IQeye Tutorial

These two pictures illustrate the motion detection feature available in the IQeye3 network camera. In certain circumstances it is necessary to capture a sequence of events without the intervention of a human hand. For example, if you want to surveillance your store at night, you can set the camera to detect any motion during the specified period. This tutorial will help you to setup the IQeye and its motion detection feature. The tutorial would take you approximately 2 hours.

Motivation and Audience

This tutorial is intended for people interested on setting up the IQeye3 network camera for surveillance purposes, and how to use the camera's motion detection feature to send images to an FTP site. The reader should have the following background and interest.

- ***Be familiar with network configuration***
- ***Know how to use the command line interface (DOS)***
- ***Desire to learn how to setup a network camera***
- ***How to configure the motion detection feature***

The rest of the tutorial is presented as follows:

- Parts List and Sources
- Construction
- Programming
- Final Words

Parts List and Sources

US-based vendors to obtain material to complete this tutorial include
IQinvision
Best Buy
To complete this tutorial, you'll need the following items

TABLE 1: Parts needed to operate camera

PART DESCRIPTION	VENDOR	Model #	PRICE (1999)	QTY
IQeye3	IQinvision		$1395	1
Ethernet cable	Best Buy	**A3L980-07-S**	$15	1
Router	Best Buy	**FS605**	$39	1

Construction

This section gives step-by-step instructions along with photos on how to setup an IQeye3 network camera.

Steps

1. Verify that the camera has power and it is connected to the network.
   use a router or cross-over cable to make the network connection.

1/2" CS mount for lens, not included

programmable LED
picture capture/user logged in

hardware MAC address

power input

serial console port

link/activity
& status LEDs

focus utility/
factory reset button

RJ45 Ethernet 10/100

relay I/O & power out

2. After you have installed the VisiCom program, open it and select *assign IP address*.

VisiCon (V1.4/1)

IQinvision

VisiCon

● assign an IP address

● configure a camera

3. From the back of the camera enter the hardware address and click OK.
4. You will then select the following options: *DHCP*, and *assign IP*. Enter the IP Address provided by your network administrator and the Subnet Mask; then select the *automatic* box on the Gateway field.
Note: to find out the Subnet Mask, go to the command line (DOS) and type *ipconfig/all*.
5. Once you have finished, you will check if the network connection to the camera is working properly. On the command line type: C:\> ping *ipaddress*


```
D:\WINNT\System32\cmd.exe

Microsoft Windows 2000 [Version 5.00.2195]
(C) Copyright 1985-2000 Microsoft Corp.

D:\>ping 129.25.20.144

Pinging 129.25.20.144 with 32 bytes of data:

Reply from 129.25.20.144: bytes=32 time<10ms TTL=60
Reply from 129.25.20.144: bytes=32 time<10ms TTL=60
Reply from 129.25.20.144: bytes=32 time<10ms TTL=60
Reply from 129.25.20.144: bytes=32 time<10ms TTL=60

Ping statistics for 129.25.20.144:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum =  0ms, Average =  0ms

D:\>
```

6. Once you have finished setting up the IP address of the camera, you will go to the VisiCon GUI and select *configure a camera*.
7. Follow the steps according to the instructions given by the program. If you don't know what to enter, just leave it blank; you will be able to change any of the settings later using telnet or a web browser.

Accessing the IQeye3

8. If you are using a web browser, type the IP address of the camera and hit enter.

9. On the drop down menu, on the right hand side, select *log in.*

10. You can now change any of the parameters you entered earlier. In addition, you can now set the motion detector, sound detector, and trigger functions.

11. To setup the trigger you will need some important information. You can get it by typing *ipconfig/all* on the command line (DOS).

12. Follow this link for an example on how to setup the trigger. In this example the trigger is activated using software, but you could do it using an external sensor by selecting the *external input* option. (consult the user's manual for more info)

13. To setup the motion detection feature of the camera, you have to select the *motion tab*. You can create up to 8 motion detection windows by selecting the window number underneath the image. You can resize the blue window by clicking on it. This is the area you want to detect motion. After you have setup the trigger, and decided where to send the pictures, you have to click restart to start sensing. Click here to see some results.

If you are using Telnet to connect to your camera, type *open* + IP address, at the command prompt.

1. Enter your user mane, and type **set privileged** (or "su") at the command line to gain administrator privileges. Note: You will have to enter an administrative password.

2.

3. Once you are in, you will type the desired command. To see the available commands you can enter the question mark sign (?) and press enter, or consult the user's manual.

4.

5. To exit, type logout.

6.

For more information about each field, look at the IQeye user's manuals.

Programming

You can also run your own code on the IQeye3 using IQinvision's Portable Universal C (PUC). Here is a sample code. For more examples visit the C_Programming page.

To be compiled with (Borland)

Note: download example1.c rather than cutting and pasting from below.

```
#include <startpuc.h>
```

```
void main

{

int t = 2;

printf("t = %d \n\r",t);

}
```

example1.c Code Description

This code outputs the value of **t** when the main program is run. The output would display "t = 2"
This code is very simple, and is only intended to give you the general idea. For more complicated examples visit
the C_Programming page

Final Words

The objective of this tutorial was to introduce you to the IQeye network camera and its configuration. If you feel
you are ready for something more challenging, you can obtain an SDK (Software Developers Kit) manual which
as some more advanced features.

Related Links

- Resolution of IQeye compared to today's cameras
- Portable Universal C
- How to make the IQeye3 work wireless
- How to use NetVision 360 monitoring system

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