

## mvBlueCOUGAR-X as WiFi camera

### *Introduction*

Using the [WiFi-Modul WLg-LINK-OEM from Acksys](#), the mvBlueCOUGAR-X becomes a WiFi camera.

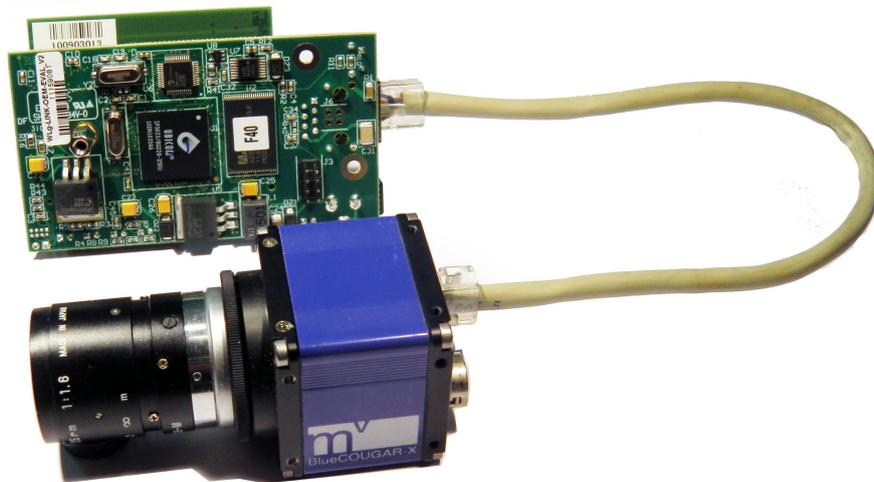


Figure 1 Acksys' WiFi module connected to the mvBlueCOUGAR-X

### *Requirements*

The following short guide assumes

- the Acksys WLg-LINK-OEM Module has factory defaults and that
- the device (Laptop or PC) has the latest mvBlueCOUGAR-X drivers installed (GenICam filter driver is installed and working for the WiFi adapter of the Laptop or PC).

## Instructions

### Setting up the Acksys WiFi module

1. Connect
  - a. the antenna,
  - b. the Ethernet cable, and
  - c. the power supply cable to the module.
2. Power the module and wait until the blue LED starts blinking.
3. Use a the Laptop or PC to find and connect to the Access Point with **SSID "acksys"**.
4. Set the Laptop's or PC's WiFi card to the **subnet 192.168.1.0/24**.
5. Connect via **http** to the module, which by default has the **192.168.1.253/24** address.
6. Login as `administrator` (leave password field blank).
7. Setup the card according to your needs. Recommendations:
  - a. Change the module IP address to another, less frequently used **class C subnet** (192.168.100.0/24).
  - b. Enable **DHCP** server so that MATRIX VISION cameras can get valid IP addresses, or leave DHCP disabled (The camera IP addresses has to be set manually then).
  - c. Set **WEP** security, so that noone else can connect to the module.

### Setting up MATRIX VISION's mvBlueCOUGAR camera

1. Connect the camera to the other end of the Ethernet cable.
2. Wait until the camera has a steady deep blue color. This means it got a DHCP IP address.

### Setting up the Laptop or PC

1. Open **mvIPConfigure** and verify that the camera is reachable and the icon next to the name is green. If it is red, the IP addresses are set up wrong!
2. Open the **wxPropView** application.
3. Select the camera, and switch the "*User Experience*" selector to *Guru*, and "*Acquisition Mode*" selector to *Continuous*.
4. Set **ImageRequestTimeout\_ms** in "Settings -> Base -> Camera" to i.e. *20.000* (20 seconds) or even *0* (infinite).
5. Set **Trigger Mode** in "Settings -> Base -> Camera -> GenICam -> Acquisition Control -> Trigger Selector" to *On*.
6. Set **Trigger Source** in "Settings -> Base -> Camera -> GenICam -> Acquisition Control -> Trigger Selector" to *Software*.
7. Set the desired image parameters (resolution, bits per pixel etc.) in "Settings -> Base -> Camera -> GenICam -> Image Format Control".
8. Set **mv Gev SCBW Control** in "Settings -> Base -> Camera -> GenICam -> Transport Layer Control -> Gev Stream Channel Selector" to *mvGevSCBW*.
9. In the field that appears below set the *mv Gev SCBW* number to *1000*.
10. Set **mv Resend Capture Window Size** in "Settings -> Base -> Camera -> GenTL -> DataStreams -> Stream0 -> Data Stream -> mv Packet Resend" to *128*.
11. Set **mv Resend Threshold** in "Settings -> Base -> Camera -> GenTL -> DataStreams -> Stream0 -> Data Stream -> mv Packet Resend" to *128* too.
12. Initiate Acquisition by pressing the "**Acquire**" button.
13. Generate software triggers by clicking the "..." button in "Settings -> Base -> Camera -> GenICam -> AcquisitionControl -> Trigger Selector -> int TriggerSoftware()".

If everything went correct the image should be transferring from the camera to the Laptop or PC. In this setup it is even possible to send a software trigger multiple times in a short period. The camera

stores the images in the internal FIFO buffer and then transfers them steady one after another from the buffer to the PC. This could have many practical applications (making acquisition bursts and then let them stream conveniently). Please note, that you cannot store more than “Settings -> Base -> Camera -> GenICam -> Acquisition Control -> mv Acquisition Memory Max Frame Count Images” in the internal buffer.

### ***Test environment***

The above setup was tested with many different acquisition settings

- 100 x 100 pixels to 5 Mpix,
- 8 bpp gray scale to 16 bpp color, and
- three different laptops.

Tested WiFi adapters were:

- Intel Centrino Advanced-N 6205,
- Intel Centrino Ultimate-N 6300 AGN, and
- Intel Wireless Wifi Link 4965 AGN

### ***Resources***

WiFi-Modul WLg-LINK-OEM from Acksys: [http://www.acksys.fr/us/produits/wlg\\_link\\_oem.htm](http://www.acksys.fr/us/produits/wlg_link_oem.htm)