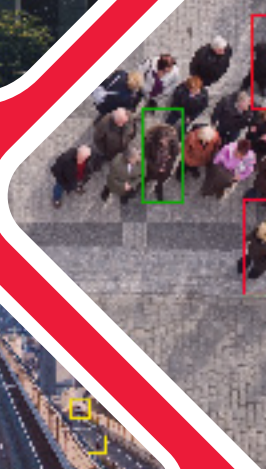
NORDEN®



VMS Xpert

Advanced

Version - 3.3

www.nordencommunication.com

Eyenor VMS Xpert Advanced Edition software is a powerful IP video management system designed for large scale, mission-critical enterprise applications, supporting unlimited cameras, servers, users and video analytics(based on license).

Eyenor VMS Xpert is unique in itself with advanced Client - Server Architecture and integrated Eyenor VMS Xpert Video Analytics. Built Incident-Event-Action framework further strengthens the whole solution with advanced Alarm Event Management over multiple devices other than cameras.

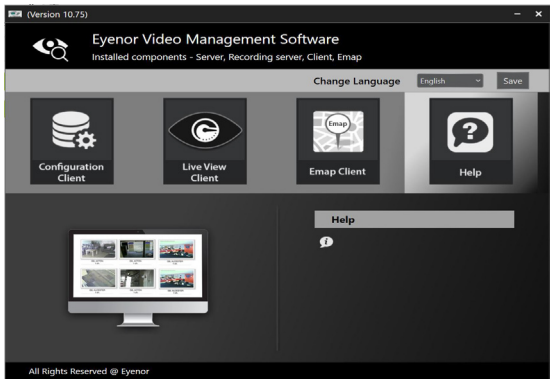
Built on innovative Open Framework Video Management platform for both Analog and IP Video Devices making scalable hybrid Video Surveillance solution allowing easy integration of 3rd party security devices.

Suitable for medium to large installations demanding Video surveillance over multiple locations. Multi Server Failover Architecture can expand from medium installation in more than one system to large installations in multiple recording servers and Management server.

Highlights:

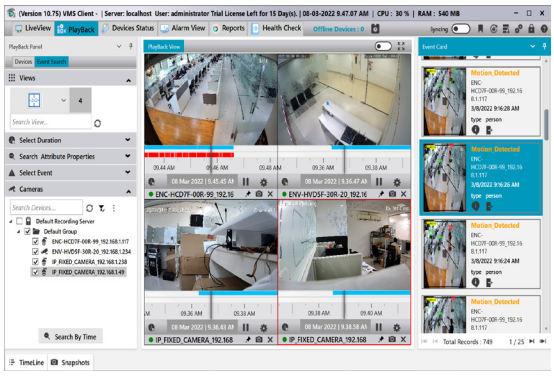
1. Performance: Maximum.
2. Multiple Recording Server support. Expandable to an Unlimited number of cameras.
3. Number of client licenses: 20 (By default but can be increased further).
4. Open Software supports cameras from more than 100 brands including ONVIF, supports non- proprietary hardware and storage.
5. Scalable client-server based distributed network architecture, user friendly interface, centralized management system, supporting multiple Recording Servers per Management Server.
6. Supports unlimited cameras, servers, users and video analytics(based on license).
7. Fail-over and Redundancy ensuring uninterrupted access to both live and recorded video.
8. Video wall and multiple monitor support for scalable video display of a large number of cameras.
9. SNMP Trap supported.
10. Support LDAP, Microsoft Active Directory supported.
11. Unicast, Multicast streaming available.
12. Event based playback available.
13. Video Time Lapse or Video Synopsis feature to summarize the video of hours to seconds.
14. Built in Video Analytics Framework. Separate license required: Perimeter Trip wire, Missing object, Abandoned object, Object tracking, camera tampering, object counting, zone intrusion, stopped vehicle, wrong way direction, no helmet detection, triple riding fire detection, image enhancement etc.. Supports Video analytic on live video and recorded video.
15. Fourplex Mode via Live View, Recording, Video Analytics and Playback simultaneously. Supports two-way audio for selected cameras.
16. Advanced camera sequencing available.
17. Motion detection based recording.
18. Complete backup available.
19. E-Maps/GIS showing real time device alarms with option to view live or recorded video.
20. Third party Device Integration: Integration with devices other than cameras via SDK and software triggers provided by connected hardware controllers. The Device can be Access Control, Motion Sensors and Door Switches, Fire alarms etc. VMS SDK is also available.
21. Supports all Windows-64 bit OS including Windows-7, 8,10 and Windows Server-2008, 2012, 2016, 2019.

Configuration Client



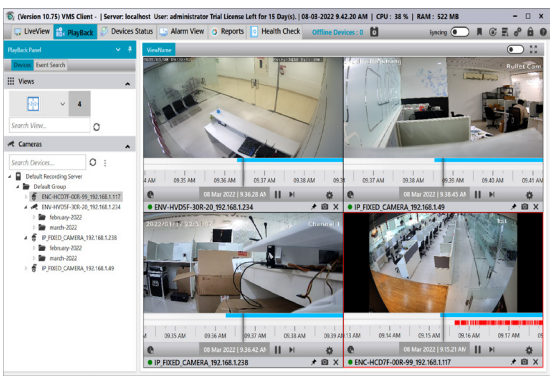
a. Configuration client is the user Interface for configuring Eyenor VMS Xpert server, cameras, enconders and other devices.
b. Device, server, events, alerts, alarms and schedules settings.
c. Test Live view, recording and streaming properties of devices.
d. Storage for adding, edit and deleting of storage drives.
e. Add cameras, Tags, groups, views and users to create hierarchical tree.
f. Support for Remote and Local Configuration setting.
g. Remote Camera configuration & Recording Server Configuration.
h. Add/delete/edit camera, encoder, server and other devices.
i. User Manuals and Technical Manuals available.
j. Search Camera and view device(s) based on standard criteria like Camera ID/ Name, Location, Group, etc.
k. Automatically synchronize Date/Time by using NTP.
l. System performance, operation status, Normal, Recording, No Signal, Not in use , Connecting and No Connection, Storage and network communication based health check.
m. Generate logs & reports in Graphical & Tabular form and export in csv, pdf, excel or more format with zip archive
n. Support dark and light visual theme.
o. License activation by Eyenor VMS Xpert Support Team.

Live View Client



a. Live View of 101 cameras simultaneously on a single system provided hardware support.
b. Default, Custom live view/Tab screen configuration. Simple drag-drop of cameras. Screen views displaying up to 101 cameras with View saving support on local and remote systems.
c. Live View of Cameras from Multiple Servers, Supports OSD from cameras.
d. Digital zoom on live video and Still images(snapshots).
e. Configurable Matrix views with size and number of cameras. Pre-defined views from full screen, 1x1 to 8x8.
f. Matrix/View Switching: Save and retrieve user views with pre-loaded cameras. Option to share views with other users.
g. Camera/Workspace Sequencing: Select cameras and time interval Options to play, pause, forward camera from the server or directly. Option to share sequence with the authorized user.
h. Instant playback with Live view and view live events.
i. Automatic Dual Streaming feature (Switching from Low to High Quality on Full screen mode).
j. Support for Local and Remote live view access via Desktop client.
k. Live view through Web and Android, ios phones/Tablets etc.
l. PC shortcuts keywords to help users to maximize the view, switch view, save/copy snapshot, print snapshot etc.
m. Ability to make a bookmark of any portion of video.
n. Ability to create virtual camera.
o. Function buttons: Snapshot, Camera settings, Audio-Video settings, Volume.
p. Display fps, resolution, date/time, codec on tile/pane.
q. Screen Lock and background live view enabling.
r. Video stream capture from Direct Camera or Eyenor VMS Xpert Video Streaming Server.
s. Print with a comment or without comment based image.
t. Configure Matrix view and set the view as a default startup screen.
u. Live View and Playback of same cameras at same time.
v. Privacy masking feature in Live view.
w. Client-workstation controlled through the administrative interface.
x. Support touch enabled multi monitor workstations.
y. Support video displaying on multiple monitors.

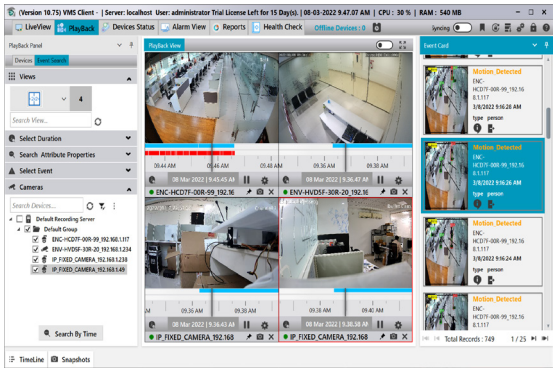
Playback Client



a. Intelligent Search based on Date/Time/Camera, Name, ID, Location for more than one camera simultaneously.

b. Quick Advanced Search of event based recordings e.g. various Detection attributes in more than one camera simultaneously.
c. Play, Stop, Pause, Fast forward, Reverse playback, seek bar, Slow, frame by frame Playing options, synchronization option, supports OSD from cameras.
d. Digital zoom on recording and Still images(snapshots).
e. Video file export in avi, asf, mp4 at user defined locations to play files in Windows Media Player/VLC player/Eyenor VMS Xpert Player and image in jpeg format.
f. Image enhancement on recorded videos.
g. Remote and Local access of Recorded Videos and Event snapshots.
h. Playback through Web and Android, ios phones/Tablets.
i. Video Analytics Events snapshot based search.
j. Timeline bar to show and replay recordings.
k. Ability to make a bookmark of any portion of the video and view a list of all bookmarks.
l. Video lock/Un-Lock features available.
m. Export Digitally Sign, Encryption based tamperproof recordings at local and remote systems in SEF format.
n. Support Forensic and Investigation mode.
o. Pre and Post alarm recording play.
p. Browse recording from storage.
q. Playback of audio along with video

Video Analytics & Event Based Playback

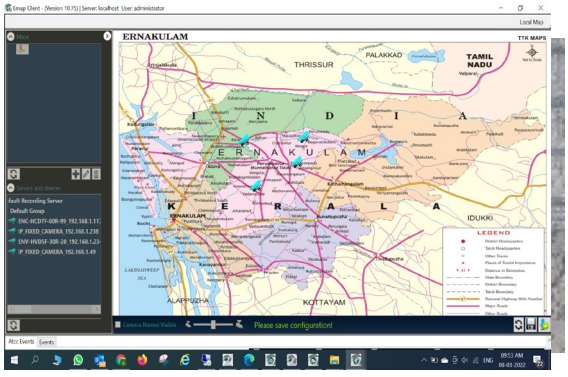


a. Wizard based Video Analytics Configuration.
b. Detection of server based analytic events and edge/cameras analytic events and Trigger event on VMS client System.
c. Option to draw up to 20 areas and zone in each camera.
d. Defining schedule and timings for Analytics Real time analytic events generated alerts & alarms like Sound, Email, SMS, Camera alarm (camera specific).
e. Video Blinking and Pop Up alarm with audio.
f. Get event alerts on all Clients based on user assigned cameras.
g. View snapshots of Analytics events and generate a report in the graph, tabular form.
h. Playback on an event Search history of Analytics events.
i. Search the history of Analytics events. Search based on camera, type of event, or date & time Events.
j. Events based recording: Pre-Post buffer recording up to 5 minutes.
k. Run macros on event /alarm.
l. Low frame to high frame rate recording on events.

Recordings and Storage

a. Video Recording and Management as Windows service.
b. Supports recording in NAS, SAN, DAS, iSCSI and local hard disk.
c. Supports recording in Hot storage as well as Cold storage.
d. Integrated with Cloud object storage API for S3 storage.
e. Recording different cameras at different paths. Expandable. based on system, storage media and network bandwidth availability.
f. Video Recording: H.265, H.264, MJPEG, MPEG4, H.263, MPEGs and 5-25/30/60fps. All Cameras supported resolutions, streams and frame rates.
g. Support megapixel video cameras at least 1000 Mbps at 64 MP resolution.
h. Scheduled/Continuous/Manual Recordings and Motion based recordings and Video Analytic Based Recording.
i. Supports Dual Stream from cameras.
j. Option for RTP over UDP, RTP over TCP, RTSP, HTTP, RTSP over HTTP streaming or both in live and recording.
k. Pre-Post buffer recording for events as per defined time.
l. Storage and Bandwidth calculator. Defining multiple storage drive at camera level.
m. Store recording in a folder in tree structure.
n. Option to Start/Stop recording manually for individual camera or automatic start recording after power resume.
o. Support multiple storage formats.
p. Support video-cum-audio recording with defined permission.
q. System and network communication based health check.
r. Continuous only keyframe based recording and adjust bit rate as per requirement.
s. Define limits and alerts for low disk space at warning and recording stopped levels.
t. Tamper-proof recording.
u. Automatic Edge/SD Card recording Synchronization feature available.
v. Storage Auto Switching option available.

E-Map Client



a. Importing of maps supporting all standard image formats i.e. file types JPG, PNG, GIF, BMP, vector images.
b. Supports Google /GIS Maps for location add/edit/search and saving the map image.
c. Unlimited level of linking of E-maps in a hierarchical tree manner.
d. Easy interface via Drag and Drop of the cameras on to the map.
e. Camera blinking, sound alarm, video popup in case of event detection alerts.
f. Camera video stream disconnection detection and automatic display of the connection status.
g. Any time Live view display of the camera video with just a mouse click of the Camera icon on E-map.
h. Support Zoom-in for Specific locations on E-map.

Live Events and Alarm Monitoring

a. Live Event monitoring with camera viewing.
b. Playback of events by clicking on an event.
c. Video Popup/Blink & Sound Alarms in Live View.
d. Analytics can be applied at lower resolution or Full HD-1080P resolution, H.265, H.264 compression and 25fps.
e. Generate alarm on System failure and video loss.
f. Escalation Matrix: All events and alarms can be defined with the escalation matrix. For example In case of no response from operator, immediate SMS to higher Authorities.

Alarm Management

a. Event notification and acknowledge events generated from cameras, VMS systems, third party devices, I/O devices by taking appropriate action (by sending SMS, email, IVR call to respective authority).
b. Alerts/notifications on Mobile phones with SMS using Push technology.
c. Display surrounding camera view in separate tile on alarm generation.
d. Selected Layout open in separate window panel on alarm.
e. Adjustable event time and screen layout.
f. Generate e-reports based on alarm event, date-time and camera.
g. Support navigational tool for the client.

PTZ Control

a. PTZ Soft keyboard joystick for PTZ cameras.
b. Move camera using Pan, Tilt, zoom. Fetch and set Presets Tour and other PTZ camera functions.
c. Auto Pan & Patrol options, On screen option, Control Hide, Optical Zoom available.
d. USB, RS 232 and Gaming and joystick support.
e. Support PTZ in android and ios mobile.

Fail-over/Redundant Server

a. Failover server ensuring uninterrupted access to both live and recorded video in case of failure of Primary Recording Server.
b. Very fast Detection failure of Primary Recording Server.
c. Single Fail-over server can take over cameras from multiple Recording servers.
d. Event notification of all Fail-over events in Management Server
e. Continuous network communication based health check of Primary Recording Server.
f. Fail-over Server take over reducing the system downtime to a few seconds (Approx. within 30 sec).
g. Supports multiple Fail-over servers to be added on the same Management Server.
h. Automatic real time live video update in the all active Live view Clients after take over of the Fail-over server.
i. Automatic database synchronization.
j. Support Manual failover.

Motion Detection

a. Defining motion detection Zones of any shape, size.
b. Detect Object that move within, enter, or exit a scene and trigger an event to VMS.
c. Object size and sensitivity parameters.
d. Turn on/off motion detection based on day/date/time schedule.
e. Motion based Pre-Post Buffer Recordings.

Events, Alarms & Logs Management

a. Motion Detection Events.
b. Video Loss or recording Aborted Alarm.
c. Recording and Live View aborted Events.
d. Signal Loss events.
e. User Login and Server start- stop logs.
f. Archiving Success-Failure Events.
g. Low disk space events.
h. IVR Message, SNMP Trap, Email, SMS alerts on configurable events.
i. Quick Event based search for recorded videos.
j. Input/output (NO-NC) Relay Support: The System can activate, deactivate relay and support recording based on inputs or alarms.

Camera Management

a. Automatic Device discovery over the Network.
b. Support for UPnP, ONVIF-S,G, T & Bonjour Services.
c. Add cameras manually by IP address, port number, username, password etc.
d. Supports more than 100+ cameras brands.
e. Add, delete, enable, disable, update all cameras/devices in one.
f. Fetch/Edit settings like resolution, fps, profile, time of all cameras with single click.
g. Defining camera names, camera groups and assigning user roles/privileges.
h. Option to add other devices like Analog cameras, IP Cameras, encoders, microphone-speakers.
i. Apply configuration setting of added devices to new devices with a single click.
j. Import camera details from excel/csv file.
k. Automatic camera sequencing on alarms/live video/playback.

Decoding and Rendering

a. Support all IP/Analog cameras, 360 camera, encoders, microphone-speakers.
b. Decoding of 64 simultaneous streams from any video encoder or recorder.
c. Support simultaneous viewing of Live video and recorded video in same panel.
d. Support decoding of High, Main, or Base profiles of H.265, H.264, MJPEG and MPEG-4 encoded video streams.
e. Support Multi- monitor and Video Wall.
f. Fully compatible with decoder hardware, no need for authentication
g. Support video decording of : H.265, H.264, MJPEG, MPEG4, MPEGs and 5-25/30/60fps. All Camera supported resolutions (4 CIF, 720p, 1080p etc.) , profiles/ streams (High, Main, Base), and frame rate (5-25/60).
h. Customizable camera sequence and video grid with 1x1, 2x2 to 8x8, (1+5, 1+7, 1+9, 1+12, 1+16) and custom layouts options.
i. Ability to de-wrap 360 degree camera in Quad, Double view.
j. Ability to save and retrieve presets for fisheye cameras.
k. Support decoding algorithm configuration including the GPU/Video cards or the CPU to decode video.
l. The ability Auto/Manual Switching or Adaptive Switching: automatically /Manually switch to a lower resolution, lower bit-rate stream on full screen mode.
m. Control of views, sequencing using mouse, keyboard and integrated CCTV joystick.
n. Option to configure SOUND Alarm, SNMP, Video POP up, Mobile Phone Push Notifications, SOP execution on alert.
o. Incident Management and Escalation Matrix.
p. All events and alarms can be defined an escalation matrix. Acknowledge option is available or put an alarm to snooze, in-progress, pending list.
q. Automatic fault tolerance feature available.
r. System performance, operation status, Storage and network communication based health check.
s. Generate logs & reports in Graphical & Tabular form and export in csv, pdf, excel or more format.
t. Customized and user defined report, SLA Report, MIS report can be generated.

Web Client

a. Defining Archiving settings at individual camera level.
b. Archive recordings to local or remote(FTP) system.
c. Delete recordings after a set number of days.
d. Automatic Archive on low disk space.
e. Customize recording archiving/retention setting for specific camera.

Archiving

a. Defining Archiving settings at individual camera level.
b. Archive recordings to local or remote(ftp) system.
c. Delete recordings after set number of days.
d. Automatic Archive on low disk space.
e. Customize recording archiving/retention setting for specific camera.

Secure Communication & Scalable Licensing

a. Supports free addition of cameras on already licensed Servers with only Camera license.
b. Scalable licensing model supporting unlimited cameras per server based on the available hardware configuration.
c. Reliable through fault-tolerant and multiple levels of redundancy.
d. Support multiple client components i.e. Live View, Playback and Emap based on the license.
e. Provides Feature based selection matrix facilitating different options while choosing the license.
f. Camera License not tied to MAC address of cameras.
g. Fully compatible with standard (COTS) hardware.
h. Unrestricted camera replacement in case of camera failure.
i. Secure client server communication using various secure communication methods like HTTPS, SRTP. TLS, AES-256, 1096 bit based encryption etc.
j. Multi language support.
k. PC shortcuts keywords to help users to connect Management Server/Recording Servers.

Multi Monitor & Video Wall support

a. Automatic detection of additional display monitors connected to the system.
b. Enables display of video screen layouts on the monitors to display as video wall.
c. Supports default screen views or custom screen views to be displayed on Secondary monitors.
d. Supports simultaneous display of the live video screen layouts in both Primary monitor and Secondary monitors.
e. All saved video list are available at the Secondary monitors for easy selection of different views.
f. Supports camera sequencing on both Primary monitor and Secondary monitors with configurable display time.
g. Supports as many number of monitors as supported by the video display card.

Third Party Device Integration

a. Supports all ONVIF supported device.
b. Support Open interface to ensure seamless integration with 3rd party system and development of user plugins, adapters.
c. Integration with devices other than cameras through SDK/API and software triggers provided by connected hardware controllers. The device can be Access Control, Motion Sensors and Door Switches, Fire alarms, Face Recognition, ALPR, RLVD, external video Analytics, edge analytics, ICCC platform etc.
d. VMS is fully integrated with Eyenor VMS Xpert Facial Recognition, Number Plate Software.
e. VMS support integration with External Video Content Analytics.
f. Supports Integration with GIS Map ((like Google map, Bing map, ESRI Arc GIS map, etc.).
g. VMS Cloud platform available.
h. Rest based SDK/API is available having HTTP requests and parse JSON responses for allowing other systems manufacturers to develop customized interfaces.
i. Support integration with other offline and online Video Analytics.

ORDERING INFORMATION

	Part Number	Description
Licence	ENS-VMS-Xpert-Basic-BL	Eyenor VMS Xpert Basic Base Licence
	ENS-VMS-Xpert-Basic-DL	Eyenor VMS Xpert Basic Device Licence
	ENS-VMS-Xpert-Pro-BL	Eyenor VMS Xpert Pro Base Licence
	ENS-VMS-Xpert-Pro-DL	Eyenor VMS Xpert Pro Device Licence
	ENS-VMS-Xpert-Adv-BL	Eyenor VMS Xpert Advanced Base Licence
	ENS-VMS-Xpert-Adv-DL	Eyenor VMS Xpert Advanced Device Licence
	ENS-VMS-Xpert-Adv-FL	Eyenor VMS Xpert Advanced Failover Licence (per camera)
	ENS-VMS-Xpert-Adv-CL	Eyenor VMS Xpert Advanced Client Licence
Analytics	ENS-VMS- Xpert - SL- ILD	Restricted Zone Intrusion / Loitering
	ENS-VMS-Xpert-SL-MD	Motion Detection
	ENS-VMS-Xpert-SL-FD	Face Detection
	ENS-VMS-Xpert-SL-AOD	Abandoned Object / Object Left Detection
	ENS-VMS-Xpert-SL-CTD	Camera Tampering Detection
	ENS-VMS-Xpert-SL-FSD	Fire / Smoke Detection
	ENS-VMS-Xpert-SL-PCD	People / Object counting
	ENS-VMS-Xpert-SL-MOD	Missing Object Detection
	ENS-VMS-Xpert-SL-OTD	Object Tracking
	ENS-VMS-Xpert-SL-OCD	Object Classification & Detection
	ENS-VMS-Xpert-SL-ASD	Attribute Search
	ENS-VMS-Xpert-SL-PTD	Perimeter / Tripwire Vioaltion Detection
	ENS-VMS-Xpert-SL-CCD	Crowd Counting
	ENS-VMS-Xpert-SL-CWD	Crowd Detection
	ENS-VMS-Xpert-SL-GVD	Graffiti and Vandalism Detection
	ENS-VMS-Xpert-SL-PFD	Person Falling Detection
	ENS-VMS-Xpert-SL-FTD	Fly Tipping Detection (Garbage Detection)
ITMS	ENS-VMS-Xpert-ITMS-BL	Eyenor VMS Xpert ITMS Base Licence
	ENS-VMS-Xpert-ITMS-LPR	Licence Plate Detection
	ENS-VMS-Xpert-ITMS-NHD	No Helmet Detection
	ENS-VMS-Xpert-ITMS-OSD	Speed Detection
	ENS-VMS-Xpert-ITMS-CAD	Collision Alert Detection
	ENS-VMS-Xpert-ITMS-TCD	Traffic Congestion Detection
	ENS-VMS-Xpert-ITMS-VOD	Vehicle Object Fall Detection
	ENS-VMS-Xpert-ITMS-SBD	Seat Belt Detection
	ENS-VMS-Xpert-ITMS-IPD	Illegal Parking Detection
	ENS-VMS-Xpert-ITMS-MDD	Mobile Phone Distraction Detection
	ENS-VMS-Xpert-ITMS-RVD	Red Light Violation Detection
	ENS-VMS-Xpert-ITMS-TRD	Triple Riding Detection
	ENS-VMS-Xpert-ITMS-WWD	Wrong-Way Detection
	ENS-VMS-Xpert-ITMS-VCD	Vehicle Counting and Classification Detection
	ENS-VMS-Xpert-ITMS-LVD	Lane Violation Detection
	ENS-VMS-Xpert-ITMS-RLD	Railraod Lane Itrusion Detection
	ENS-VMS-Xpert-ITMS-PCD	Pedestrial Road Crossing Detection
FRS	ENS-VMS-Xpert-FRS-BL	Eyenor VMS Xpert FRS Base Licence
	ENS-VMS-Xpert-FRS-DL	Eyenor VMS Xpert FRS Device Licence