

# Milesight-Troubleshooting LPR

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# 1. What is LPR

LPR(License Plate Recognition) is a a technology that uses optical character recognition on images to read vehicle registration plates. The LPR algorithm is embedded in cameras are able to recognize, capture and upload license plate images on their own and intelligently.



# 2. LPR Cameras

- LPR 12x H.265+ AF Motorized Pro Bullet Network Camera
- LPR 12x H.265+ Mini PTZ Bullet Network Camera
- LPR H.265+ ABF Pro Box Network Camera
- LPR H.265+ Mini Bullet Network Camera
- LPR H.265+ Vandal-proof Motorized Mini Bullet Network Camera
- LPR H.265+ Motorized Pro Bullet Network Camera

# 3. How to set LPR

### (1) Settings

**Step1:** After log in the web, and go to "Advanced Settings " $\rightarrow$  "LPR " $\rightarrow$  "Settings ". Check the checkbox "Enable License Plate Recognition", you can draw the screen to select four areas interested. The area as shown in the blue box below, it will also display pixels above each area.



[License]: We will automatically assign an license to each device.

[License Status]: This column is used to display the status of the license, [Valid] or [Invalid].

Enable License Plate Recognition:					
License:	a13d45b0550786e4dc1172				
License Status:	Valid				
Processing Resolution:	1920*1080 1280*720 640*260				
Enable Day/Night Detection Mode:	320*176				

**[Processing Resolution]:** Resolution of the stream for LPR analysis. Default selected resolution is 1280\*720. Users can choose different resolution according to the environment.

[Enable Day/Night Detection Mode]: With this option enabled, the camera will enable different detection modes according to Day/Night mode.

[Enable Vehicle Speed Detection]: With this option enabled, it will display two lines(Line1 and Line2) in the live view. You need to fill in Camera Installation Height, Horizontal Distance1 and Horizontal Distance2, then the camera will calculate the vehicle speed based on the line position and the data you filled in, and display the result on the logs interface.

Camera Installation Height: real height of camera.

Horizontal Distance1: real distance between camera pole and line1.

Horizontal Distance2: real distance between camera pole and line2.

**Note:** The two lines are used to match the actual position of the car as a reference line for measuring two horizontal distances. You can use the default line position set by the camera, or drag the line to move its position.

**[Set LPR Detection Region]:** You can set up to 4 ROI areas by drawing the screen. If you choose **Normal Mode**, it supports configuring the LPR detection regions for the current area. If you choose **Advanced Mode**(Only for PTZ series), it supports configuring different LPR detection regions for

#### different PTZ presets(Only support Preset 1~4 so far).

		The second se			-
Effective Regio	on Settings:	Adva	nced	~	<u></u>
Effective wit	h Presets:	Prese Prese Prese	et <b>1</b> et 2 et 3 et 4		K.
	Add Clear	Note: Please draw the screen of Delete All	for setting!		
	Add Clear	Note: Please draw the screen 1 Delete All Name	for setting!	Delete	
	Add Clear 1	Note: Please draw the screen 1 Delete All Name ROI_1	for setting!	Delote	
	Add Clear 1 2	Note: Please draw the screen 1 Delete All ROI_1 ROI_2	for setting!	Delote X X	

# Notes

- Only license plates larger than 150 pixels can be recognized.
- For better performance, please choose the appropriate resolution in advance.

**Step2:** Schedule Settings. You can draw the schedule by clicking "**Edit**" button. And then click **[Save]** or **[Reset]** after setting. You also can copy the settings to other channels.



Time Schedule						
<b>v</b>	Period1	Period2	Period3			
⊠Sunday	00 - 24 - 24 - 00 -	00 🗸 :00 🗸 00 🗸 :00 🗸	00 🗸 : 00 🗸 - 00 🗸 : 00 🗸	Copy to Other Days		
Monday	00 - 24 - 24 - 00 -	00 🗸 : 00 🗸 00 🗸 : 00 🗸	00 🗸 : 00 🗸 - 00 🗸 : 00 🗸	Copy to Other Days		
✓Tuesday	00 - 24 - 24 - 00 -	00 🗸 :00 🗸 00 🗸 :00 🗸	00 🗸 : 00 🗸 - 00 🗸 : 00 🗸	Copy to Other Days		
Wednesday	00 - 24 - 24 - 00 -	00 🗸 : 00 🗸 00 🗸 : 00 🗸	00 - 00 - 00 - 00 - 00	Copy to Other Days		
Thursday	00 - 24 : 00 - 24 - 24 - 24 - 24 - 24 - 24 - 24 -	00 🗸 00 🗸 00 🗸 00 🗸	00 🗸 : 00 🗸 - 00 🗸 : 00 🗸	Copy to Other Days		
Friday	00 - 24 : 00 - 24 - 24 - 00 - 24 - 24 - 24 - 24 -	00 🗸 :00 🗸 00 🗸 :00 🗸	00 🗸 : 00 🗸 - 00 🗸 : 00 🗸	Copy to Other Days		
✓Saturday	00 - 24 - 24 - 00 -	00 ~:00 ~ 00 ~:00 ~		Copy to Other Days		

Step3: Detection Settings and LPR Message Post Settings.

Detection Trigger:	Alarm Input
Repeat Plate Checktime:	60 millisecond 🗸 (0~60000ms)
Features Identification:	☑All ☑Direction ☑ROI_ID
LPR Message Post Settings	
Enable LPR Message Post:	
Post Tuno	RTSP

[Detection Trigger]: If you choose "Always", camera will always detect the license plate. If you choose "Alarm input", camera will only detect the license plate when Alarm Input is being triggered.

[**Repeat Plate Checktime**]: Set the time interval for repeatedly reading license plates to effectively avoid duplicate identification of parking vehicles.

[Feature Identification]: Check Direction, ROI\_ID or All to enable Features Identification, it will

display the corresponding information on the logs interface.

**[LPR Message Post Settings]**: Check the checkbox to enable LPR Message Post. It will push information to some third-party devices or software that are compatible with ours. Information can be pushed by **RTSP**, **TCP** or **HTTP**.

More information about LPR Message Post, please refer to *Milesight-Troubleshooting-Integration between LPR Camera and NVR(VMS).* 

Step4: Don't forget to click "Save" after finishing all settings.

### (2) List Management

Add the license plates to this interface as Black or White type (Black/White List), and then you can set the alarm action for these license plates in the corresponding black list mode or white list mode interface. When these license plates are detected, the camera will respond accordingly to your settings.



**Step1:** Select the **license plate type** as black or white, enter the license plate, click the **"Add"** button, the license plate will be added successfully.

**Step2:** You can add a csv form with the license plate you want to add, click the "**Browse**" button to import the form to this interface, click the "**Upload**" button, the license plates will be added successfully.

#### Note:

1. You can first download the template as a reference in this interface.

2. It allows to add 1000 license plates to Black and White List.

**Step3:** Select Plate Type or directly enter the license plate number, click the "**Search**" button, the corresponding license plate will be displayed in the list.

Step4: Click the "Export List" button to export the license plate in the current list to a csv form locally.Step5: Click the "Delete List" button to delete all the license plate in the current list.

## (3) Black List Mode

Advance	d Settings >> LPR					
Settings	List Management	Black List Mode	White List Mode	itor Mode Logs		
			Enable Black List Mode:			
			Schedule Settings			
			Sun -			
			Tue =			
			Thu - Fri -			
			Sat J 00 01 02 03 04 05 06 07	09 10 11 12 13 14 15 16 17 18 19 2	20 21 22 23 24	
				Edit		
			Alarm Action			
			Save Into NAS:	File Format: Record (Please mount storage de	vice.)	
			Upload Via FTP:	File Format: Record	<u> </u>	
			Upload Via SMTP:	File Format: Snapsho	<u> </u>	
			External Output:	(Please configure the Extension Time.)	ernal Output	

**Step1:** Check the checkbox to enable Black List Mode.

**Step2:** Schedule Settings. You can draw the schedule by clicking Edit button.

Step3: Set alarm action.

Alarm Action	
Save Into NAS:	File Format: Record (Please mount storage device.)
Upload Via FTP:	File Format: Record
Upload Via SMTP:	File Format: Snapsho
External Output:	☐ (Please configure the External Output Action Time.)
Play Audio:	☐ (Please configure the Audio Action Settings and Audio Interval.)
Alarm to SIP Phone:	(Please open the SIP.)
HTTP Notification:	

#### **Step4:** Set alarm settings.

Alarm Setting	
Record Video Sections:	5 seconds
Pre-record:	0 second V
Snapshot Type:	License Plate
Snapshot:	3 🗸
Snapshot Interval:	1 second V
External Output Action Time:	30 seconds 🗸
Audio Action Settings:	Edit
Play Audio Interval:	Auto

After that, when a license plate marked as "black" is detected, the camera will respond accordingly to your settings.

### (4) White List Mode

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Advance	d Settings >> LPR				
Settings	List Management	Black List Mode	White List Mode Visitor Mo	de Logs	
			Enable White List Mode:		^
			Schedule Settings		L
			Sun Mon Thu Wed Thu Sat 00 01 02 03 04 05 06 07 08 09 10	11 12 13 14 15 16 17 18 19 20 21 22 23 24	
			Alarm Action	_	
			Save Into NAS:	File Format: Record V (Please mount storage device.)	
			Upload Via FTP:	File Format: Record	
			Upload Via SMTP:	File Format: Snapsho	
			External Output:	(Please configure the External Output     Action Time )	~

**Step1:** Check the checkbox to enable White List Mode.

**Step2:** Schedule Settings. You can draw the schedule by clicking Edit button.

Step3: Set alarm action.

Alarm Action	
Save Into NAS:	<ul> <li>File Format: Record </li> <li>(Please mount storage device.)</li> </ul>
Upload Via FTP:	File Format: Record
Upload Via SMTP:	File Format: Snapsho
External Output:	☐ (Please configure the External Output Action Time.)
Play Audio:	☐ (Please configure the Audio Action Settings and Audio Interval.)
Alarm to SIP Phone:	(Please open the SIP.)
HTTP Notification:	

#### Step4: Set alarm settings.

Alarm Setting	
Record Video Sections:	5 seconds
Pre-record:	0 second V
Snapshot Type:	License Plate 🗸
Snapshot:	3
Snapshot Interval:	1 second V
External Output Action Time:	30 seconds 🗸
Audio Action Settings:	Edit
Play Audio Interval:	Auto

After that, when a license plate marked as "White" is detected, the camera will respond accordingly to your settings.

### (5) Visitor Mode

Advanced	I Settings >> LPR							
Settings	List Management	Black List Mode	White List Mode	Visitor Mode	Logs			
			Enable Visitor Mode:	E	Z			
			Schedule Settings					
			Sun Mon Wed Thu Sat 00 01 02 03 04 05 66	07 08 09 10 11 1 Edit	2 13 14 15 16	+ 17 18 19	20 21 22 1	23 24
			Alarm Action					
			Save Into NAS:	[	File Format (Please mou	Record nt storage d	levice.)	
			Upload Via FTP:	[	File Format	Snapsho	$\checkmark$	
			Upload Via SMTP:	[	File Format	Snapsho	$\checkmark$	
			External Output:	[	(Please conf Action Time )	figure the Ex	xternal Outp	ut

**Step1:** Check the checkbox to enable Visitor Mode.

**Step2:** Schedule Settings. You can draw the schedule by clicking Edit button.

Step3: Set alarm action.

Alarm Action	
Save Into NAS:	File Format: Record (Please mount storage device.)
Upload Via FTP:	File Format: Record
Upload Via SMTP:	File Format: Snapsho
External Output:	☐ (Please configure the External Output Action Time.)
Play Audio:	☐ (Please configure the Audio Action Settings and Audio Interval.)
Alarm to SIP Phone:	(Please open the SIP.)
HTTP Notification:	

#### **Step4:** Set alarm settings.

Alarm Setting	
Record Video Sections:	5 seconds
Pre-record:	0 second
Snapshot Type:	License Plate V
Snapshot:	3 🗸
Snapshot Interval:	1 second V
External Output Action Time:	30 seconds
Audio Action Settings:	Edit
Play Audio Interval:	Auto

After that, when a license plate that is not marked as "Black" or "White" is detected, the camera will respond accordingly to your settings.



			Timo	Engent	Licores Dis	
PTZ	Bullet State	10/04/2019 14 25 04	Time	anapsi	License Plat	
		and a stre	2019-04-09 21:24:48	35배 27	18 35 버 2718	
			2019-04-09 21:24:38	·35# 27	<b>18</b> 35 버 2718	
			2019-04-09 21:24:34	35배 27	<b>18</b> 35 번 2718	
	And Charles		2019-04-09 21:24:32	·35배 27	<b>18</b> 35 H 2718	
SI	now 30 v entries	License Plate	Plate Type		Log Search	
	2019-09-10 19:09:55	6541921	Visitor	^	Plate Type:	
	2019-09-10 19:09:52	11□9216	Visitor		All	
	2019-09-10 19:09:48	65711921				
			Visitor		License Plate:	
	2019-09-10 19:09:38	16년1011	Visitor		License Plate:	
	2019-09-10 19:09:38 2019-09-10 18:51:22	16년 1011 20#1999	Visitor Visitor Visitor	Detail	License Plate:	
	2019-09-10 19:09:38 2019-09-10 18:51:22 2019-09-10 18:50:52	16년 1011 20#1999 12구0197	Visitor Visitor Visitor Visitor	Detail	License Plate: Start Time: 2019-08-23 00:00:00	
	2019-09-10 19:09:38 2019-09-10 18:51:22 2019-09-10 18:50:52 2019-09-10 18:33:37 2019-09-10 18:33:57	1651011 20#1999 12%-0197 ##1009 2#1960	Visitor Visitor Visitor Visitor Visitor	Detail	License Plate: Start Time: 2019-08-23 00:00:00	
	2019-09-10 19:09:38 2019-09-10 18:51:22 2019-09-10 18:50:52 2019-09-10 18:33:37 2019-09-10 18:32:59 2019-09-10 18:32:59	1641011 20#1999 12-00197 ###1009 2#2850 04580210	Visitor Visitor Visitor Visitor Visitor Visitor	Detail	License Plate: Start Time: 2019-08-23 00:00:00 End Time: 2019-09-23 23:59:59	
	2019-09-10 19:09:38 2019-09-10 18:51:22 2019-09-10 18:50:52 2019-09-10 18:33:37 2019-09-10 18:32:59 2019-09-10 18:32:27 2019-09-04 18:32:26	165-1011 20#999 122-0197 ###1009 2#2850 06660710 4057101	Visitor Visitor Visitor Visitor Visitor Visitor Visitor	Detail	License Plate: Start Time: 2019-08-23 00:00:00 End Time: 2019-09-23 23 59:59 Search	
	2019-09-10 19:09:38 2019-09-10 18:51:22 2019-09-10 18:51:22 2019-09-10 18:50:52 2019-09-10 18:32:59 2019-09-10 18:32:27 2019-09-10 18:32:26 2019-09-10 18:32:46	1014 1011 2001 9909 122-0197 #889 0009 232850 06560710 4027101 041100	Visitor Visitor Visitor Visitor Visitor Visitor Visitor	Detail	License Plate: Start Time: 2019-08-23 00:00 00 End Time: 2019-09-23 23 59:59 Search	
	2019-09-10 19:09-38 2019-09-10 18:51:22 2019-09-10 18:50:52 2019-09-10 18:30:37 2019-09-10 18:32:37 2019-09-10 18:32:27 2019-09-10 18:32:26 2019-09-10 18:31:56 2019-09-10 18:31:57	161-[1011 20#1999 122-[v0137 ###1009 282859 05680710 4052710 5#1189 051710	Visitor Visitor Visitor Visitor Visitor Visitor Visitor Visitor Visitor	Detail	License Plate: Start Time: 2019-08-23 00:00 0 End Time: 2019-09-23 23 59 59 0 Search	
	2019-09-10 10:09-38 2019-09-10 16:51:22 2019-09-10 16:50:52 2019-09-10 16:30:37 2019-09-10 16:32:37 2019-09-10 16:32:26 2019-09-10 16:32:26 2019-09-10 16:31:56 2019-09-10 16:31:47 2019-09-10 17:36 59	154(1011 20#1950 123/e1957 ###1009 3#2850 056#0710 40,27101 5#1189 05%0710 11,2(1911	Visitor Visitor Visitor Visitor Visitor Visitor Visitor Visitor Visitor Visitor	Detail	License Piate: Start Time: 2019-08-23 00:00 0 End Time: 2019-09-23 23 59 59 0 Search Log Expert	
	2019-04-10 1909-38 2019-09-10 18-51-32 2019-09-10 18-55-52 2019-04-10 18-35-52 2019-04-10 18-32-59 2019-04-10 18-32-29 2019-04-10 18-32-59 2019-04-10 18-31-47 2019-04-10 18-31-47 2019-04-10 18-31-59 2019-04-10 10 28-59	161-(1011 2001999 121-0197 ###1009 2#2850 06560710 4027101 5#1189 65%0710 11.2.1911	Visitor Visitor Visitor Visitor Visitor Visitor Visitor Visitor Visitor Visitor Visitor Visitor	Detail	License Plate: 2019-06-23 00:00 00 End Time: 2019-06-23 23 59 59 Carroth Log Export	
	2019-04-19 10-09 38 2019-05-10 18:51 22 2019-05-10 18:55 22 2019-05-10 18:33 37 2019-06-10 18:32:56 2019-04-10 18:32:56 2019-04-10 18:32 56 2019-04-10 18:31 47 2019-06-10 17:32 56 2019-04-10 17:32 56 2019-04-10 10:32 67	164(1011 20#1969 123/v0187 ###1009 2#2859 00640710 40527101 591189 65/v0710 11321911 ###41111	Visitor Visitor Visitor Visitor Visitor Visitor Visitor Visitor Visitor Visitor Visitor Visitor Visitor Visitor Visitor	Detail	License Piale: Start Time: 2019-08-23 00 00 00 End Time: 2019-09-23 23 25 05 00 Bearth Log Export Auto Export	

**Step1:** The detect results in real time will be displayed on the right side of Logs page, including detected time, live screenshot, and license plate.

**Note:** Only 10 logs are visible on the right side.



Step2: Select Plate Type or directly enter the license plate number, select Start Time and End Time, click the "Search" button, the corresponding license plate will be displayed in the list below.Note: It supports displaying 10,000 logs.

Time	License Plate	Plate Type		Log Search	
2019-09-10 19:09:55	65나1921	Visitor	^	Plate Type:	
2019-09-10 19:09:52	11타9216	Visitor		All	-
2019-09-10 19:09:48	657 1921	Visitor		License Plate:	
2019-09-10 19:09:38	16년 1011	Visitor		Election rate.	-
2019-09-10 18:51:22	20#1999	Visitor	Detail	Start Time:	
2019-09-10 18:50:52	12누0197	Visitor		2019-08-23 00:00:00	
2019-09-10 18:33:37	###1009	Visitor		End Time:	
2019-09-10 18:32:59	2#2850	Visitor		2010 00 22 22 50 50	_
2019-09-10 18:32:27	056#0710	Visitor		2019-09-23 23.59.59	
2019-09-10 18:32:26	40모7101	Visitor		Search	
2019-09-10 18:31:56	5#1189	Visitor			
2019-09-10 18:31:47	05누0710	Visitor		Log Export	
2019-09-10 17:28:59	11고1911	Visitor			
2019-09-10 06:38:07	##저1111	Visitor			-
2019-09-10 03:15:16	0서2195	Visitor		Auto Export	
2019-09-10 03:13:41	##도7072	Visitor	~		

Step3: Click the "Detail" button on the right of each log to display license plate details as shown

below.

Time <sup>.</sup>	License Plate	Plate Type:	ROL ID.
2019-09-10 18:50:52	12누0197	Visitor	1
Direction:	Vehicle Speed:		
Approach	1941		

Step4: Click the "Log Export" button to export the license plate in the current list to a csv form locally.

You can also click the "Auto Export" button to automatically export the log to FTP, SMTP or Storage.

Enable Auto Export Logs:	$\checkmark$	
Day:	Everyday V	
Time:	00:00:00	
Export Time Range:	Ali	
Export to:	ETP SMTP Sto	rade

**END**