



6SS EDGE LPR

Tattile Integration Guide



6SS

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1. INTRODUCTION

This document is intended to provide a full installation guide of Tattile Vega Smart Camera and its integration with Milestone XProtect. Tattile Vega Smart Camera is an ANPR camera used for free flow tolling, traffic monitoring and security. In this integration we are getting the streams directly from Tattile camera, saving the data into the database and displaying LPR results in Milestone XProtect Smart Client.

Tattile LPR Main Features

- Fully integrated with All Milestone XProtect versions
- Accessed from the Smart Client interface
- Fully integrated with Maps
- Parallel handling and processing of unlimited camera inputs
- Color coding for faster search
- Compatible with any image source: analog, digital, still images and MPEG video streams
- Filter through LPR history based on various criteria
- Flexible search functionality by from-to date, plate number, country and license type
- List of all captured plate numbers including plate type, color, country, state, confidence level, image, camera name and date.
- Option to view a playback video for the period when the plate number was detected
- Scheduled reports on a daily, weekly or monthly basis
- Customizable dashboards and statistics
- Alarming capabilities (Email, SMS)
- Regular expression alerting
- Configurable actions in case of license plate recognition
- Option to save the license plate as Blacklisted or Whitelisted
- Can read the blacklisted file in various formats (DB Table, Excel or CSV)
- Hotlist alarming capabilities
- One click data export in Excel format
- Automatic data retention period handling
- Easy installation and operation
- Customizable upon request

2. GETTING STARTED

2.1. System Requirements

- Windows OS 8.1 or above
- SQL Server 2012 SP1 or above
- Tattile Configuration Application 3.4.0 or above
- Milestone XProtect Management Client (2016 or above)
- Milestone XProtect Smart Client (2016 or above)

2.2. System Introduction

The server part of the system consists of 2 main components: Management and LPR servers. Each LPR system contains only one Management server, and one or more LPR servers, depending on the project size and the system's distributed architecture. Both processes can be installed and ran on the same server, but each with its own configuration. The machine has to be licensed first before doing anything on the LPR system after the installation.

Below is a figure describing the architecture of the system.

3. TATTILE LPR CONFIGURATION & INSTALLATION

3.1. SQL Server Configuration

The configuration for the 6SS LPR database needs to be done on the server where Microsoft SQL server is installed.

3.1.1. Database Creation

Double click the given SQL script in order to create Tattile Database and click the execute button to run the query.

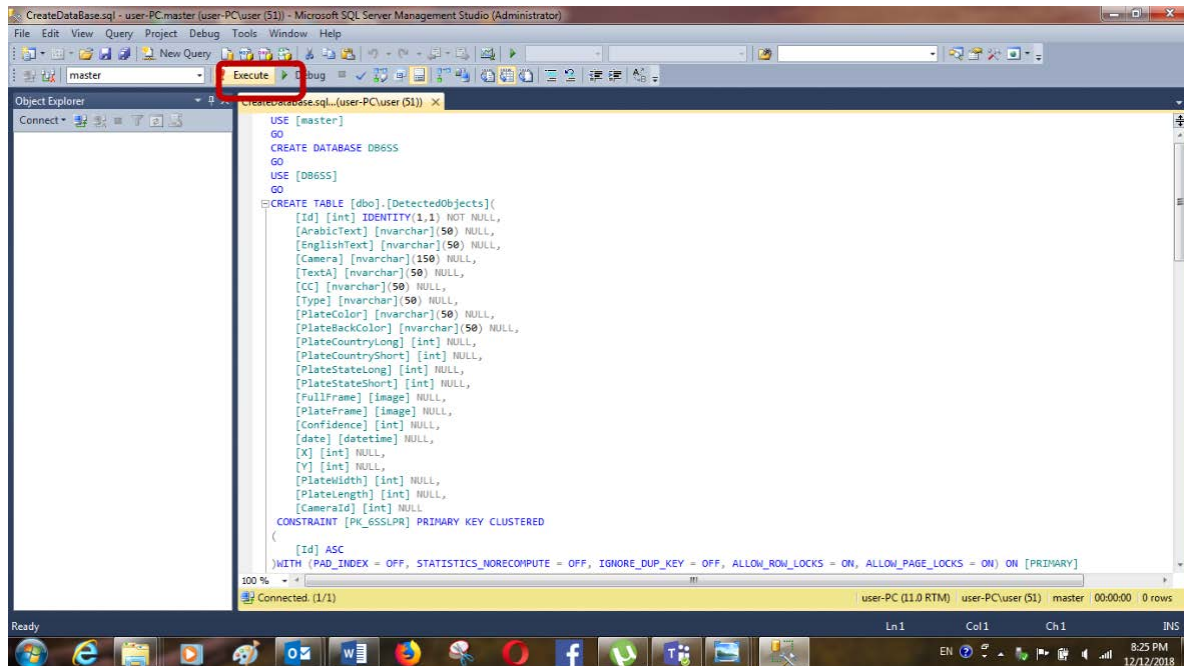


FIGURE 1: CREATE 6SS DATABASE USING SQL QUERY

Tattile database is created and appears in SQL server as shown below:

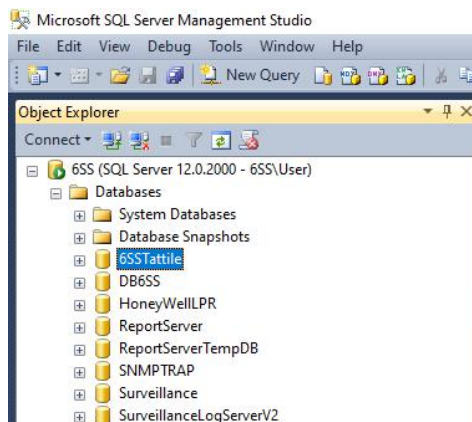


FIGURE 2: DATABASE CREATED

3.2. Tattile Configuration

3.2.1. Tattile Configuration Settings

In this application, all the camera devices needed for LPR streaming are defined here by entering the devices' IP address and 31000 as port number. All the added devices will be displayed in the Device list.

For the integration to work properly, it is crucial to specify the Server IP address that is responsible for receiving the data from the camera along with port number 32000.

After clicking the **Connect** button, the camera devices will stream back to the targeted server and the data will be stored in the SQL Server Database.

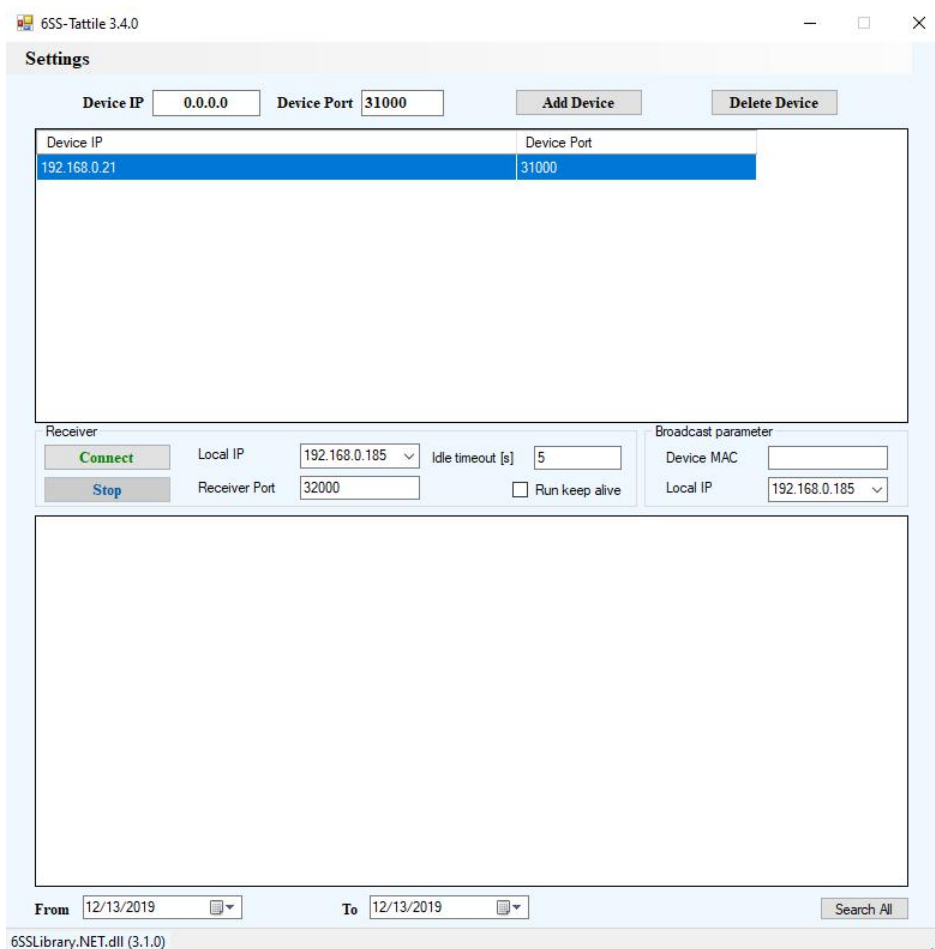


FIGURE 3: TATTILE CONFIGURATION SETTINGS

3.3. Tattile LPR Plugin

3.3.1. Setup Wizard

Unzip the Release folder and open to run the setup wizard for the LPR plugin.

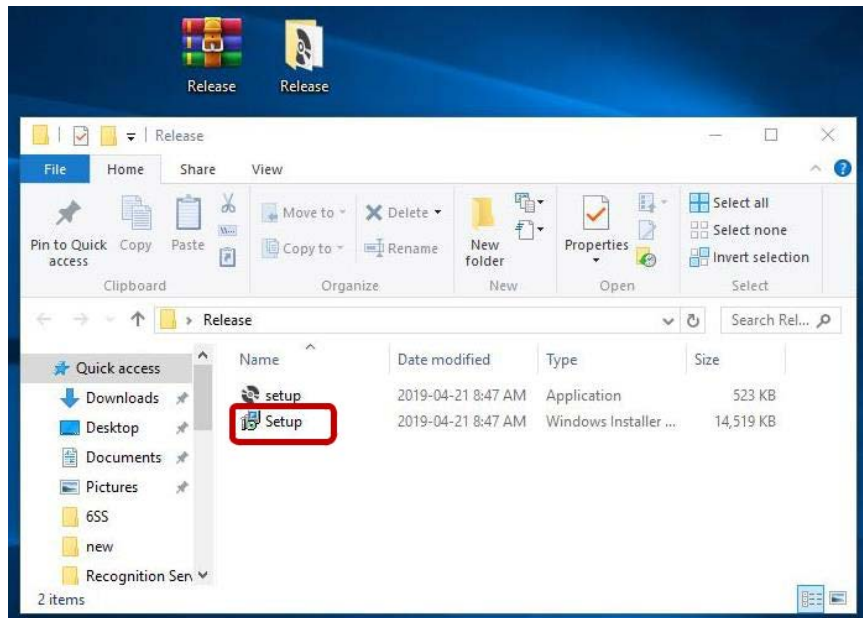


FIGURE 4: LPR PLUGIN SETUP FOLDER

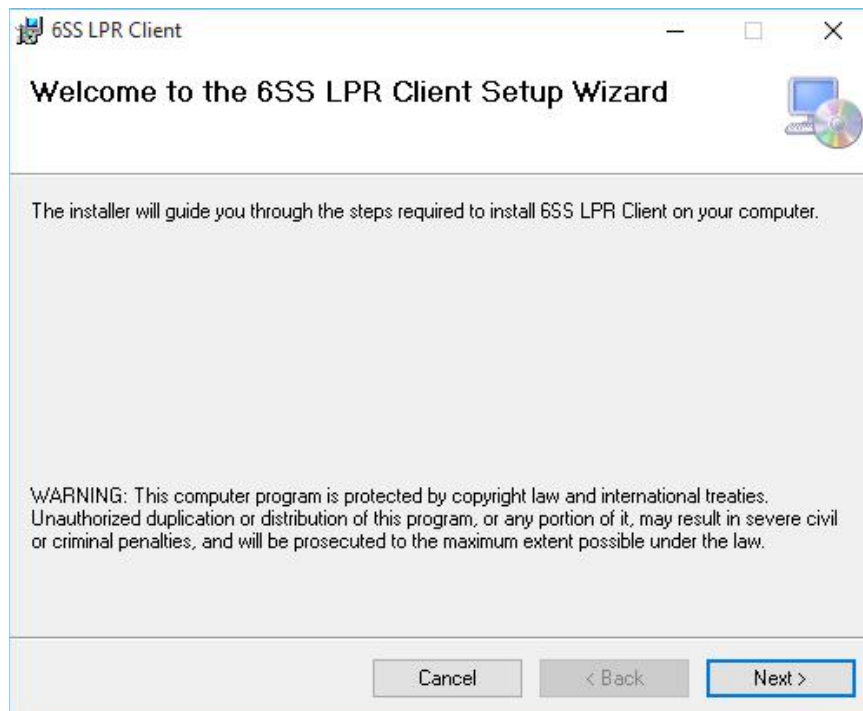


FIGURE 5: LPR SETUP WIZARD

Choose the path to where the LPR plugin folder will be created as shown in **Figure 7**. Click next to continue and the setup will be installed as shown in **Figure 8**.

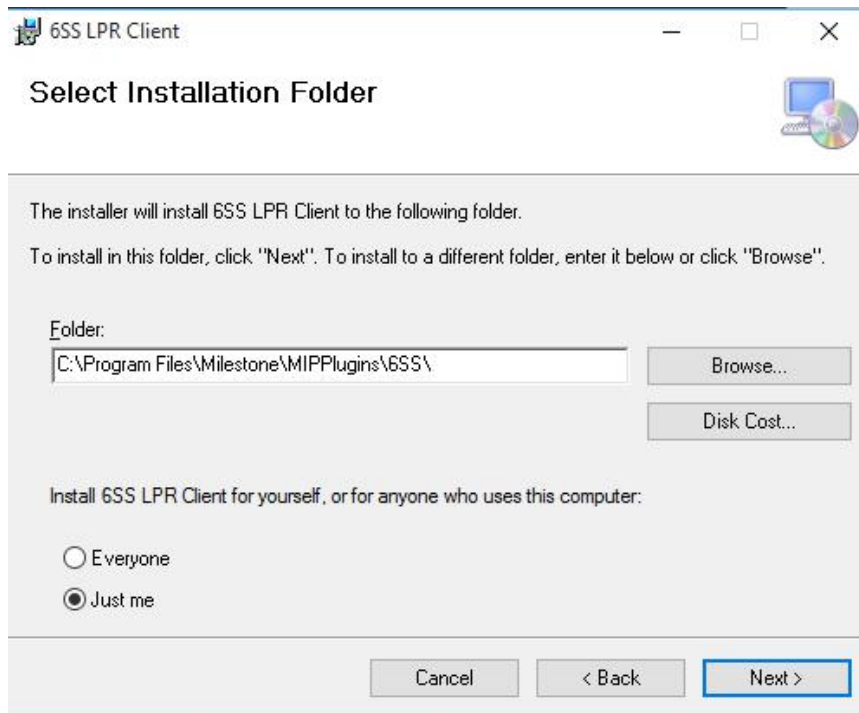


FIGURE 6: 6SS LPR CLIENT INSTALLATION FOLDER

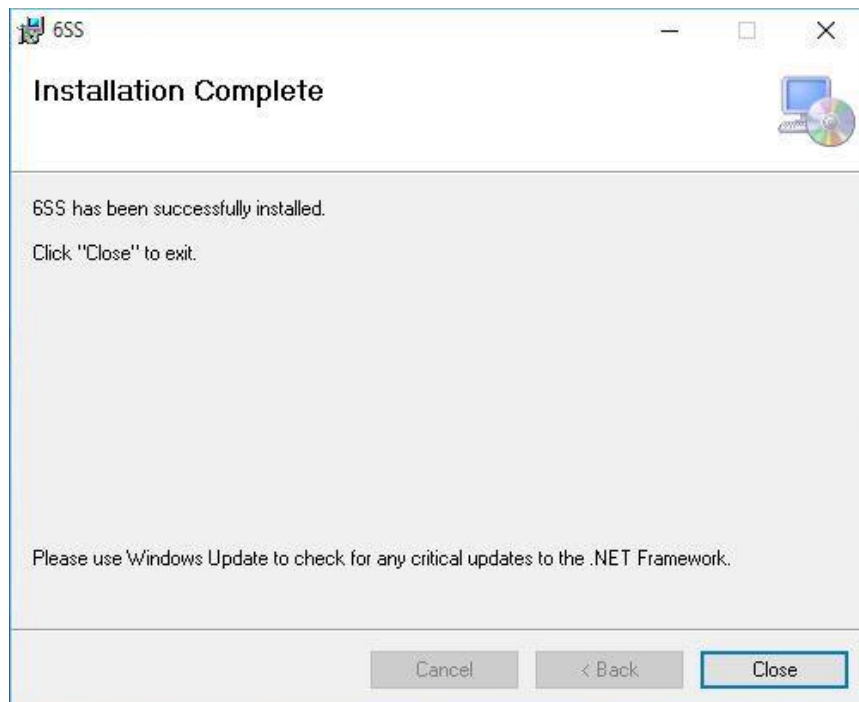


FIGURE 7: 6SS LPR CLIENT INSTALLATION SETUP

3.3.2. Smart Client Interface

Once the installation completes, navigate to Milestone XProtect Smart Client, click connect after entering your credentials and specify the SQL server host name or IP address for first time use only.

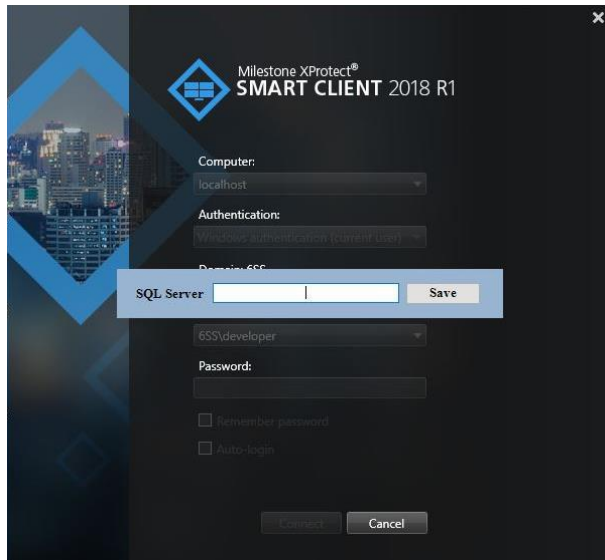


FIGURE 8: SQL SERVER NAME

Once connected click on **Setup** button, create a view and drag and drop “Live LPR” under **System Overview**, as shown in **Figure 10**, into the created view.

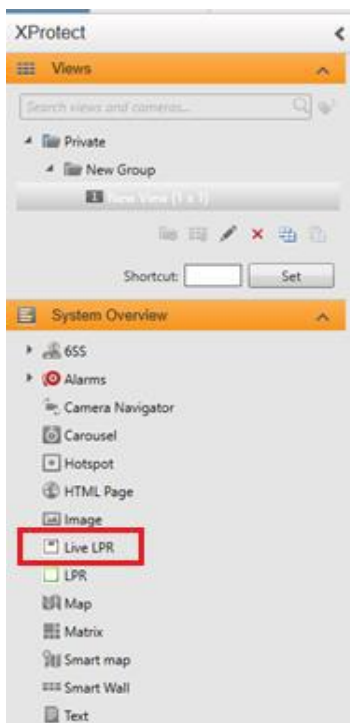


FIGURE 9: ADD THE PLUGIN

Click again on **Setup** to view the Live plugin by selecting a camera using the button “Select Camera” in the bottom right corner. The button will be renamed by the camera’s name. Each captured plate number by the specified camera will be shown in the right panel.

Note that in **Figure 11**, External LPR/Campus LPR list is added that allows the user to select the LPR source if there is integration with other than Tattile camera for example ARH.

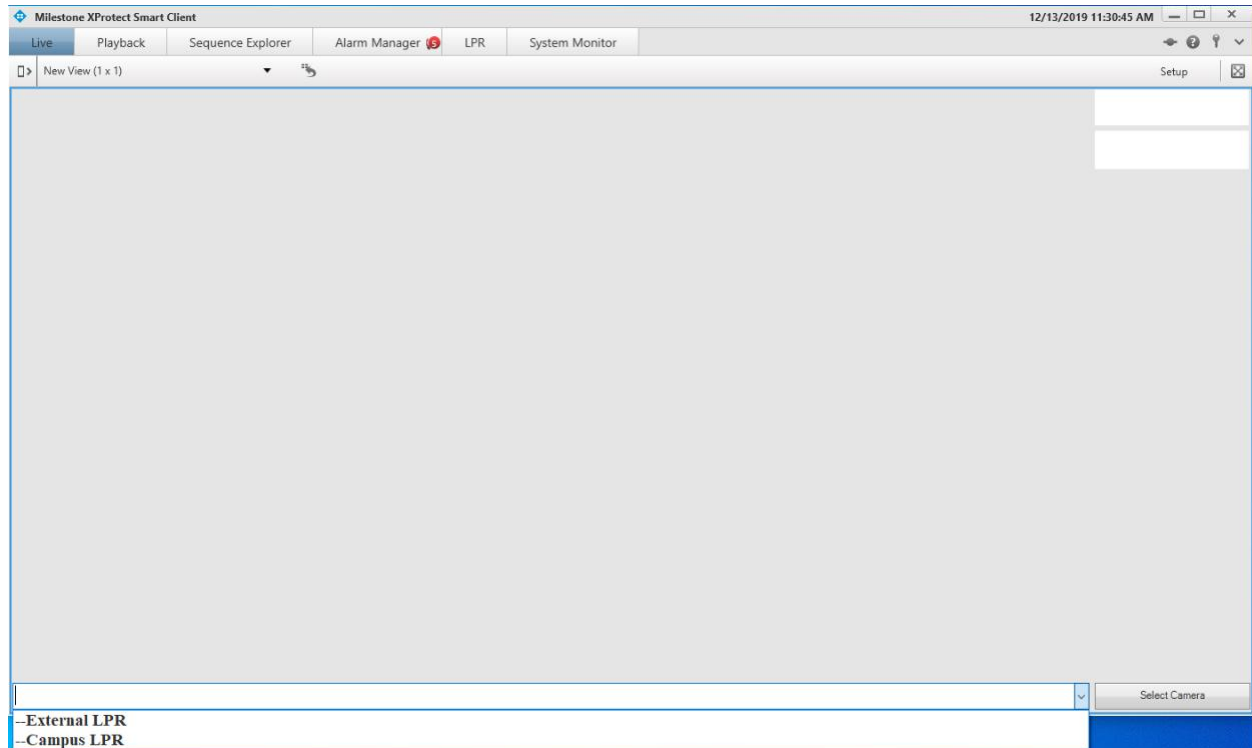


FIGURE 10: VIEW LIVE PLUGIN

After installing the LPR plugin setup you will notice that an additional tab named “LPR” has been added next to the **Alarm Manager** tab. In this tab you can easily find the list of all captured plate numbers with its related information based on the specified LPR source and the chosen camera (Tattile/ARH).

Use the filters in the right panel to filter the LPR list as convenient and click on “Refresh” button to update the LPR table. You can anytime generate an excel file (**Figure 14**) and a pdf document (**Figure 15**) for your evidence proof or later investigation.

Milestone XProtect Smart Client 12/13/2019 11:31:50 AM

Live Playback Sequence Explorer Alarm Manager **LPR** System Monitor

External LPR History Campus LPR History

Date	Time	Plate	Country	Plate Region	Plate Color	Vehicle Brand	Plate Color	Vehicle Color	OCR Score	PLATE COUNTRY	GPS Speed	Sp
12/11/2019	00:00:00	C54150		KK			WHITE			ARE		
12/11/2019	00:00:00	C54150		KK			WHITE			ARE		
12/11/2019	00:00:00	C54150		KK			WHITE			ARE		
12/11/2019	00:00:00	C54150		KK			WHITE			ARE		
12/11/2019	00:00:00	C54150		KK			UNKNOWN			ARE		
12/11/2019	00:00:00	C54150		AZ			UNKNOWN			ARE		
12/11/2019	00:00:00	C54150		KK			WHITE			ARE		
12/11/2019	00:00:00	C54150		KK			WHITE			ARE		
12/11/2019	00:00:00	C54150		KK			WHITE			ARE		
12/11/2019	00:00:00	C54150		KK			WHITE			ARE		
12/11/2019	00:00:00	C54150		KK			WHITE			ARE		
12/11/2019	00:00:00	C54150		KK			WHITE			ARE		
12/11/2019	00:00:00	C54150		KK			WHITE			ARE		
12/11/2019	00:00:00	C54150		KK			WHITE			ARE		
12/11/2019	00:00:00	C54150		KK			WHITE			ARE		
12/11/2019	00:00:00	C54150		KK			WHITE			ARE		
12/11/2019	00:00:00	C54150		KK			WHITE			ARE		
12/11/2019	00:00:00	C54150		KK			WHITE			ARE		
12/11/2019	00:00:00	C54150		KK			WHITE			ARE		
12/11/2019	00:00:00	C54150		KK			WHITE			ARE		
12/11/2019	00:00:00	C54150		KK			WHITE			ARE		
12/11/2019	00:00:00	C54150		KK			WHITE			ARE		

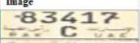
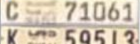
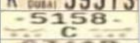
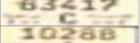
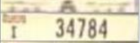
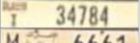
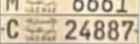
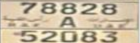
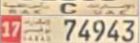
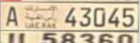
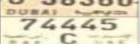
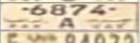
Country: [Dropdown] Text: [Text]
 State: [Dropdown] Color: [Dropdown]
 Confidence(>=): 0 [Slider]
 Type: [Dropdown]
 Camera: [Dropdown]
 From: 12/13/2019 00:00:00 [Calendar]
 Till: 12/13/2019 23:59:59 [Calendar]
 Refresh Excel PDF

FIGURE 11: EXTERNAL (TATTILE) LPR HISTORY

Milestone XProtect Smart Client 12/13/2019 11:32:54 AM

Live Playback Sequence Explorer Alarm Manager **LPR** System Monitor

External LPR History Campus LPR History

Camera	Type	Plate Number	Country	State	Confidence	Date	Plate Color	Image
DirectShow Virtual Video Server (0.0.0.1) - Camera 2	C	83417 C	United_Arab_Emirates	RAK	62	12/6/2019 2:34 PM	WHITE	
DirectShow Virtual Video Server (0.0.0.1) - Camera 2	C	C 71061	United_Arab_Emirates	RAK	45	12/6/2019 2:34 PM	WHITE	
DirectShow Virtual Video Server (0.0.0.1) - Camera 2	K	K 59513	United_Arab_Emirates	Dubai	66	12/6/2019 2:34 PM	WHITE	
DirectShow Virtual Video Server (0.0.0.1) - Camera 2	C	5158 C	United_Arab_Emirates	RAK	54	12/6/2019 2:34 PM	WHITE	
DirectShow Virtual Video Server (0.0.0.1) - Camera 2	C	63417 C	United_Arab_Emirates	RAK	20	12/6/2019 2:34 PM	WHITE	
DirectShow Virtual Video Server (0.0.0.1) - Camera 2	A	10288 A	United_Arab_Emirates	RAK	14	12/6/2019 2:34 PM	WHITE	
DirectShow Virtual Video Server (0.0.0.1) - Camera 2	I	134784	United_Arab_Emirates		50	12/5/2019 6:22 PM	WHITE	
DirectShow Virtual Video Server (0.0.0.1) - Camera 2	T	T 34784	United_Arab_Emirates		26	12/5/2019 6:22 PM	WHITE	
DirectShow Virtual Video Server (0.0.0.1) - Camera 2	M	M 6661	United_Arab_Emirates	RAK	72	12/5/2019 6:22 PM	WHITE	
DirectShow Virtual Video Server (0.0.0.1) - Camera 2	C	C 24887	United_Arab_Emirates	RAK	78	12/5/2019 6:22 PM	WHITE	
DirectShow Virtual Video Server (0.0.0.1) - Camera 2	A	78828 A	United_Arab_Emirates	RAK	75	12/5/2019 6:22 PM	WHITE	
DirectShow Virtual Video Server (0.0.0.1) - Camera 2	C	52083 C	United_Arab_Emirates	RAK	66	12/5/2019 6:22 PM	WHITE	
DirectShow Virtual Video Server (0.0.0.1) - Camera 2	17	17 74943	United_Arab_Emirates	Abu Dhabi	33	12/5/2019 6:22 PM	WHITE	
DirectShow Virtual Video Server (0.0.0.1) - Camera 2	A	A 43045	United_Arab_Emirates	RAK	81	12/5/2019 6:22 PM	WHITE	
DirectShow Virtual Video Server (0.0.0.1) - Camera 2	U	U 58360	United_Arab_Emirates	Dubai	63	12/5/2019 6:22 PM	WHITE	
DirectShow Virtual Video Server (0.0.0.1) - Camera 2	C	74445 C	United_Arab_Emirates	RAK	63	12/5/2019 6:22 PM	WHITE	
DirectShow Virtual Video Server (0.0.0.1) - Camera 2	A	6874 A	United_Arab_Emirates	RAK	56	12/5/2019 6:22 PM	WHITE	
DirectShow Virtual Video Server (0.0.0.1) - Camera 2	E	E 84973	United_Arab_Emirates	Dubai	23	12/5/2019 6:22 PM	WHITE	

Country: [Dropdown] Text: [Text]
 State: [Dropdown] Color: [Dropdown]
 Confidence(>=): 0 [Slider]
 Type: [Dropdown]
 Camera: [Dropdown]
 From: 11/13/2019 [Calendar]
 Till: 12/13/2019 [Calendar]
 Refresh Excel PDF

FIGURE 12: CAMPUS (ARH) LPR HISTORY

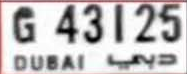
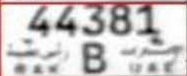
M9								
	A	B	C	D	E	F	G	I
1	6SS LPR							
2				From	2019-06-06			
3				Till	2019-06-07			
4								
5	Camera	Plate Number	Country	State	Confidence	Date	Plate Color	Image
6	DirectShow Virtual Video Server (0.0.0.1) - Camera 1	288297	United_Arab_Emirates	SHJ	82	2019-06-06 15:14	WHITE	
7	DirectShow Virtual Video Server (0.0.0.1) - Camera 1	P38794	United_Arab_Emirates	Dubai	61	2019-06-06 15:14	WHITE	
8	DirectShow Virtual Video Server (0.0.0.1) - Camera 1	N30197	United_Arab_Emirates	Dubai	76	2019-06-06 15:13	WHITE	
9	DirectShow Virtual Video Server (0.0.0.1) - Camera 1	A41786	United_Arab_Emirates	RAK	78	2019-06-06 15:13	WHITE	
10	DirectShow Virtual Video Server (0.0.0.1) - Camera 1	G43125	United_Arab_Emirates	Dubai	80	2019-06-06 15:13	WHITE	
11	DirectShow Virtual Video Server (0.0.0.1) - Camera 1	44381B	United_Arab_Emirates	RAK	71	2019-06-06 15:13	WHITE	

FIGURE 13: LPR EXCEL FILE

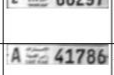
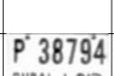
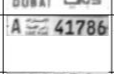
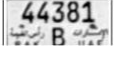
6SS LPR Report From 2019-08-07 12:00:00 AM To 2019-08-07 11:59:59 PM									
Camera	Plate Number	State	Confidence	Date	Plate Color	Id	Image	Type	Country
DirectShow Virtual Video Server (0.0.0.1) - Camera 1	G43125	Dubai	78	2019-08-07 10:32:20 AM	WHITE	86990		G	United_Arab_Emirates
DirectShow Virtual Video Server (0.0.0.1) - Camera 1	288297	SHJ	80	2019-08-07 10:32:19 AM	WHITE	86987			United_Arab_Emirates
DirectShow Virtual Video Server (0.0.0.1) - Camera 1	A41786	RAK	76	2019-08-07 10:32:13 AM	WHITE	86977		A	United_Arab_Emirates
DirectShow Virtual Video Server (0.0.0.1) - Camera 1	44381B	RAK	78	2019-08-07 10:32:13 AM	WHITE	86976		B	United_Arab_Emirates
DirectShow Virtual Video Server (0.0.0.1) - Camera 1	N30197	Dubai	78	2019-08-07 10:31:55 AM	WHITE	86972		N	United_Arab_Emirates
DirectShow Virtual Video Server (0.0.0.1) - Camera 1	G43125	Dubai	78	2019-08-07 10:31:53 AM	WHITE	86969		G	United_Arab_Emirates
DirectShow Virtual Video Server (0.0.0.1) - Camera 1	288297	SHJ	82	2019-08-07 10:31:52 AM	WHITE	86964			United_Arab_Emirates
DirectShow Virtual Video Server (0.0.0.1) - Camera 1	P38794	Dubai	74	2019-08-07 10:31:51 AM	WHITE	86962		P	United_Arab_Emirates
DirectShow Virtual Video Server (0.0.0.1) - Camera 1	A41786	RAK	76	2019-08-07 10:31:46 AM	WHITE	86955		A	United_Arab_Emirates
DirectShow Virtual Video Server (0.0.0.1) - Camera 1	44381B	RAK	75	2019-08-07 10:31:45 AM	WHITE	86954		B	United_Arab_Emirates

FIGURE 14: LPR PDF FILE

3.3.3. Management Client Interface

Open Milestone XProtect Management Client, click connect after entering your credentials and navigate to MIP Plug-ins- LPR- LPR under **Site Navigation**.



The LPR Hotlist is mainly used to alert users when a specific plate number is detected by the camera. Specify the plate number, plate type (blacklisted or whitelisted), status (enabled/disabled), and the event/action that may be attached to this plate number as shown in the below figure. Click **Update Status** if you need to change the Alarm Status and click **Delete Alert** button to delete the Alert from the list.

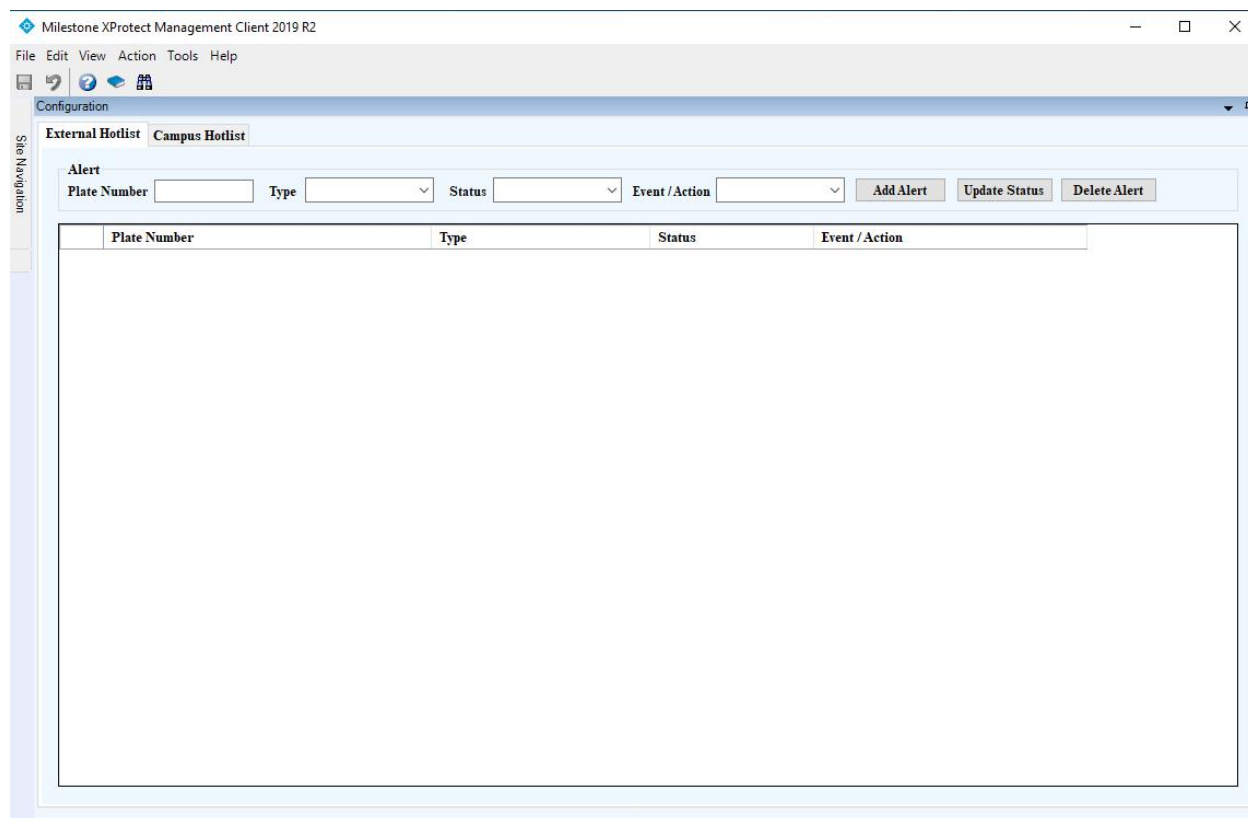


FIGURE 15: EXTERNAL (TATTILE) HOTLIST

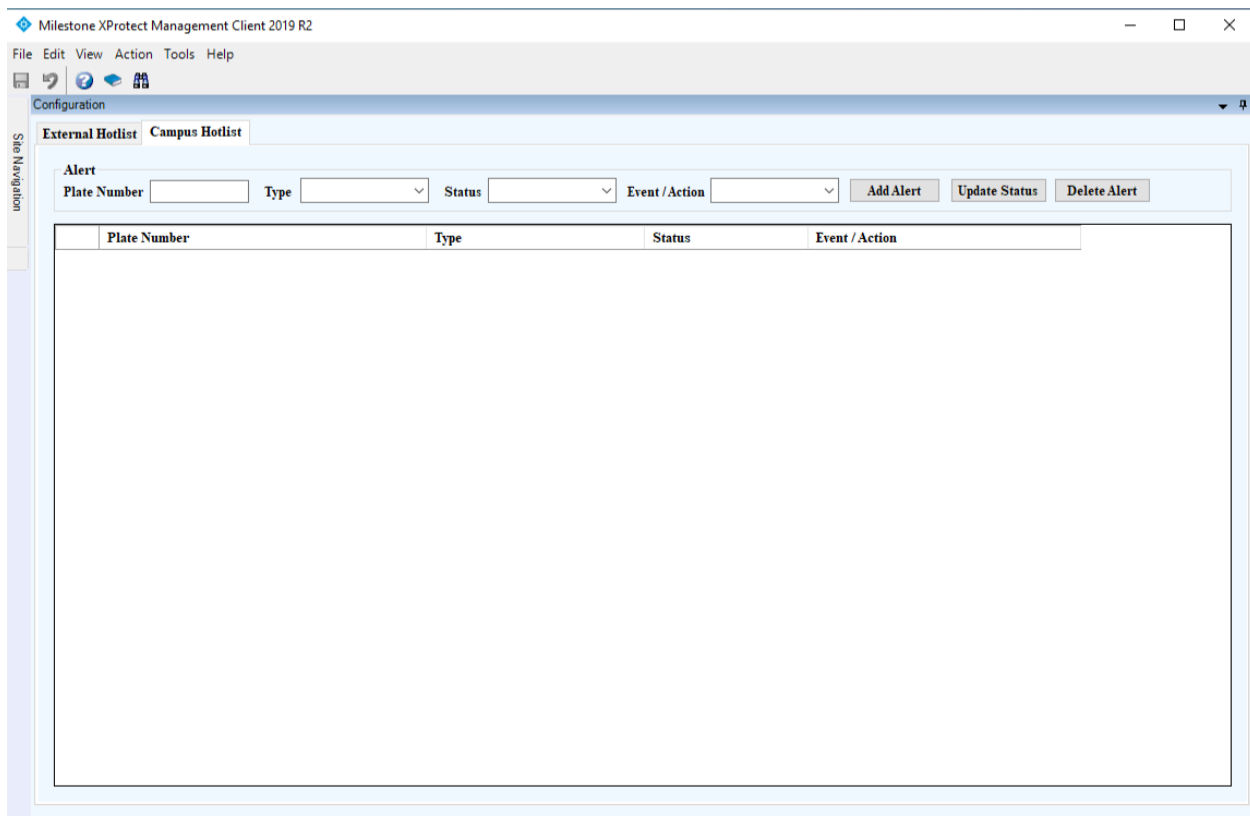


FIGURE 16: EXTERNAL (ARH) HOTLIST