

Security Management System Configuring Vehiscan LPR Solution Interface

Introduction

Security Management System software is a true open platform VMS software solution. It provides interface for integration with several cameras, encoders, DVRs, video sources, CCTV keyboards, access control systems, building management systems, fire alarm systems, fence control systems, PLCs, 3rd party video analytics solutions, 3rd party face recognition solutions, 3rd party license plate recognition systems etc.

This document describes the steps to configure the integration between 'Security Management System server' software and 'Vehiscan license plate recognition' solution.



Integrated System design

The integrated system works as follows -



- 1. 'Vehiscan ALPR software' is installed on a separate computer. It captures video from the video camera independently.
- 2. 'Security Management System server' software is installed on a separate computer. The video camera is added to 'Security Management System server' software as a normal video source. 'Security Management System server' software communicates with the video camera independently.
- 3. 'Security Management System server' software installer includes 'SMS Integration Application'. This application runs on same computer where 'Security Management System server' software is running.
- 4. The 'SMS Integration Application' communicates with the 'Vehiscan ALPR software' through network
- 5. 'Security Management System server' software communicates with the 'SMS Integration Application'

Note – Network1 and Network2 can be separate networks or can be a part of a single network.

Important – Please refer to 'Vehiscan ALPR software' manual for hardware recommendations, and ensure that requirements are met by 'Computer 2' used in this system.



Configuring 'Security Management System server' software

- 1. Execute 'Security Management System Server' software.
- 2. Add required cameras to 'Security Management System Server' software. One of these cameras should be the Vehiscan IP camera used for 'License Plate Detection'. It is the same camera which is accessed by the Vehiscan software independently.
- 3. Navigate to the 'License Plate Recognition -> LPR Modules' page from the left-hand side navigation menu.

:hGate_Main					C
eo devices		ی 😸			6
lio devices	Sr No.	Module ID	Module Name	Associated Video Channel	
vice groups					
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m management					
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PR Modules					
r interface settings					

4. Click on the 'Add LPR module...' button. This will pop-up the 'Add New LPR Module' dialog box.

(3)	A	Add New LPR Module	×
	Module Name:	LR001	
	Module ID:	LR_ 001	
	Video Channel:	Cam453	¥
		0	



- 5. Provide the required inputs on the 'Add New LPR Module' dialog box.
 - (a) 'Module Name' must be same as 'Camera Name' provided in Vehiscan LPR Solution.
 - (b) 'Module ID' is unique string which is internally used by the 'Security Management System server' software.
 - (c) Please select 'Video Channel' which is same Vehiscan IP camera used by with 'Camera Name' provided as module name.
- 6. Click on the 'OK' button to finish adding the LPR module
- 7. The newly added LPR module will be then displayed in list of the LPR Modules

192.168.0.64	License Pla	te Recognition → L	PR Modules		
SouthGate_Main					0
Security devices		2 😣			1
Keyboards and Joysticks	Sr No.	Module ID	Module Name	Associated Video Channel	
Users and Privileges	1	LR_001	LR001	Cam453	
Alarm management					
Data management					
Remote backup					
Tasks					
Linked servers					
Server settings					
Video panorama					
Under Vehicle Surveillance					_
Tasks					
Linked servers					_
Server settings					
Video panorama					
Under Vehicle Surveillance					_
Face Recognition					
License Plate Recognition					
LPR Modules					
LR001					
User interface settings	·				
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8. A separate link will be available for each of the added LPR modules. Clicking in the link will show the information about the LPR module, the video of the associated video channel. Video from the associated video channel will also be displayed on this page. If required, the associated video channel can be changed.



192.168.0.64	License Plate Reco	gnition \rightarrow LPR Modules \rightarrow LR001	
SouthGate_Main	Module ID:		
Keyboards and Joysticks	Module ID:	LR_001	
Users and Privileges	Module Name:	LR001	
Alarm management			
Data management			
Remote backup			Primary video channel
Tasks			- Video Channel
Linked servers			Primary: Cam455 V
Server settings			
Video panorama			
Under Vehicle Surveillance			
Face Recognition			
Tasks			
Linked servers			
Server settings			
Video panorama			
Under Vehicle Surveillance			
Face Recognition			
License Plate Recognition			
LPR Modules			
▶ LR001			
User interface settings			
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Configuring 'SMS Integration Interface' Application

 Execute 'SMS Integration Interface 2' application from the programs menu shortcut 'Security Management System -> Server -> Extension Apps -> SMS Integration Interface 2'

0	S	MS Intergration	n Interface 2		-	□ ×
SMS Servers LPR Processors ATM/POS Processors	SMS Serve	ers 💽				
		Site ID	Site Name	Site IP Address	Username	Statu
Launch Watchdog	<					>
About						

- 2. Navigate to the 'SMS servers' page from the left-hand side navigation menu
- 3. Click on the 'Add new site' button to add a new 'Security Management System server'. This will pop up 'Add SMS server' dialog box



Ac	ld SMS Server
Connect using:	● IP Address ○ Name
Server IP Address:	192.168.0.64
Administrator Username:	admin
Administrator Password:	•••••
'Port forwarding' enablTCP Port 1: 5500	led at server RTSP Port(TCP): 1024
HTTP Port(TCP): 9900	RTP Port(UDP): 20000
	RTCP Port(UDP): 20001
	00

- 4. Type the IP address and port number of the 'Security Management System server' software.
 - (a) 'Security Management System server software' IP address is displayed at the top-left corner in the 'Security Management System server' software.
 - (b) Port number is always 5500

192.168.0.64	License Plat	te Recognition \rightarrow LPR M	lodules		
SouthGate_Main					\bigcirc
Audio devices	🙂 (🕗 😸			1
Device groups	Sr No.	Module ID	Module Name	Associated Video Channel	
Status	1	LR_001	LR001	Cam453	
Reports and Export					-
Communication					
Security devices					
Keyboards and Joysticks					
Users and Privileges					
Alarm management					
Data management					_
Remote backup					
Tasks					
Linked servers					_
Server settings					
Video panorama					_
Under Vehicle Surveillance					_
Face Recognition					
License Plate Recognition					
LPR Modules					
LR001					
User interface settings 🗸 🗸					
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5. Type the user name and its password to connect to the 'Security Management System server'. This user should have 'Administrator' privilege in the 'Security Management System server' software.

SMS Servers	LPR Proce	essors			
LPR Processors	6				
ATM/POS Processors		0			
		Processor N	Site Name	Site ID	Site Connecti
		11000000011111	Sice Hume	Sice ID	Dice connectim
Launch Watchdog					
About					

6. Navigate to the 'LPR Processors' page from the left-hand side navigation menu

7. Click on the 'Add' button to add a new LPR Processor. This will pop up 'Add LPR Processor' dialog box



	Add LPR Processor	×
LPR Processor Type		
LPR Processor Type:	Vehiscan 🗸	
LPR Processor Name:	VehiscanSolution	
- LPR Software Connection	n Parameters	
IP Address:	192 . 168 . 0 . 65	
HTTP Port:	80	
User Name:	admin	
Password:	•••••	
- Associated SMS Server L	DD Darametera	
Associated SMS Server L	PRParameters	
SMS Server:	SounthGate_Main(192.168.0.64)	•
	0	

- 8. Provide the parameters
 - (a) Select 'LPR Processor Type' as 'Vehiscan'
 - (b) Provide valid 'LPR Processor Name'
 - (c) Under 'LPR Software Connection parameters', provide valid IP Address, port number, user name and password for Vehiscan LPR solution server.
 - (d) Select the target 'SMS server' from the dropdown menu.
- 9. Click on the 'OK' button to finish adding the LPR processor.
- 10. Click on LPR Processor name on left hand side navigation menu



(•)	SMS Intergra	ition Interface 2		×
SMS Servers	VehiscanSolution			_
LPR Processors	LPR Module Type:	Vehiscan		
VehiscanSolution	- LPR Software Conr	nection Parameters		
ATM/POS Processors	Name IP Address HTTP Port User Name Associated SMS Se SMS Server: IP Address:	SounthGate_Main(Device_645A04A3DF13)	•	
Launch Watchdog	LPR Logs	192.168.0.64		
About			9	
About				

- 11. 'LPR Logs' list will display recent communication between associated software modules.
- 12. If the software is being set up for deployment, please click on the 'Launch watchdog' button to start the watchdog application.



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SMS Servers	VehiscanSolution			
LPR Processors	LPR Module Type:	Vehiscan		
VehiscanSolution	- LPR Software Conn	ection Parameters		
ATM/POS Processors	Name IP Address HTTP Port User Name Associated SMS Ser SMS Server: IP Address:	Value 192.168.0.65 80 admin ver LPR Module SounthGate_Main(Device_645A04A3DF13) 192.168.0.64		
Launch Watchdog About			9	

A confirmation message box will be displayed. Click on the 'Yes' button to accept and to launch the watchdog application.

Once watchdog application is started, it will also get added to computer's start-up. Hence watchdog and the 'SMS Integration Interface 2' will start automatically after computer reboot.



License Plate Detection Monitor Screen

1. In 'Security Management System server' software, navigate to the 'License Plate Recognition -> LPR Modules' page from the left-hand side navigation menu.

192.168.0.64		te Recognition → L	PR Modules		
GouthGate_Main					
Audio devices		🖉 🥮			
Device groups	Sr No.	Module ID	Module Name	Associated Video Channel	
Status	1	LR_001	LR001	Cam455	
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Communication					
Security devices					
Keyboards and Joysticks					
Jsers and Privileges					
Narm management					
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Remote backup					
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LPR Modules					
LR001					
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- 2. Click on the 'View Monitor Screen' button to open the LPR monitoring screen.
- 3. The monitor screen has 3 tabs 'Monitor', 'Search' and 'Test Alarm'



Monitor tab



1. The 'Monitor' tab has following user interface elements -

- (a) Live video display: Which displays live video feeds for the associated LPR modules on the right side of the screen. The video toolbar can be used to control the video displays.
- (b) License Plate Detections: Which is available on the left side of the screen and displays the list of detected license plates. Right click on any of the detected license plate images and select 'LPR Event Details...' to view the 'details window' displaying larger size images and the details about the license plate.
- 2. 'License Plate Detections' list will be refreshed real-time and display the latest detections.
- 3. To view earlier alarms from these lists, please click on the 'Freeze' button available in the control toolbar below the lists. This will enable the page navigation in the list.



4. The real-time list refresh will get disabled while 'Freeze' is in action. Please click on the 'Unfreeze' button to returns to the real-time view mode.



Search Tab



1. The 'Search' tab has following user interface elements -

- (a) Search Parameters section: Which is available on the left hand side. Search parameters can be provides in this section and new search can be initiated.
 - i. Search Time Duration to specify the search time duration 'From' time to 'To' time
 - ii. License Plate Number It supports wild card search by typing * character as wild card search string. Typing * as search string returns all detected license plates in selected time duration.
 - iii. Vehicle Details Extra search parameters can be provided including type of vehicle and speed.
 - iv. LPR Modules it is possible to select one or more LPR modules which will be included in the search operation.
 - v. 'Search' button is available at the bottom of this section. Clicking on the 'Search' button performs the search operation and displays the search results
- (b) Search Results section: Which displays the search results, as a list.
 - i. Any of the search result can be clicked to view the recorded video associated with license plate detected.
 - ii. Page navigation buttons are available at the bottom of the search results list.
 - iii. Right click on search result and select 'LPR Event Details...' to view 'Details window' which displays larger size image and extra information about detected license plate.



Test Alarm tab

The 'test alarm' tab is not used during normal operations. It is used during configuration and fine tuning of the system, for generating test / dummy data.