



Merit LILIN Application Note

Control4 & LILIN Integration for LPR/ANPR via LILIN Navigator

Document Number : A00103

Date : 2016/04/28

Dept: Technical Support, Taipei

Subject: This document describes the integration of Control4 and LILIN automatic number plate recognition (ANPR) via Navigator Software (NAV) including:

- (1) Control4 remote control for LILIN Navigator over HDMI output,
- (2) Setup LILIN Navigator ANPR for event notification

Requirements:

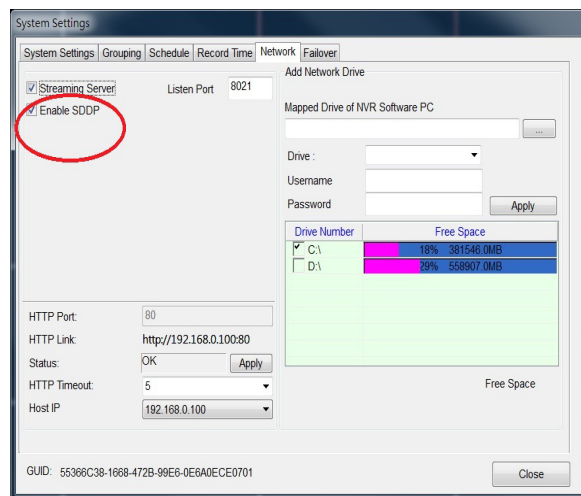
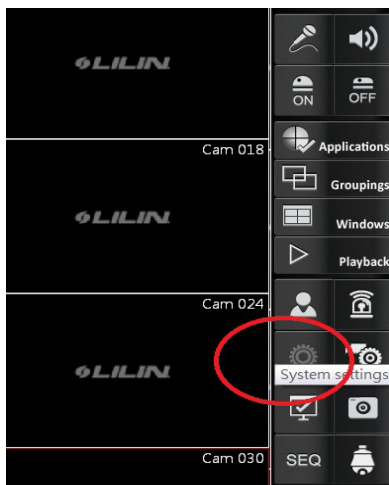
Navigator Enterprise: 1.1.1.56 or higher

Control4 Composer: 2.8 or higher

LILIN ANPR-FL (freeflow) or ANPR-PK (parking) USB dongle is required.

Setup of LILIN Navigator Software:

1. Go to System Settings in the Navigator Software and make sure the SDDP option is enabled. Click System Settings->Network.

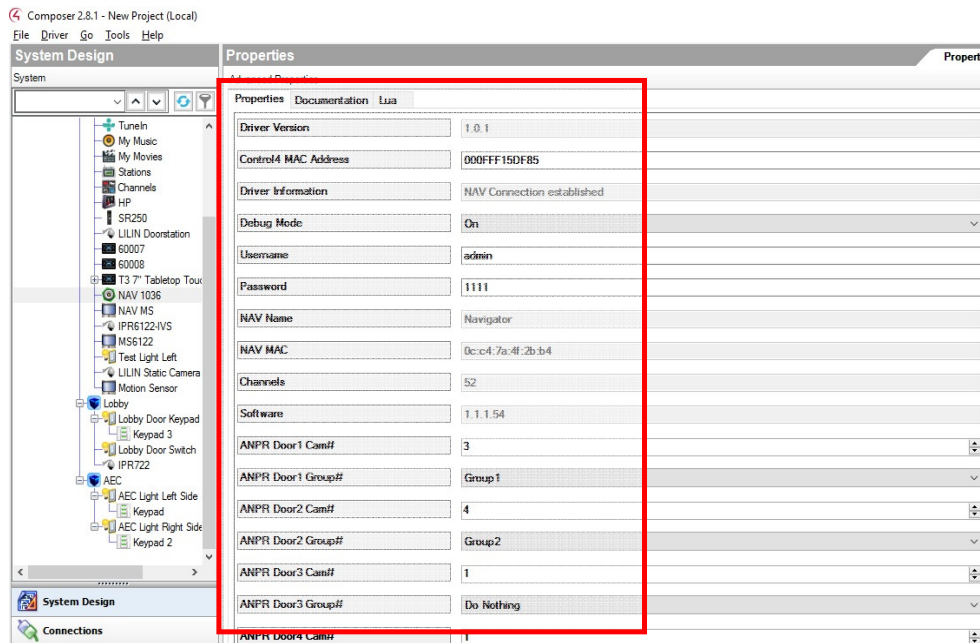


2. Run Control4 Composer 2.8.0 or above
3. Load the Navigator driver in Composer, "cable_Lilin_NAV_IP.c4i" via SDDP.
4. In the Discovered Tab of "System Design", LILIN Navigator device is detected as below:

Items				
Locations		Discovered	My Drivers	Search
Type	Manufacturer	Model	Address	
Cable	LILIN	NAV1080	NAV-USER-PC	

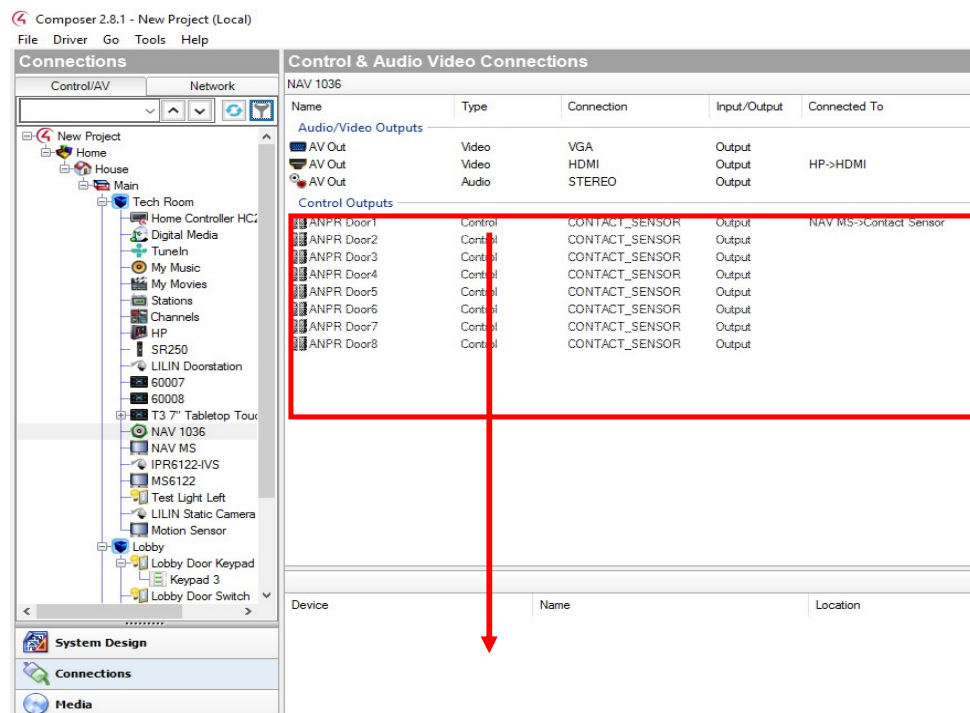


Double click LILIN Navigator device, it will be automatically added in the left side. Click on the added item in the System Design tree list. Composer will show related properties in the Properties Tab as follows:



ANPR/LPR Setting via Control4:

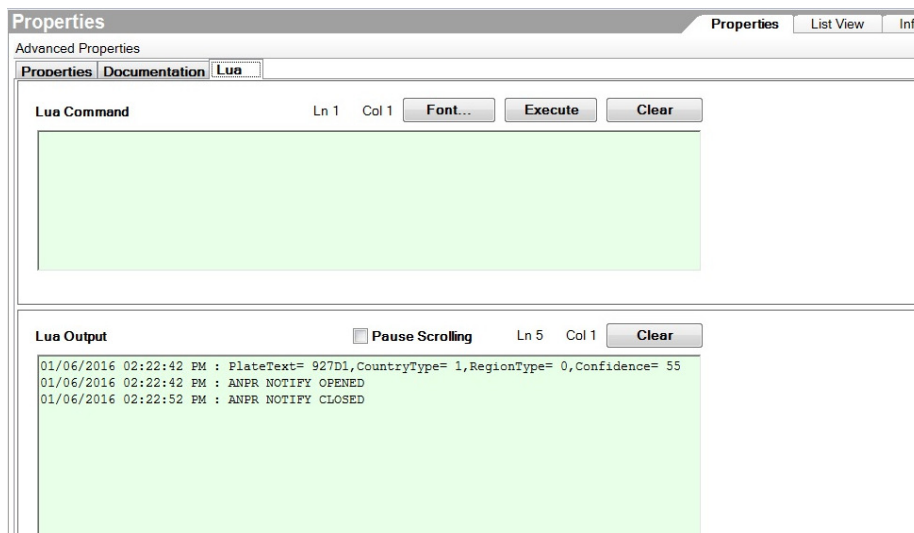
Switch to the Connections tab, there 8 “ANPR Detection” options can be found in the “Control Outputs”. The selected item can be connected to other input devices by “drag and drop”. The input device (LPR/ANPR) can be used for programming purposes for triggering devices such as a siren or a gate control in Control4 systems.



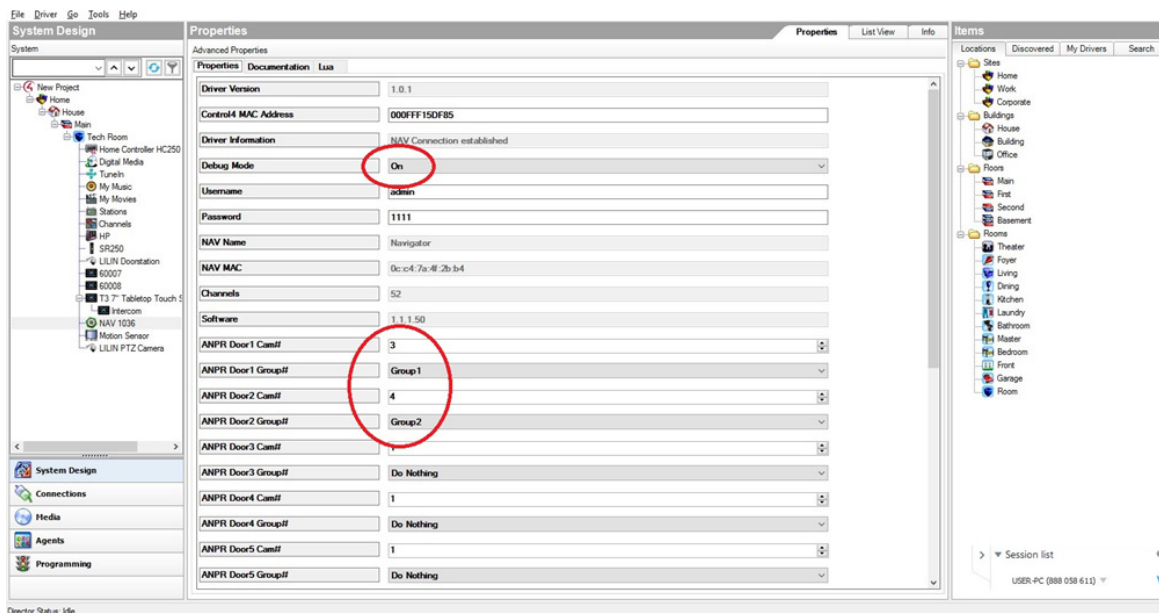


For checking the ANPR information such as number plates and recognition rate sent from LILIN Navigator, this can be used for debugging purpose. Switch to “System Design” tab and choose specified “ANPR Channel”, and enter “Debug Mode” as following:

Switch to “Lua” Tab, it will show related information sent from LILIN Navigator:



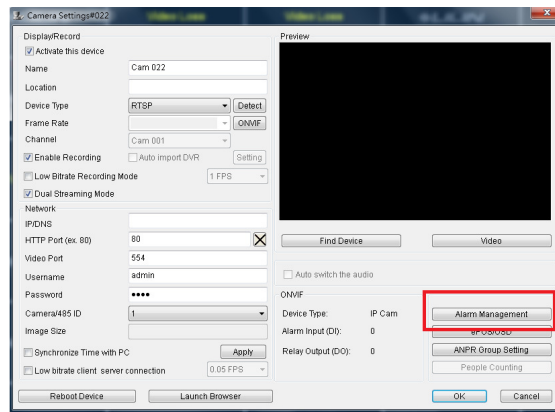
Switch to “System Design” tab and choose “ANPR Door 1 Camera#” (for example) and specify the camera number for ANPR feature. After it, assign “ANPR Door 1 Camera#” for its ANPR group. The ANPR groups are preconfigured at LILIN Navigator Enterprise for example, denied access, approved access, CEO, and Boss groups.



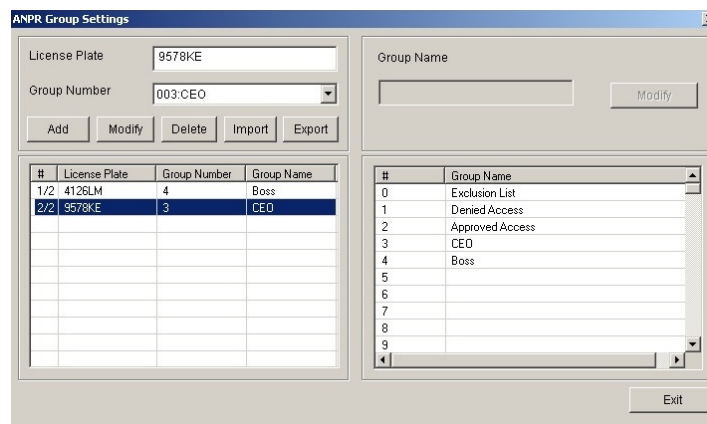


ANPR/LPR Setting via LILIN Navigator :

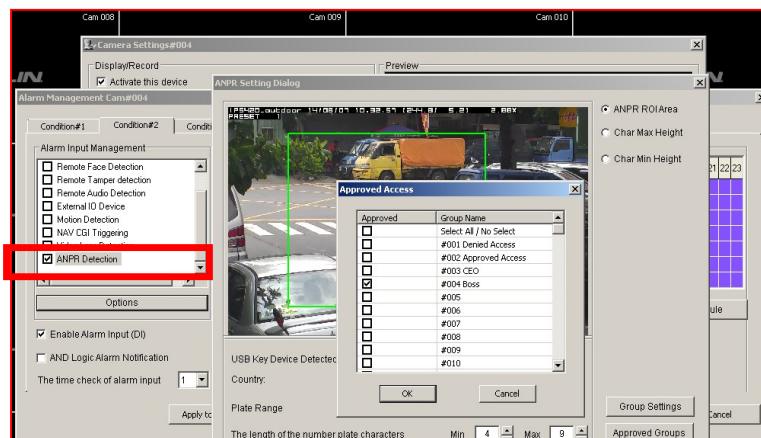
Select one of the camera and click Property. In Camera Settings dialog box, select "Alarm Management" for configuring ANPR plates.



1. License Plate types: In Properties->ANPR Group Setting, setup different authentication license plate groups such as CEO group and Manager group in below:

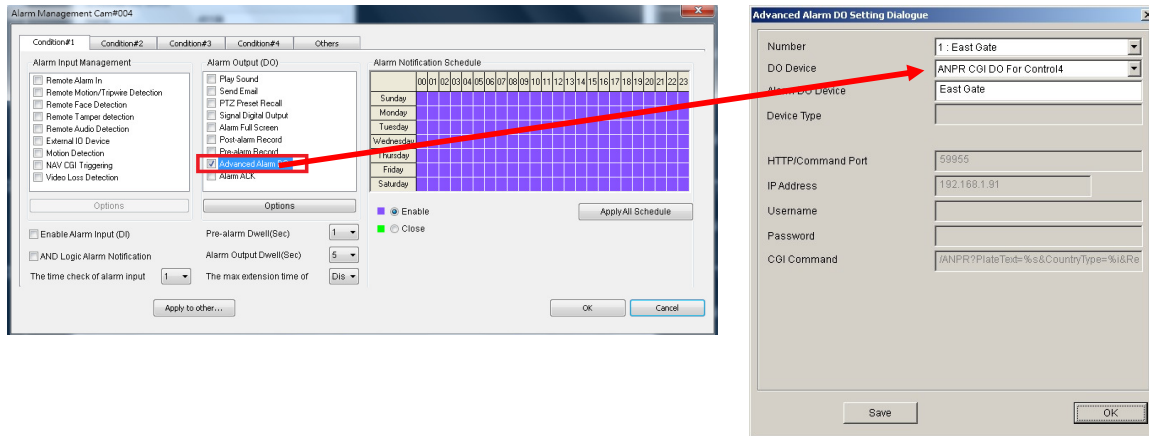


2. Alarm Input: After purchase LILIN ANPR/LPR dongle, insert the dongle to the Navigator PC. ANPR Detection is shown in the Alarm Input Management box. Select on ANPR Detection item and click on Options button to assign an authentication group for ANPR Setting Dialog box. Click on Approved Groups button to assign one of the plates groups.





3. Alarm Output: Choose “ANPR CGI for Control4” in Advanced Alarm DO option.



Note: The IP and Port will be set automatically by the Control4 Host Device. There is no need to specify IP and Port.



Controls via Composer User Interface

After LILIN Navigator driver gets installed, the following items could be used only via Composer user interface:

(1) NAV Live Control

- Change to a specific camera in full screen—press "*" and "number of the camera".
- Matrix view—press "#" and "4, 9, 16, 25, or 36".
- Change to a video group—press "DVR" and the "group number".

(2) NAV PTZ Control

- Recall a PTZ preset—press "Recall" and the "preset number".
- Move to a PTZ Position—press "Left", "Right", "Down", and "Up".
- Zoom in—press "Page Up" button.
- Zoom out—press "Page Down" button
- Auto pan and stop auto pan—press "Guide" button.

(3) NAV Play Control

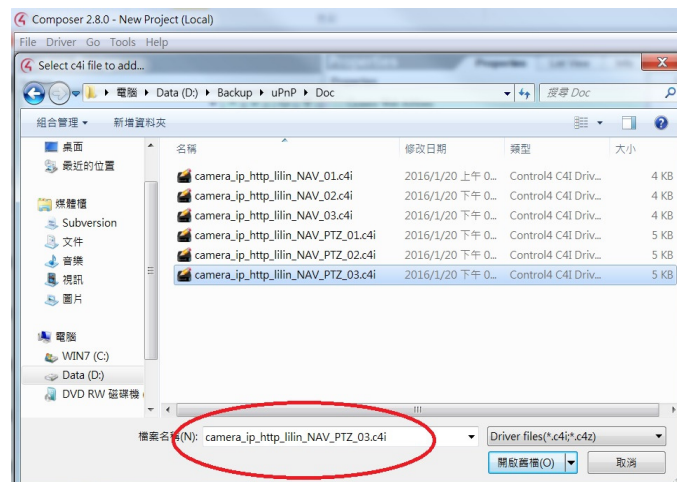
- Bring up the Playback UI and Search Dialog—press "Play" button in the NAV live control mode
- Navigate and Change Date/Time units In Search Dialog—press "Left", "Right", "Down", and "Up" buttons
- For video playing control—press "FF", "FR", "Stop", "Play" and "Pause" buttons in the play control mode
- Step Back and Step Forward—press "Pause" button first and then press "FF" or "FR" buttons
- Exit Playback UI —press "Cancel" button.

(4) Panoramic Camera Control

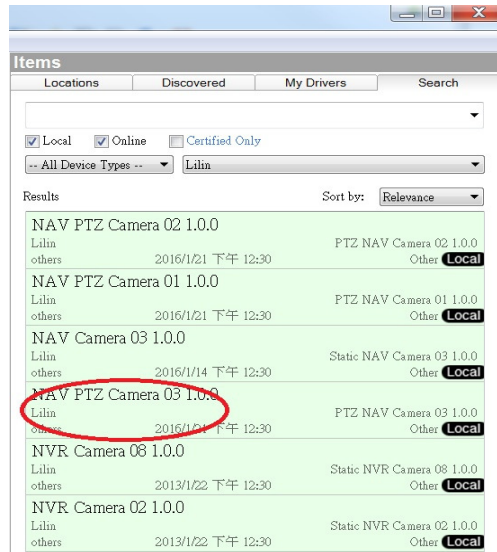
- 360 view—press "Recall" and "127".
- 5-division—press "Recall" and "126".
- Quad—press "Recall" and "125".

Manually Install NAV Camera Drivers:

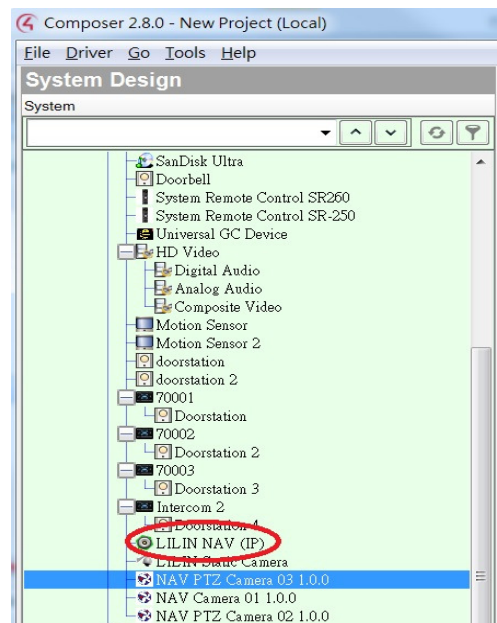
Add NAV Camera Drivers for Control4: In "Drivers" -> "Add or Update drivers" within the Composer user interface, add NAV camera drivers.



In the "System Design"->"Items"->"Search" tab, select "LILIN" as the filter:



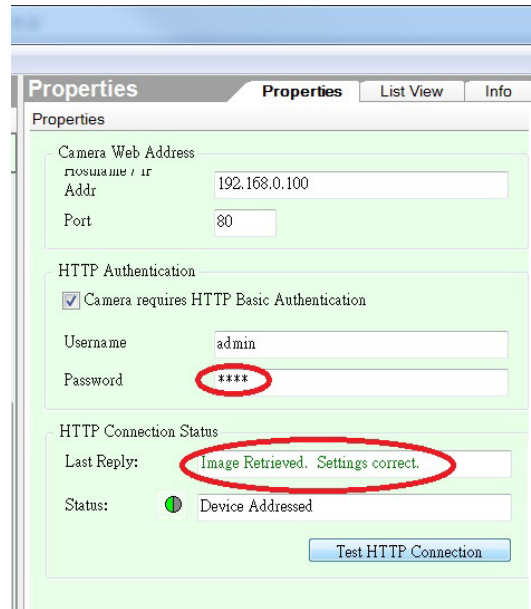
Double click this camera driver to add in the left side of "System Design", it is different from the Navigator driver:



Click the "NAV PTZ Camera 03 1.0.0", some properties must be set, like IP, port, user name, and password:

- (1) IP and Port: The IP and port of LILIN Navigator
- (2) User name and password: the username and password of LILIN Navigator
- (3) Press "Test Http Connection": if the communication is successful, then the properties would be kept in the Control4

Note: The password could not be empty. You must change the password for LILIN Navigator.



Properties Properties List View Info

Properties

Camera Web Address

Address: 192.168.0.100

Port: 80

HTTP Authentication


☒ Camera requires HTTP Basic Authentication

Username: admin

Password: ****

HTTP Connection Status

Last Reply: Image Retrieved. Settings correct.

Status:  Device Addressed

Test HTTP Connection

Controls via Remote Control

After the Navigator camera driver is installed correctly, the specific live channels of LILIN Navigator would be showed in security-->camera part of the Control4 screen, therefore, the following items could be achieved by Control4 remote control:

(1) **NAV Camera Live Control**

- Sequence through cameras "CH+" and "CH-" if a camera is in full screen.

(2) **NAV Camera PTZ Control**

- Change to a PTZ preset 1, 2, 3, 4— move to left part if a camera live view is in full screen, and press "Preset 1", "Preset 2", "Preset 3", or "Preset 4" button
- Zoom in/out—move to left part if a camera live view is in full screen, and press "Zoom in", or "Zoom out" button
- Change PTZ Position—move to right part if a camera live view is in full screen, press "Select" and then "Left", "Right", "Down", and "Up" buttons around the "Select" button

Further Readings

LILIN Navigator ANPR Software Manual for setting up ANPR camera and Navigator Software.

Contact

Contact <http://lilin.zendesk.com> for technical support.