These are ISPY compatible and allow SD recording (internal). I have added some POE and Wifi 960P SV3C brand cameras.

Recording

I do put SD chips in most of my PTZ cameras (some cams have problems with the SD). I also record all cameras using ISPY software and control date/size of files saved. The advantage of using onboard SD recording is you have full speed, full resolution with audio (on PTZ models), where I generally run 2 fps on most ISPY recorded cameras (except for traffic cams) and do not record audio. I am replacing my SRICAM 720P (sp012) models with the 1080p (sp016) models. You will run into difficulty if you run more than ~10 full frame rate cameras at a time using ISPY. (these cheapo cameras run at 2.4Ghz. So you can have much high speed recordings without jamming your network , by storing locally. Also if you use the Reolink SD recording system you get a 15 second pre alarm video buffer. ISPY also allow you to chage the video frame rate when an alarm is triggered (so you can monitor at a moderate rate and record at higher rate). ISPY also allow pre buffering of video but it is impractical on larger systems like mine (to much ISPY overhead).

ISPY (Windows Compatible Open Software)

Free, Most Versitile, Software

Supports many security cameras with many many features. All cameras can me monitored at the same time on one screen. This system has sooo many features it is hard to describe, like “PTZ camera follow object”. I am supporting 20 cameras now on one I5 laptop. You will need to reduce the framerate of Wifi cameras above say 10. I run most of mine at 2 fps (fine for my security). I run a couple at 6 fps, for quick detection and boost the framerate when detected for traffic monitoring. You can limit storage by age and or folder storage size for each camera. Many many features and accessory applications for many things. ISPY will load up your PC for:

Excessive camera bandwidth (>10 full speed cams)

Adding Audio to all cameras will cause loading.

Adding pre record buffering on camera videos will cost you cpu (limit this).

I have used the PTZ controls from ISPY screen, but find it cumberson. (Android apps do a significantly better job).

Motion Detection

All of the cameras I use support motion detection but..

Most Camera Motion Detection of cheap camera software does not allow exclusion areas (uses whole picture). Reolink is an exception.

ISPY software does allow inclusion/exclusion areas.

MOTION DETECTION FOR OUTDOORS WILL NOT WORK IN MOST CASES  
 (WIND, CLOUDS, SHADOWS)

SRICAM cameras will notify you via the Android App (Text Message) of motion

(as desired)

Expect all cameras to be triggered by snow/rain, unless significant distance is maintained.

Night Vision Limitations:

The SP016 and SP016 IR LED lighting is not well distributed. The SV3C is somewhat better. The Reolink POE distribution is much improved for the 5mp version.

Night Vision resolution is significantly reduced by all my cameras and anything moving will blurr easily. You can get a good framerate say 25fps, but if it is moving you will get 25fps of blurry pictures. I would guess anything above 5mph would be blurry.

**The Foscam Years**

I have been using budget security cameras in my home for ~10 years starting with the SRICAM 640X480 foscam camera knockoffs. These were ok fixed position cameras and gave reasonable service. These were a little difficult for Joe Smuck users to configure, but you could easily get by with a little wifi experience. To get onto the internet you needed to tinker with your router. Resolution was OK. PTZ versions were OK.

**SRICAM 720p PTZ sp012**

The SRICAM sp012 cameras were pretty good resolution, and easy easy to configure. You downloaded their app to your phone and click (add new camera) with the camera plugged into the router. Then add wifi name/pw and you are done.

Added Features:

Listen/talk thru app to camera

View cameras anywhere without router setup

pan/tilt

Can access camera from Windows ISPY app (very robust) - allows storage

Built in storage (micro SD)

Android App

Windows ISPY App (robust) - #1 App for Security Cameras

**SRICAM 1080 PTZ sp016 (similar to SP012 and compatible with same software)**

The SRICAM sp016 cameras are resolution (wider vewing angle), and easy easy to configure. You downloaded their app to your phone and click (add new camera) with the camera plugged into the router. Then add wifi name/pw and you are done.

Added Features:

Listen/talk thru app to camera

View cameras anywhere without router setup

pan/tilt

Can access camera from Windows ISPY app (very robust) - allows storage

Built in storage (micro SD)

Android App

Windows ISPY App (robust) - #1 App for Security Cameras

**SV3C 960P Fixed - indoor/outdoor**

Android App

ISPY Compatible

Superior Picture

Cheap

SD Internal

Have lost 2 to moisture!

More Technical skills required

## 

## **Reolink POE RLC-420-5mp Fixed - indoor/outdoor**

Android App - From Reolink

ISPY Compatible

Higher Resolution 5mp

Cheap $42.50

SD Internal

H.264

**Reolink PoE IP Security Camera Indoor Outdoor Video Surveillance IR Night Vision Motion Detection with SD Card Slot Dome RLC-420-5MP (No Power Adapter)**

**Power dongle comes with camera, just add 12 VDC power supply.**

**RLC-420-5MP Specification:**

* Image Sensor: 1/2.7" CMOS Sensor
* Effective Pixels: 2560 x 1920 (5.0 Megapixels)
* Lens: f=4.0mm F=2.0
* Angle of View: Horizontal: 80°, Vertical: 58°
* IR Distance: 30 Meters (100ft) (LED: 18pcs/14mil/850nm)
* Noise Reduction: 3D DNR
* Compression: H.264
* Frame Rate: Main Stream@25fps, Sub Stream@6fps
* Audio: Support Audio pick up, built-in Microphone
* Max. User Access: 20 Users (1 admin account & 19 user accounts); Support up to 12 simultaneous video streams (10 substreams & 2 mainstreams).
* Storage: Built-in Micro SD slot, up to support 64GB Micro SD card
* Power Supply: 12V 1A power adapter/48V 802.3af PoE injector
* Power Consumption: <10W
* Working Environment: -10℃~+55℃(14°F~131°F)
* Ingress Protection: IP66
* Weight: 480g

**5MP Super HD - Incredibly Clear**

RLC-420-5MP, with the resolution of 2560x1920, captures nearly 2.4X clearer and sharper video than 1080p ones. It sees your home security more clearly, with more details. The lens of this camera is 4mm and offers 80° wide viewing angle. You will definitely have the best chance to see every image detail as you wish.