

The PELCO logo is rendered in a bold, italicized, blue sans-serif font. A thin horizontal line is positioned directly beneath the text. The background of the top half of the slide features a pattern of light gray triangles of various sizes and orientations, creating a geometric, low-poly effect.

PELCO[™]

by **Schneider** Electric

VideoXpert Plates Product Introduction

Introducing VideoXpert Plates

VideoXpert Plates ALPR License Plate Recognition Software

PELCO VideoXpert Plates ALPR

Group 1
Context: Video:1920x1080 pixels Stream: 11 FPS / Display: 6 FPS
Plates Read: 53

03:12:34 AK66KM
03:12:54 LP6200R
03:13:05 CV65XUT
03:13:25 WM16VH
03:52:13 PL108NW
04:51:15 X1FJT
04:51:34 D7ULD
04:53:41 VK67UOU
04:54:19 L14CMLJ
04:55:59 EJ67MND
04:57:31 L18AFV
04:58:55 K854T0P
04:59:02 X6ZL9D
04:59:14 L467LLA
04:59:47 R837PAK
04:01:10 LM16G4X
04:02:21 LB11BHJ
04:03:21 AK18V5J
04:03:24 L765YKQ
04:05:18 B161BYBS
04:05:44 BK06MYB
04:07:02 WR11EFA
04:08:15 D7ULD
04:09:41 M458WCM
04:09:45 R45XG
04:14:23 Y80WALJ
04:14:33 EJ18NDH
03:14:59 LT64SCX

Latitude: ?
Longitude: ?
ALPR Camera ID: 1
Plate Number: LT64SCX
Country: GBR
Plate Category:
Global Confidence: 58.7 %
Character Height: 11.0 (px)
ROI ID: -1
Timestamp: 03:14:59
Multipass Rate: 3
OCR Time: 30.1 (ms)
Mode: Freeflow
Speed: -1.0 Km/h
Direction: Closer
Make:
Model:
Vehicle Color:

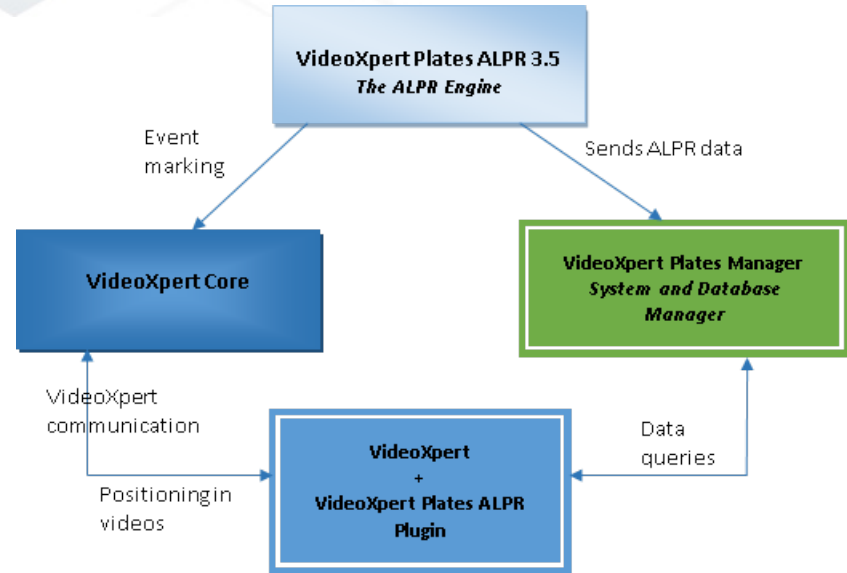
03:01:22 All ALPR camera processes are running

Display Time: 04:17:49
Software Update: 9 hours 15 min

- New video analytic product
- Software-only server-based license plate detection system
- Usable as:
 - Integral part of VideoXpert VMS installation
 - A stand alone ALPR
 - Integrated to a 3rd party VMS
- Detects, captures, and matches plates

What is included?

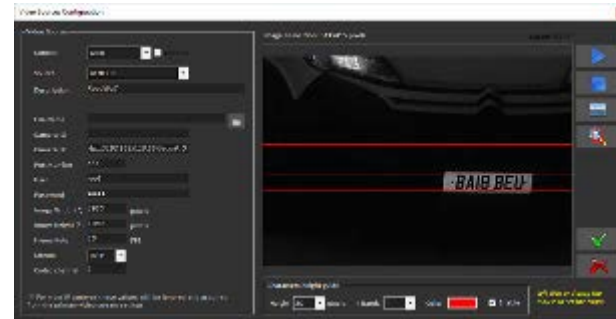
- **VideoXpert Plates ALPR**
 - Machine learning Optical Character Recognition (OCR) engine
- **VideoXpert Plates Manager**
 - Central management of license plate data
 - Two “size” options:
 - Professional (1M stored plates)
 - Enterprise (50M stored plates)
- **VideoXpert Plates Plugin**
 - Integrates Plates with OpCenter



VideoXpert Plates ALPR:

Highly accurate plate recognition and capture

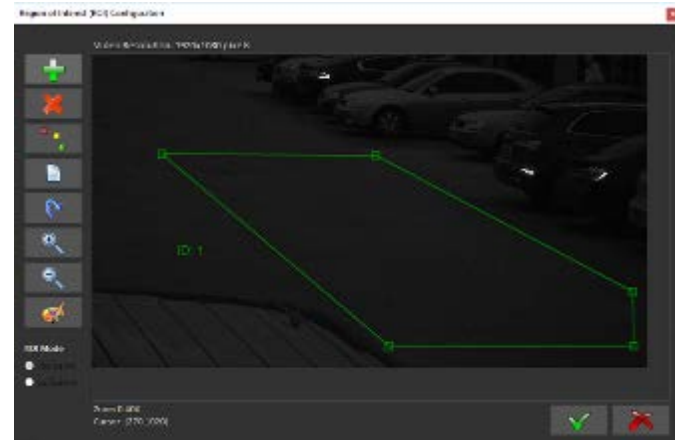
- Captures license plates from vehicles moving up to 150 mph / 250 kph
- Captures rectangular and square plates with up to 3 lines of characters
 - Accepts any dark-on-light / light-on-dark color combinations
- Reconstructs images of damaged/broken plates using fuzzy logic matching
- Compensates for obscuring of plates by plate frame / plate carrier
- Single-, dual-, or multi-lane coverage from single camera
 - Single lane – 1280x720 min
 - Dual lane – 1920x1080 min
 - Four lane – 4K
- Reads plates in both directions
- Reads multiple plates on a single vehicle
 - Up to 8 plates per vehicle with a single camera



VideoXpert Plates ALPR:

Adaptable to your environment or application

- Country independent – based on simultaneous character reads of:
 - Multiple countries
 - Multiple US states, Canadian provinces
- Enhanced country/state syntax grammar filters to increase local capture accuracy while capturing all plates
 - Example: Determines if O is the letter O, or a Zero (0)
 - 8 countries simultaneously
 - 5 US states simultaneously, all Canadian provinces
- Character sets supported:
 - Arabic, Chinese, Hebrew, Korean, Latin (English), Thai
- Region of Interest zones
 - Multiple user-defined polygons
 - Focus plate reading to a specific area
 - Eliminate repeated captures of parked vehicles



VideoXpert Plates ALPR:

Increased situational awareness

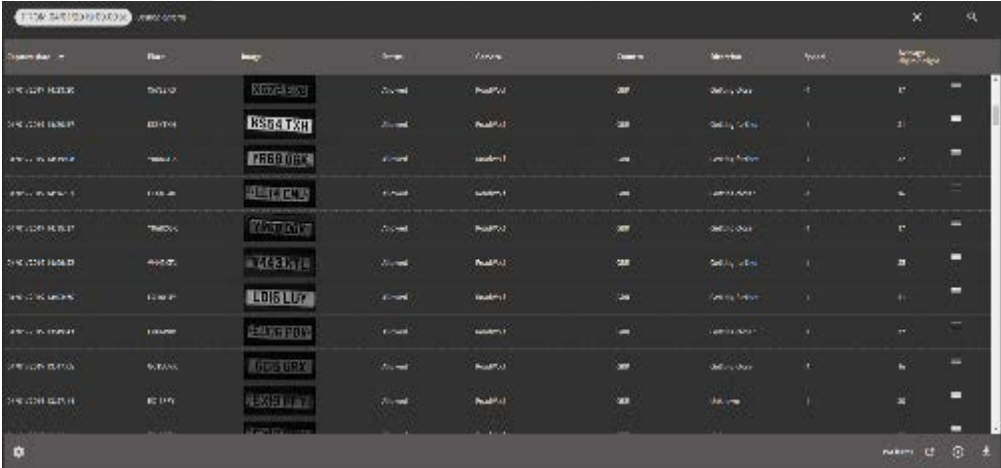
- Dual-camera support per camera ID
 - License plate and driver image capture
 - License plate and area overview
- Wrong way vehicle detection and event generation
- Free Flow or Trigger mode
- Camera compatibility
 - Designed for standard IP cameras using standard rolling shutter
 - Works for LPR cameras using global shutter
 - Recommended to use IR lighting to capture the plate



VideoXpert Plates Manager:

Powerful search

- Search based on:
 - Plate number
 - Time
 - Date
 - Camera
 - Zone
 - Country
 - Direction
 - Status
 - Coordinates
 - Alarms in real time



The screenshot displays a software interface for license plate management. At the top, there is a search bar containing the text '12345678901234567890'. Below the search bar is a table with the following columns: 'System Name', 'Plate', 'Image', 'Status', 'Camera', 'Zone', 'Direction', 'Status', 'Coordinates', and 'Image Path'. The table contains ten rows of data, each representing a license plate. The 'Image' column shows small thumbnail images of license plates with various alphanumeric characters. The 'Status' column shows 'Online' or 'Offline'. The 'Camera' column shows camera names like 'RoadCam1'. The 'Zone' column shows zone names like 'Zone1'. The 'Direction' column shows directions like 'North'. The 'Status' column shows 'Ready'. The 'Coordinates' column shows coordinates like '12.345678'. The 'Image Path' column shows file paths like 'C:\Images\12345678901234567890.jpg'. At the bottom of the interface, there are navigation icons and a 'Refresh' button.

System Name	Plate	Image	Status	Camera	Zone	Direction	Status	Coordinates	Image Path
ONE-ONE-ONE-ONE	123456	123456	Online	RoadCam1	Zone1	North	Ready	12.345678	C:\Images\12345678901234567890.jpg
ONE-ONE-ONE-ONE	123456	123456	Online	RoadCam1	Zone1	North	Ready	12.345678	C:\Images\12345678901234567890.jpg
ONE-ONE-ONE-ONE	123456	123456	Online	RoadCam1	Zone1	North	Ready	12.345678	C:\Images\12345678901234567890.jpg
ONE-ONE-ONE-ONE	123456	123456	Online	RoadCam1	Zone1	North	Ready	12.345678	C:\Images\12345678901234567890.jpg
ONE-ONE-ONE-ONE	123456	123456	Online	RoadCam1	Zone1	North	Ready	12.345678	C:\Images\12345678901234567890.jpg
ONE-ONE-ONE-ONE	123456	123456	Online	RoadCam1	Zone1	North	Ready	12.345678	C:\Images\12345678901234567890.jpg
ONE-ONE-ONE-ONE	123456	123456	Online	RoadCam1	Zone1	North	Ready	12.345678	C:\Images\12345678901234567890.jpg
ONE-ONE-ONE-ONE	123456	123456	Online	RoadCam1	Zone1	North	Ready	12.345678	C:\Images\12345678901234567890.jpg
ONE-ONE-ONE-ONE	123456	123456	Online	RoadCam1	Zone1	North	Ready	12.345678	C:\Images\12345678901234567890.jpg
ONE-ONE-ONE-ONE	123456	123456	Online	RoadCam1	Zone1	North	Ready	12.345678	C:\Images\12345678901234567890.jpg

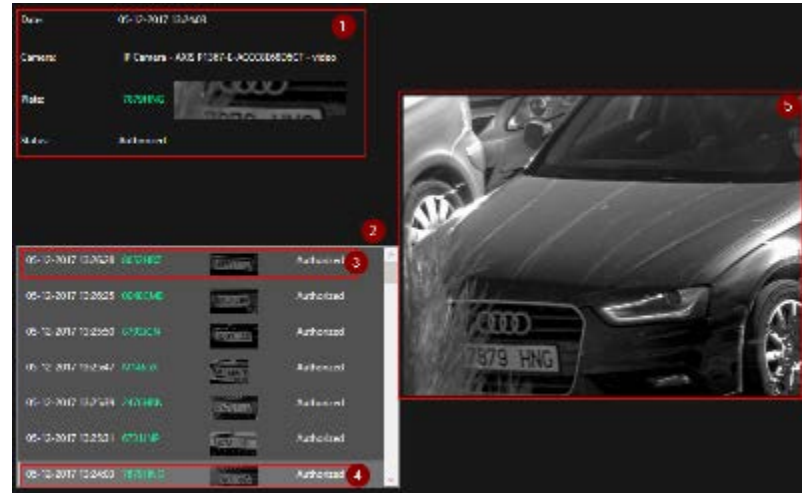
- Partial plate and wildcard character searches

- Stores all metadata and images with adjustable data retention times to meet local requirements

VideoXpert Plates Manager:

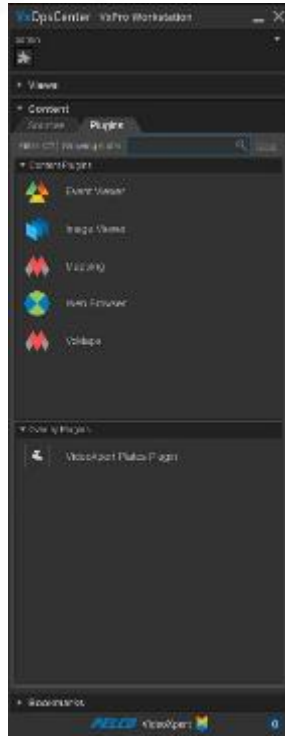
Vehicle classification

- Multiple user-defined vehicle classification and identification lists
 - White lists for VIPs, Customers
 - Black lists to flag scofflaws, “bad guys”
- Create authorized/unauthorized zones
 - Ideal for parking areas without gate control
 - Ideal for airports to manage multiple parking classifications
- Overtime in Area schedules
 - Define length of time a vehicle is permitted in a specific area
 - Generates an alert if vehicle exceeds this time
- On-screen display of license plate and associated driver for verification
- Alert notifications via:
 - VideoXpert VMS Event monitor
 - Email
 - Push notifications to multiple users with PushBullet (3rd party app)



VideoXpert Plates Plugin

Integrate with VideoXpert OpsCenter



- Displays video and captured plate information
- Manage blacklists and whitelists
- Search

Hardware Requirements:

All-in-One System

- Cameras per server are typical values, every situation is different
- Additional cameras require an additional camera-only server

VideoXpert Plates Server Requirements Example – Cameras / Server VideoXpert Plates ALPR + VideoXpert Plates Manager					
Approximate Maximum Vehicle Speed		Parking Stop & Go	30 Kph 20 Mph	100 Kph 60 Mph	*160 Kph 100 Mph
Camera Frames per Second (FPS)		2 fps	10 fps	20 fps	30 fps
Intel Core i5-4570TE (2.70-3.30) GHz	Single Lane	6	2		
	Two Lanes	4	2	-	-
Intel Core i7-7700T (2.90-3.80) GHz	Single Lane	20	12	6	3
	Two Lanes	20	12	6	-
Intel Core i7-8700K (3.70-4.70) GHz	Single Lane	40	30	20	10
	Two Lanes	40	18	10	5
Intel Core i9-9960X (3.10-4.40) GHz	Single Lane	120	90	60	30
	Two Lanes	120	58	30	15

Hardware Requirements: Distributed System

VideoXpert Plates Server Requirements Example – Cameras / Server VideoXpert Plates ALPR Only						
Approximate Maximum Vehicle Speed	Parking Stop & Go	30 Kph 20 Mph	100 Kph 60 Mph	160 kph 100 Mph	250 kph 150 mph	
Camera Frames per Second (FPS)	2 fps	10 fps	20 fps	30 fps	50 fps	
Intel Core i5-4570TE (2.70-3.30) GHz	Single Lane	12	4	4	-	-
	Two Lanes	8	4	2	-	-
Intel Core i7-7700T (2.90-3.80) GHz	Single Lane	24	16	8	4	-
	Two Lanes	24	16	8	-	-
Intel Core i7-8700K (3.70-4.70) GHz	Single Lane	48	36	24	12	6
	Two Lanes	48	24	12	6	3
Intel Core i9-9960X (3.10-4.40) GHz	Single Lane	128	96	64	32	16
	Two Lanes	128	64	32	16	8

- Cameras per server are typical values, every situation is different
- Separate VideoXpert Plates Manager

Server Requirements	VideoXpert Plates Professional	VideoXpert Plates Enterprise
Processor	Parking Applications: Intel Core i5-4570TE (2.70-3.30) GHz (4 Threads) or better	
	Roadways and other Applications: Intel Core i7-7700T (2.90-3.80) GHz (8 Thread) or better	
RAM	16 GB RAM +1 GB per camera	32 GB RAM +1 GB per camera
Min free Disk Space	4TB	16TB

Part Numbers

Part Number	Description
VXPL-PRO	VideoXpert Plates Professional – 1M Plate Reads
VXPL-ENT	VideoXpert Plates Enterprise – 50M Plate Reads
VXPL-1C	VideoXpert Plates Camera License
VXPL-PRO-SUP1	VideoXpert Plates Professional Software Upgrade
VXPL-ENT-SUP1	VideoXpert Plates Enterprise Software Upgrade
VXPL-1C-SUP1	VideoXpert Plates Camera License Software Upgrade

VideoXpert Plates

Auto. License Plate Recognition



- Detects, captures, and matches plates
- White lists and black lists
- Multi-camera operation allows capture of plate and driver, plate and overview
- Can capture plates from nearly any country/US state
- Can differentiate grammar (0 / O and 1 / I) simultaneously for:
 - 8 countries
 - 5 US states

Software Product



- Server based software
- Includes 3 pieces of software:
 - VideoXpert Plates ALPR (per camera)
 - VideoXpert Plates Manager
 - VideoXpert Plates Plug-In

Technical Details



- Standard IP cameras using rolling shutter
- Supports all-in-one and multiple server operations
- Multiple character sets including:
 - Arabic
 - Chinese
 - Korean
 - Etc.

Supported Country List

Afghanistan (partial)	Bosnia	Cyprus	Ghana	Ivory Coast
Albania	Botswana	Czech Republic	Gibraltar	Jamaica
Algeria	Brazil	Denmark	Great Britain	Jordan
American Samoa	Brunei	Djibouti	Greece	Kazakhstan
Andorra	Bulgaria	Dominica	Gabon	Kenya
Angola	Burkina Faso	Dominican Republic	Greenland	Kosovo
Anguilla	Burundi	East Timor	Grenada	Kuwait
Antigua and Barbuda	Cambodia (Partial)	Ecuador	Guadeloupe	Kyrgyzstan (partial)
Argentina	Cameroon	El Salvador	Guam	Laos (partial)
Armenia	Canada	Equatorial Guinea	Guatemala	Latvia
Aruba	Cape Verde	Estonia	Guinea Bissau	Lebanon
Australia	Cayman Islands	Falkland Islands	Guinea	Lesotho
Austria	Central African Republic	Faroe Islands	Guyana	Liberia
Azerbaijan	Chad	Fiji	Haiti	Liechtenstein
Bahamas	Chile	Finland	Honduras	Lithuania
Bahrain	Christmas Islands	France	Hong Kong	Luxembourg
Barbados	Colombia	French Guiana	Hungary	Macau
Belarus	Comoros	French Polynesia	Iceland	Macedonia
Belgium	Congo	French Southern Territories	India	Madagascar
Belize	Cook Islands	Gabon	Indonesia	Malawi
Benin	Costa Rica	Gambia	Ireland	Malaysia
Bermuda	Croatia	Georgia	Israel	Maldives
Bolivia	Cuba	Germany	Italy	Mali

Supported Country List

Malta	Northern Mariana Islands	Saudi Arabia (Partial)	Trinidad and Tobago
Marshall Islands	Norway	Senegal	Turkey
Mauritania	Oman	Serbia	Turkmenistan
Mauritius	Palau	Seychelles	Turks and Caicos Islands
Mayotte	Palestinian	Sierra Leone	Tuvalu
Mexico	Panama	Singapore	Uganda
Micronesia	Papua New Guinea	Slovakia	Ukraine
Moldova	Paraguay	Slovenia	United Arab Emirates
Monaco	Peru	Solomon Islands	United Kingdom
Montenegro	Philippines	Somalia	United States
Montserrat	Poland	South Africa	Uruguay
Morocco (partial)	Portugal	South Korea	Vanuatu
Mozambique	Puerto Rico	South Sudan	Vatican
Namibia	Qatar	Spain	Venezuela
Nauru	Reunion Island	Sri Lanka	Vietnam
Netherlands Antilles	Romania	Sweden	Virgin Islands British
Netherlands	Russia	Switzerland	Virgin Islands USA
New Caledonia	Rwanda	Taiwan	Wallis and Futuna Islands
New Zealand	St. Kitts and Nevis	Tanzania	Western Sahara
Nicaragua	Saint Vincent and the Grenadines	Thailand	Zambia
Niger	Samoa	Timor Leste - East Timor	Zimbabwe
Nigeria	San Marino	Togo	
Niue	Sao Tome and Principe	Tonga	



Questions?

PELCO

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