



## Merit LILIN Application Note

### LILIN P5/Z5 Series Cameras on Control4

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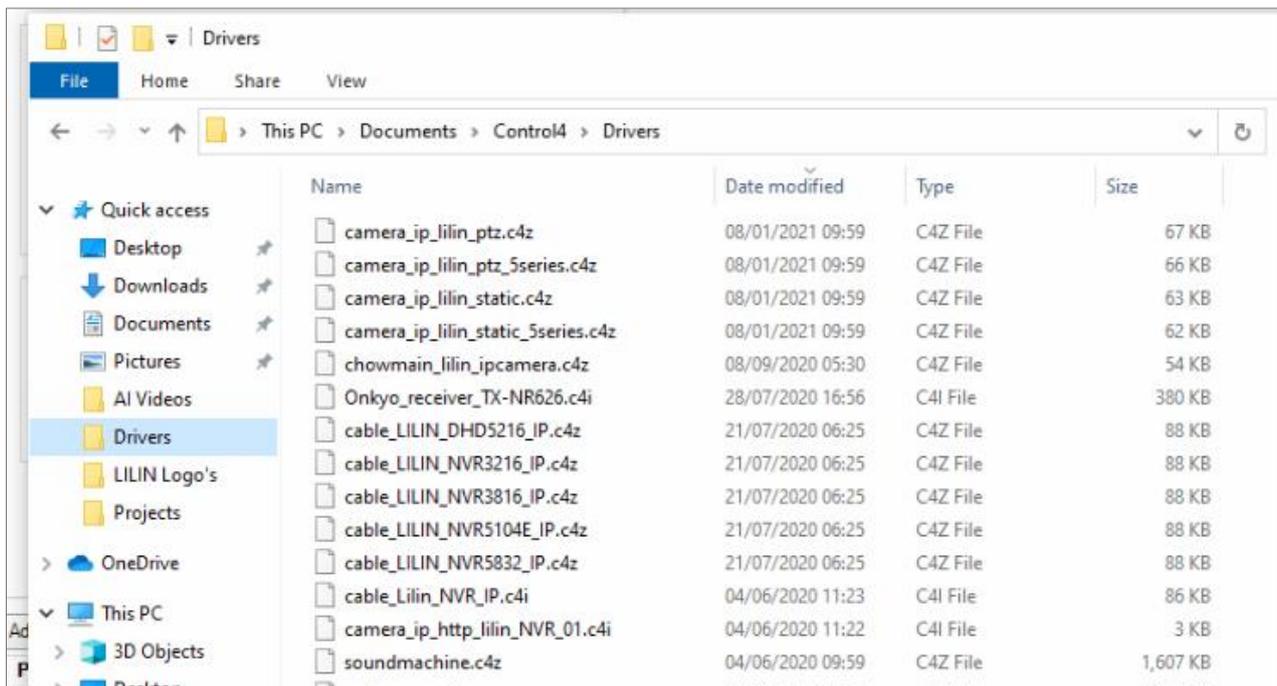
Dept: Technical Support, Taipei

#### Driver Identification

Model	Driver File Name	Composer search name	Version
P5	camera_ip_lilin_static_5series.c4z	LILIN Static IP Camera (5 Series)	136
Z5	camera_ip_lilin_ptz_5series.c4z	LILIN PTZ IP Camera (5 Series)	136

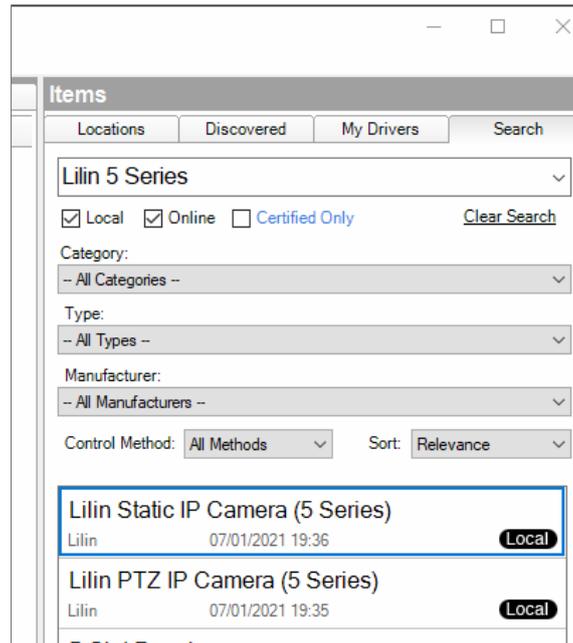
- LILIN P5 & Z5 Series cameras are not SDDP (Auto discoverable) on Control4.

To add a camera to the Control4 system first copy the 5 series drivers into your Control4 driver folder.

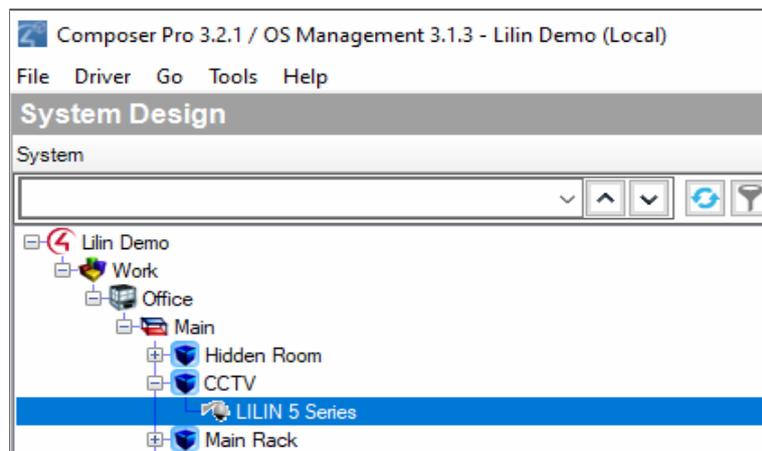




Run Composer and search for LILIN 5 Series. Select either PTZ (Z5) or Static (P5) and double click to add to project.

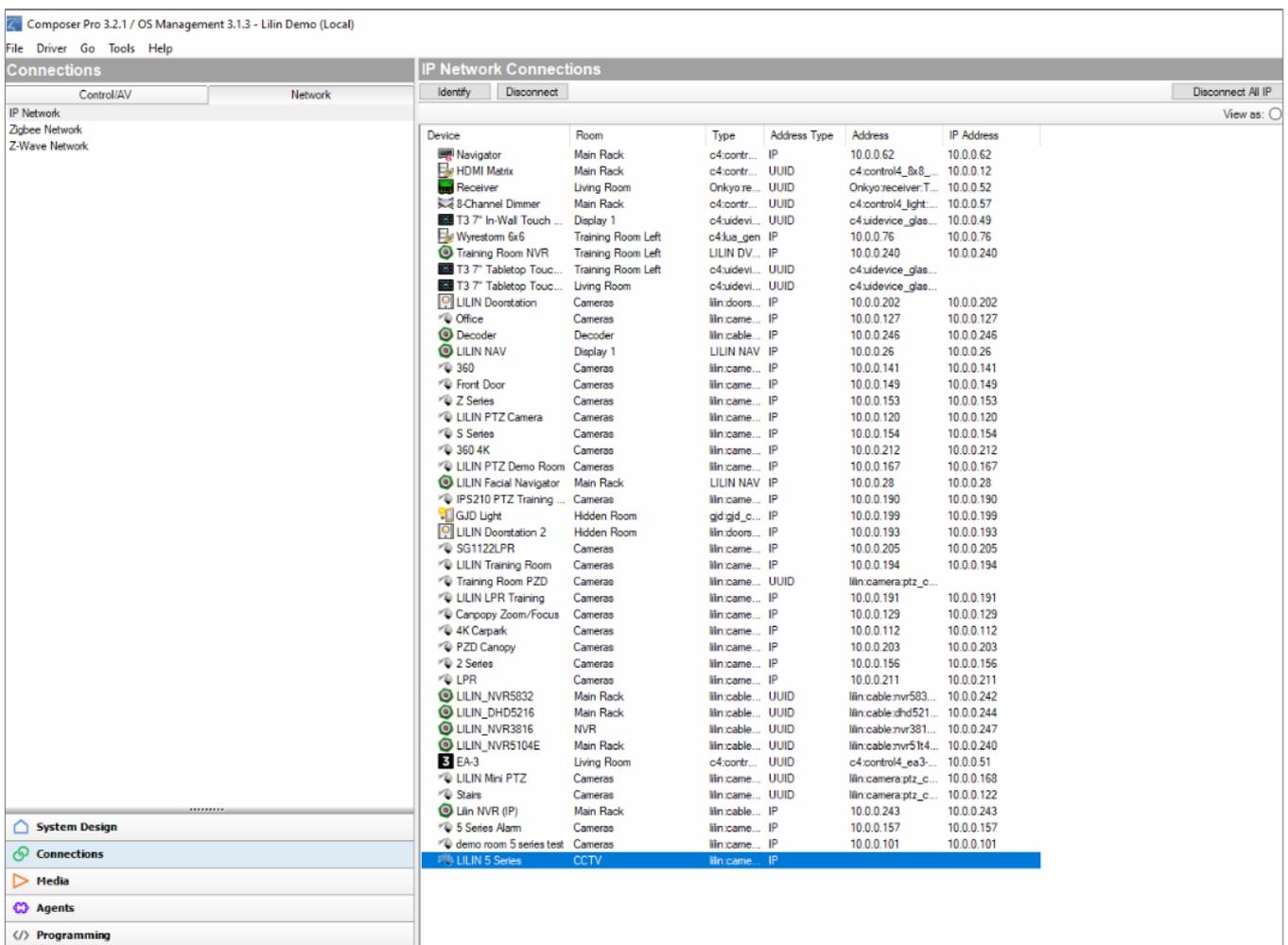


Once added you can rename the device as required.





As the 5 series is not SDDP you need to enter the IP address of the camera. To do this, select the connections tab followed by Network – all IP connected devices (on your C4 project) will be shown.



Double click on the camera and a new window will appear. Enter the camera IP address here and click close.



Return to system design. The IP address will now be complete in the camera properties.  
Enter port number (if camera is not using 80)  
Enter Username & Password and press set.

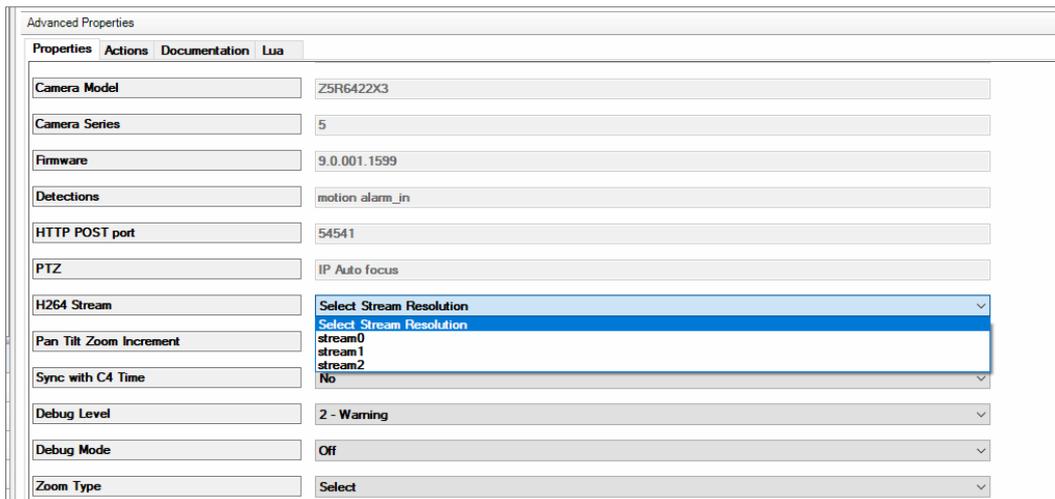
The screenshot shows a 'Properties' window with two tabs: 'Camera Properties' and 'Camera Test'. The 'Camera Test' tab is active. It contains two main sections: 'Address' and 'Authentication'.  
In the 'Address' section, there are fields for 'Hostname / IP Address' (10.0.0.101), 'HTTP Port' (80), 'RTSP (H.264) Port' (554), 'Snapshot Refresh Rate' (60 Sec.), and a 'Publicly Accessible' checkbox.  
In the 'Authentication' section, there is a 'Required' checkbox (checked), 'Username' (admin), 'Password' (masked with dots), and a 'Type' dropdown menu (Basic).  
At the bottom, there is an 'Aspect Ratio' dropdown menu (16x9), a 'Load Defaults' button, and a 'Help' button.

If using a Z5 (PTZ Driver) scroll to the bottom of the Advanced Properties and select AF Series (Auto Focus), and press set. This will enable you to zoom the camera in & out on the Control4 Panel.

The screenshot shows the 'Advanced Properties' window with tabs for 'Properties', 'Actions', 'Documentation', and 'Lua'. The 'Properties' tab is active. It displays a list of camera settings:  
Camera Model: Z5R6422X3  
Camera Series: 5  
Firmware: 9.0.001.1599  
Detections: motion alarm\_in  
HTTP POST port: 54541  
PTZ: IP Auto focus  
H264 Stream: Select Stream Resolution  
Pan Tilt Zoom Increment: 7  
Sync with C4 Time: No  
Debug Level: 2 - Warning  
Debug Mode: Off  
Zoom Type: Select (dropdown menu open showing options: Select, PTZ Series, Pro Series, AF Series)



By default, the driver connects to camera stream 1. To change this, click on Select Stream Resolution & choose from the drop-down menu.



**Note:** Please check that your C4 Panel can support your selected resolution.

How does the stream selection relate to your camera? LILIN 5 cameras can be set to stream three resolutions at one time. Enter the configuration menu of your camera and select Video.

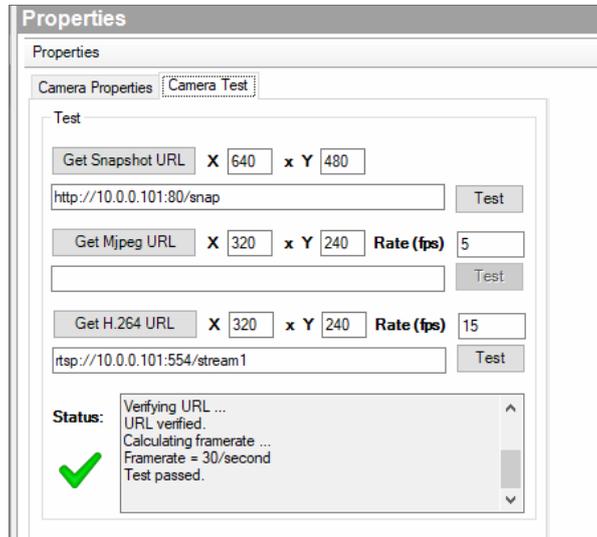




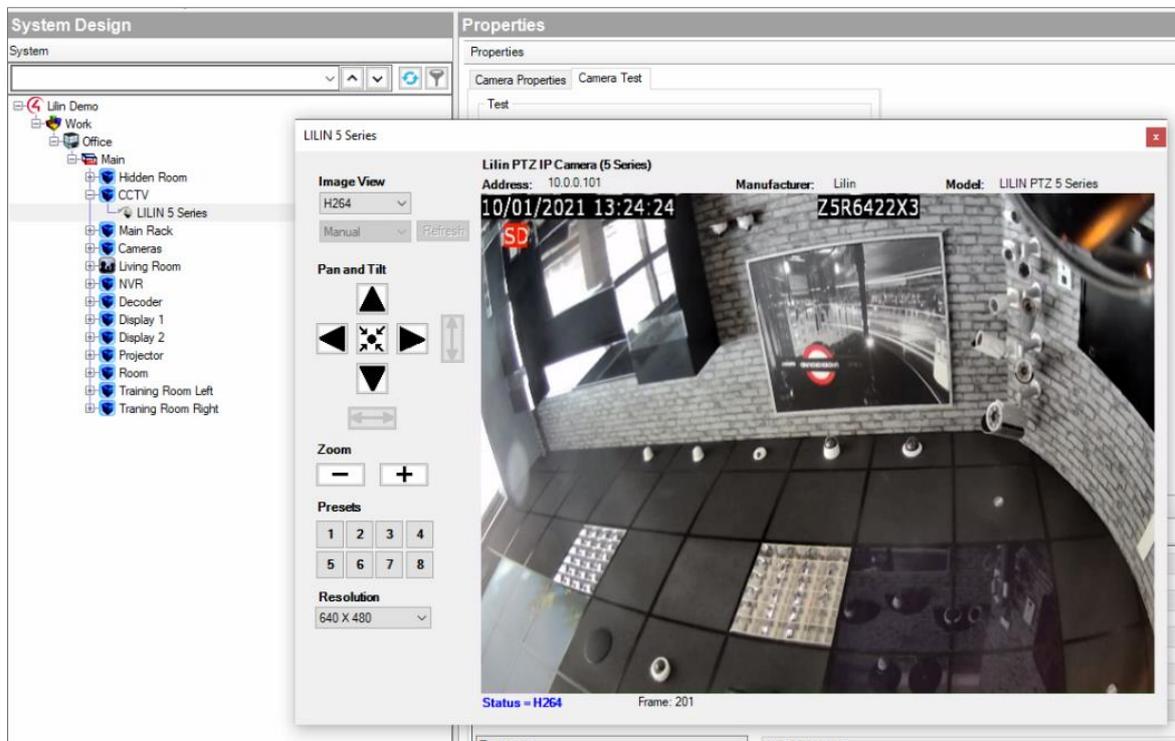
In the above image Stream 0 is 1080P, Stream 1 is 720p & Stream 2 is 480P. As I have selected Stream 1 in Composers advance camera properties, my panels will display the 720p H.264 Stream.

There are several ways to check your connection/stream in composer.

In the properties window select camera test. Here you can test the snapshot (for thumbnail) & the H.264 stream you have selected.



Alternatively, double click on the camera in the system Design section. A preview window will open.



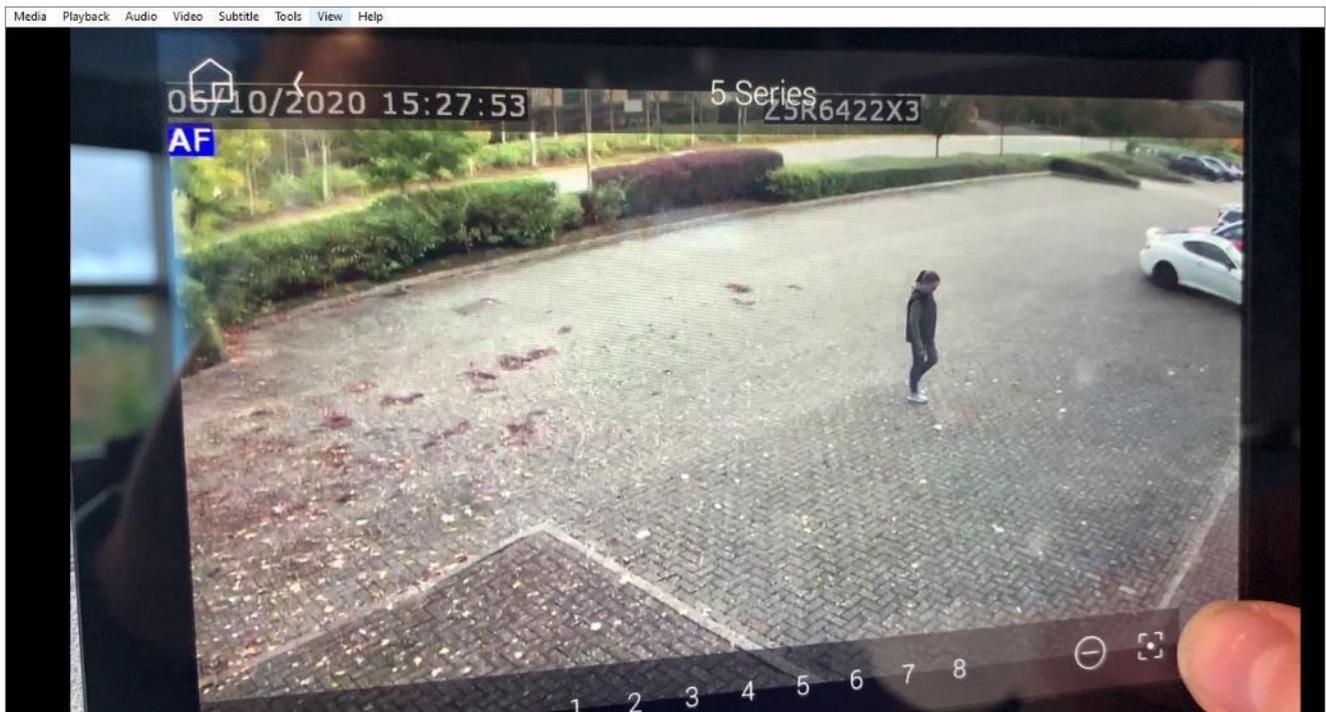
Here you can view the snapshot or the live H.264 stream.



Once finished refresh Navigators in composer and your newly added 5 Series cameras will appear on C4 Panels under the Security Section



If it is a Z5 Series (auto Zoom/Focus) you can control the Zoom with the Controls at the bottom of Panel. The Preset 8 key is to Auto Focus.





The 5 Series cameras also have two alarms.

- Motion Detection
- Alarm input (DI)

Once the LILIN 5 Series camera has been added to your C4 Project it will automatically create 2 Smart Events (alarms) in the LILIN camera

- 01 – For Motion
- 02 – For Digital Input

**Note:** These alarms cannot be edited for sleep time or extra actions as when C4 director reboots, it resets these pre-programmed Smart Events back to these defaults – So if you wish to add other actions, add them as other Events from Event 3 onward.

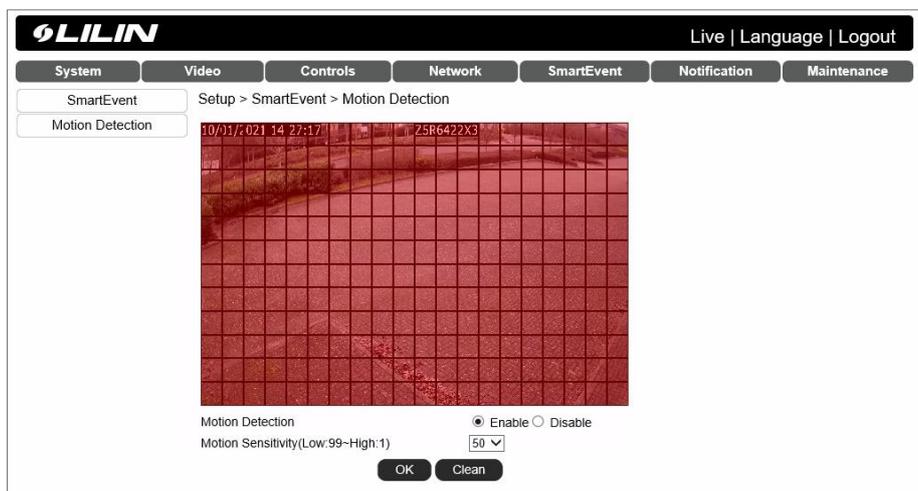
The driver also creates the first 2 HTTP posts in the camera.

- 01 – For Motion
- 02 – For digital input

Number	HTTP POST Server Name	HTTP POST Server IP/DNS	Port
1	Control4_motion	10.0.0.62	54541
2	Control4_digital_in	10.0.0.62	54541
3	httpservername2	httpserver.com	80
4	httpservername3	httpserver.com	80
5	httpservername4	httpserver.com	80
6	httpservername5	httpserver.com	80
7	httpservername6	httpserver.com	80
8	httpservername7	httpserver.com	80
9	httpservername8	httpserver.com	80
10	httpservername9	httpserver.com	80

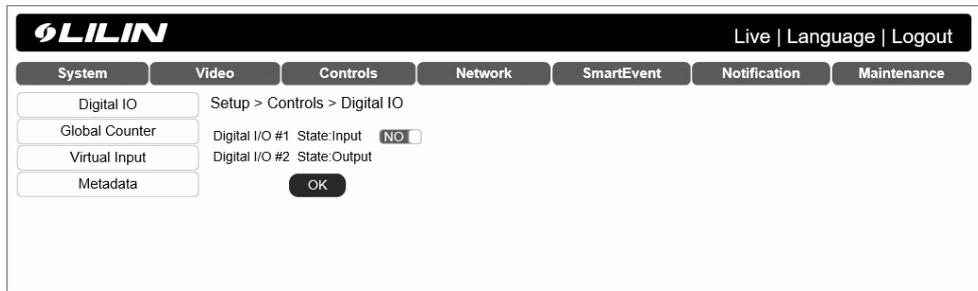
**Note:** If you want to use other HTTP Posts do not use 1 & 2 as these will default back to these preprogrammed settings if C4 reboots.

If you want to use Motion Detection under Smart Event select Motion detection and click enable



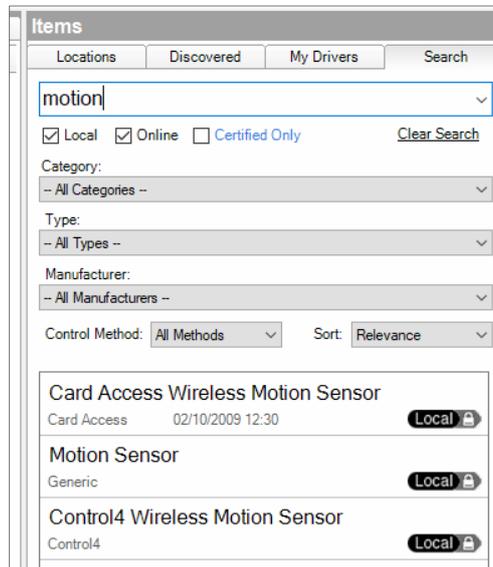


For Digital Input choose Controls → Digital IO and choose NO or NC for your State Input.



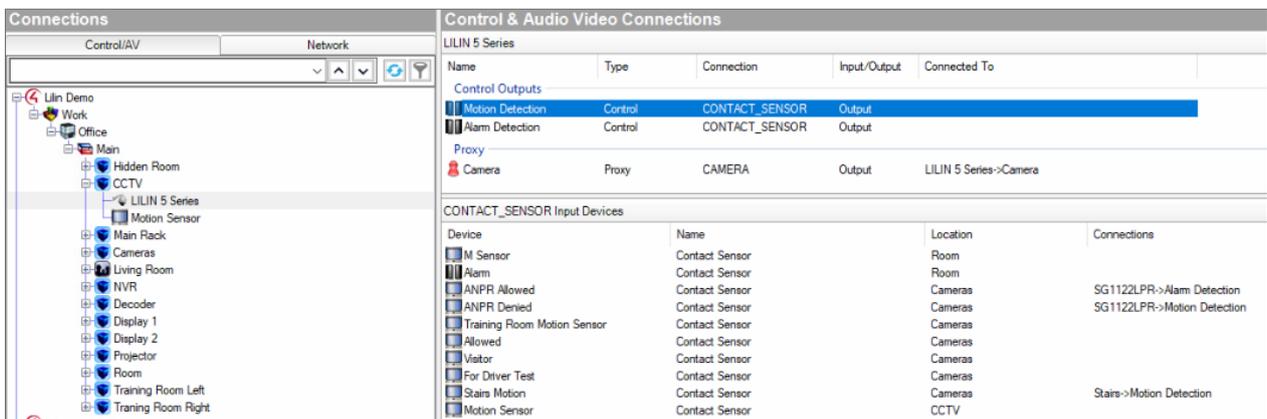
Now the camera has been set, you need to Bind the Alarms to Control4

To set control4 to respond to alarms, first install a generic Motion alarm in composer. Under Items Search for Motion.



Double click on the Motion Sensor (Generic) to add it to your project.

Go to Connections, Control AV and highlight your camera (under Items). The camera alarms are then displayed in Control & Audio Connections Section.





Highlight the alarm you want – Either Motion or Alarm Detection and drag it to your Generic Motion Sensor to Bind the Alarm.

Control & Audio Video Connections				
LILIN 5 Series				
Name	Type	Connection	Input/Output	Connected To
<b>Control Outputs</b>				
Motion Detection	Control	CONTACT_SENSOR	Output	Motion Sensor->Contact Sensor
Alarm Detection	Control	CONTACT_SENSOR	Output	
<b>Proxy</b>				
Camera	Proxy	CAMERA	Output	LILIN 5 Series->Camera
<b>CONTACT_SENSOR Input Devices</b>				
Device	Name	Location	Connections	
M Sensor	Contact Sensor	Room		
Alarm	Contact Sensor	Room		
ANPR Allowed	Contact Sensor	Cameras	SG1122LPR->Alarm Detection	
ANPR Denied	Contact Sensor	Cameras	SG1122LPR->Motion Detection	
Training Room Motion Sensor	Contact Sensor	Cameras		
Allowed	Contact Sensor	Cameras		
Visitor	Contact Sensor	Cameras		
For Driver Test	Contact Sensor	Cameras		
Stairs Motion	Contact Sensor	Cameras	Stairs->Motion Detection	
Motion Sensor	Contact Sensor	CCTV	LILIN 5 Series->Motion Detection	

You can check if the Control4 system is receiving alarms. Go to system Design and under the camera advance properties set Debug level to 5 – Trace & Debug mode to Print – then press set.

Advanced Properties			
Properties	Actions	Documentation	Lua
Camera Model	Z5R6422X3		
Camera Series	5		
Firmware	9.0.001.1599		
Detections	motion_alarm_in		
HTTP POST port	54541		
PTZ	IP Auto focus		
H264 Stream	stream1		
Pan Tilt Zoom Increment	7		
Sync with C4 Time	No		
Debug Level	5 - Trace	Set	Cancel
Debug Mode	Print	Set	Cancel
Zoom Type	AF Series		



## Select Lua Tab

Advanced Properties

Properties Actions Documentation **Lua**

Lua Command Ln 1 Col 1 Font... Execute Clear

Lua Output  Pause Scrolling Ln 7 Col 1 Clear

```
Starting Timer: Debug
Starting Timer: Motion Dwell
Starting Timer: Motion Dwell
Starting Timer: Motion Dwell
Starting Timer: Motion Dwell
On Dwell Expired MotionDetect
```

Powered by Lua

The Control4 DriverWorks SDK uses Lua as its programming language.  
<http://www.lua.org>  
Lua is Copyright (c) 1994-2018 Lua.org, PUC-Rio.

Above you can see Motion Alarms from the Camera being received & below Digital Input alarms being received.

Advanced Properties

Properties Actions Documentation **Lua**

Lua Command Ln 1 Col 1 Font... Execute Clear

Lua Output  Pause Scrolling Ln 6 Col 1 Clear

```
OnPropertyChanged(Debug Mode) changed to: Print
Starting Timer: Debug
OnPropertyChanged(Debug Level) changed to: 5 - Trace
Starting Timer: Alarm Dwell
On Dwell Expired AlarmInputDetect
```

Powered by Lua

The Control4 DriverWorks SDK uses Lua as its programming language.  
<http://www.lua.org>  
Lua is Copyright (c) 1994-2018 Lua.org, PUC-Rio.

Next simply program the Generic Motion Alarm to whatever action you require.

## Contact

Contact [lilin.zendesk.com](http://lilin.zendesk.com) for technical support.