

# Avigilon Control Center<sup>™</sup> 6 Software



ACC<sup>™</sup> software is easy-to-use video management software that optimizes the way security professionals manage and interact with high-definition video. It efficiently captures and stores high-definition video, while intelligently managing bandwidth and storage using our patented High Definition Stream Management (HDSM)<sup>™</sup> technology. ACC 6 software combines an intuitive interface with advanced search functions called Avigilon Appearance Search<sup>™</sup> video analytics technology and Unusual Motion Detection (UMD). Avigilon Appearance Search technology and UMD are sophisticated deep learning artificial intelligence (AI) search engines that enable users to quickly locate a specific person or vehicle of interest or identify motion anomalies across an entire site.

## **RECORDING NVR PLATFORMS PURPOSE-BUILT FOR ACC SOFTWARE AND AVIGILON APPEARANCE SEARCH TECHNOLOGY**



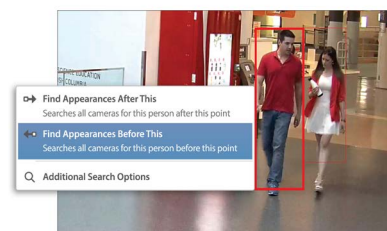
ACC software is pre-installed and configured on HD Video Appliances, HD Network Video Recorders (NVRs), HD NVR Workstations, ACC Edge Solution (ES) HD Recorders, ACC ES Analytics Appliances and the H4 ES camera line. It also works as a stand-alone software, to meet the needs of a wide variety of installations. With the addition of a GPU, our NVRs quickly become capable of running Avigilon Appearance Search technology.

## **SELF-LEARNING VIDEO ANALYTICS**



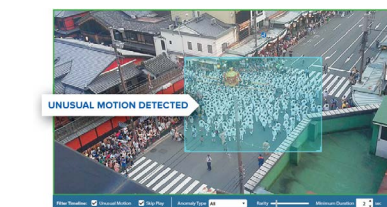
ACC video management software enables analytics events and alarms to be viewed and searched through an intuitive user interface. Real-time events and forensic capabilities detect and notify scene changes and rules violations.

## **AVIGILON APPEARANCE SEARCH TECHNOLOGY**



Avigilon Appearance Search video analytics technology is a sophisticated AI search engine for video data that now incorporates the characteristics of a person's face. It sorts through hours of footage with ease, to quickly locate vehicles of interest or people even if items such as their clothing change over time across an entire site with ease. Using Avigilon Appearance Search technology can dramatically improve incident response time and enhance forensic investigations by allowing operators to build robust video evidence and create a powerful narrative of events. Appearance Search now allows users to initiate a search for a person by selecting certain specific physical descriptions.

## **UNUSUAL MOTION DETECTION**



UMD is an advanced artificial intelligence (AI) technology that brings a new level of automation to surveillance. Without any predefined rules, UMD technology continuously learns what typical activity in a scene looks like, and then detects and records motion anomalies. UMD is supported by the H4A, H4 SL and H4 Mini Domes camera lines.

# Advanced Avigilon Control Center Features



## **HDSM™ Technology**

Efficiently compresses and preserves image quality while intelligently managing HD image transmission throughout the Avigilon system — sending only the requested portions of captured images to operator workstations.



## **HDSM SmartCodec™ Technology Support**

Avigilon HDSM SmartCodec technology automatically optimizes compression levels for regions in a scene, to maximize bandwidth while still maintaining image quality.



## **Avigilon Appearance Search Technology**

Allows you to quickly search recorded video to find instances of a person or vehicle across the entire site from all Avigilon cameras with self-learning analytics. Search for a person by selecting specific physical descriptions, including upper lower clothing color, hair color and gender.



## **Intelligent Search**

Powerful search tools enable you to quickly search recorded video for motion, the presence of classified objects (people or vehicles), background changes in the scene (thumbnail search), and for events.



## **Simple Camera and Server Installation**

Plug-and-play capabilities for NVRs and cameras that automatically identify themselves on the network, without manual configuration or searching.



## **Avigilon Presence Detector™ Support**

The Avigilon Presence Detector (APD) sensor is a small form factor impulse radar device with self-learning radar analytics that accurately detects the presence of a person even if they have stopped moving or are hidden. It has the ability to detect presence through blankets, cardboard, wood and drywall.



## **License Plate Recognition (LPR) Analytics**

ACC 6.10 and above feature an upgraded LPR analytics engine with easy configuration and improved accuracy for faster security response. Multiple license match lists can each trigger a unique ACC rule on match.



## **ACM™-ACC interoperability**

Receives, processes, and acts on ACM door events, hardware input events, and access grants, enabling operators to unlock access doors directly from a camera view. Identity Verification enables users to see ACM credentials dynamically displayed with ACC camera views. Identity Search enables users to visually verify access events, and initiate an Appearance Search across the entire site for the same person.



## **Alarm Escalation**

Allows the creation of complete end-to-end workflows for the monitoring, assignment, and acknowledgement of alarms.



## **ACC Mobile Software**

Push alarm notifications, live and recorded alarm video, audio talkdown, self-learning video analytics overlays, and digital output triggers for Android™ and iOS mobile devices.



## **Detailed Management, Monitoring, and Reporting of System Status and Security**

Detailed logs of storage, network, and overall system status to ensure the highest possible system uptime for critical applications.



## **POS Transaction Engine**

Link HD surveillance footage (viewed instantly) with transaction data to address compliance requirements and reduce shrinkage and theft.



## **Scalable Integration with External Systems**

Distributed architecture features .NET-based and REST-based APIs that can easily be integrated with other systems, such as access control and building management.



## **ONVIF® Profile S Conformant VMS**

ONVIF profile S conformance ensures interoperability between IP based ONVIF security devices regardless of manufacturer.



## **Unusual Motion Detection**

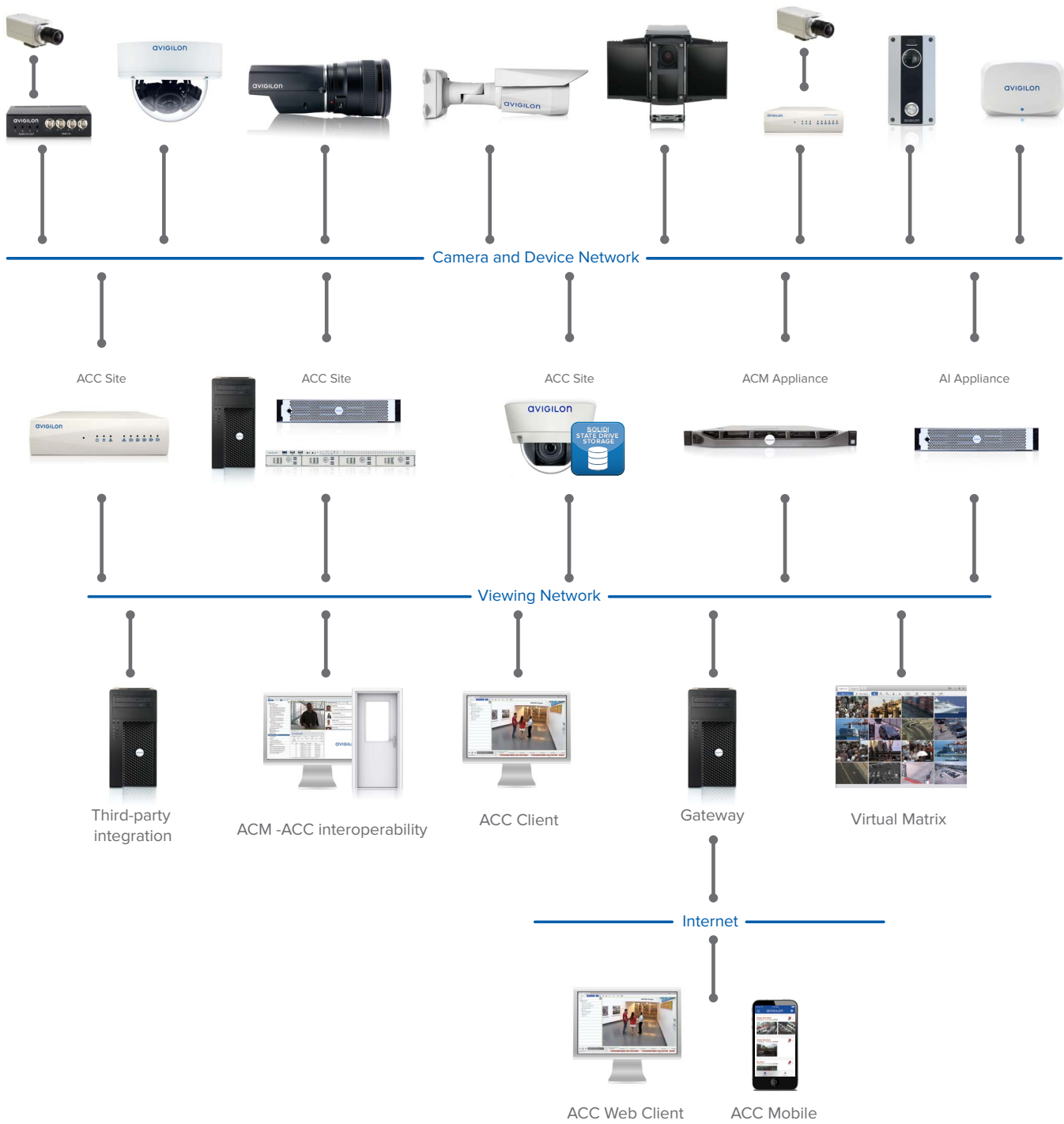
UMD enables fast video search and is designed to reduce hours of work to minutes by narrowing potentially thousands of motion events to a handful. This allows operators to focus their attention on video footage needing further investigation.



## **H4 Video Intercom Support**

Video Intercom support provides operators with visual and audio verification of visitors. The H4 Video Intercom integration uses wide dynamic range and echo canceling technologies for clear viewing and two-way communication with visitors.

# System Architecture



# Core, Standard & Enterprise

To create a system most suited for your surveillance needs, the Avigilon Control Center software is offered in three editions: Core, Standard and Enterprise. The Enterprise edition includes more advanced features for a sophisticated solution, whereas the Standard edition is used for more focused needs or for those looking to transition to HD surveillance in a cost-effective way. ACC Core software is an entry-level version of our award-winning software that delivers advanced high definition surveillance capabilities, ease of use, and superior image quality to smaller implementations. No matter what the size of your installation, you can customize a solution that is right for you.



SYSTEM	CORE	STANDARD	ENTERPRISE
Number of cameras per server	24	75	300+
Number of cameras per site	24	75	10 000+
Number of servers per site	1	1	100+
Number of client licenses per server	2	10	Unlimited
High Definition Stream Management (HDSM) Technology	Yes	Yes	Yes
HDSM SmartCodec Technology Support	Yes	Yes	Yes
Dual Streaming for ONVIF compliant cameras	Yes	Yes	Yes
DEVICE SUPPORT	CORE	STANDARD	ENTERPRISE
Automatic device discovery	Yes	Yes	Yes
Third-party IP cameras & encoders	Yes	Yes	Yes
HD Pro cameras	No	No	Yes
Avigilon Presence Detector (APD) sensor	Yes	Yes	Yes
H4 HD cameras with self-learning video analytics	Yes	Yes	Yes
HD cameras with self-learning video analytics	Yes	Yes	Yes
HD Micro Dome, HD Multisensor, HD Panoramic, HD PTZ, IR PTZ, H4 Fisheye, H4 SL cameras, H4 Mini Dome	Yes	Yes	Yes
H4 Video Intercom	Yes	Yes	Yes
ONVIF compliant cameras & encoders	Yes	Yes	Yes
Avigilon encoders	Yes	Yes	Yes
Avigilon Artificial Intelligence Appliance	No	No	Yes
H.264 support	Yes	Yes	Yes
MPEG4 support	Yes	Yes	Yes
MJPEG support	Yes	Yes	Yes
JPEG2000 support	Yes	Yes	Yes
CLIENT	CORE	STANDARD	ENTERPRISE
Powerful, easy-to-use client interface	Yes	Yes	Yes
Video analytics overlays (Self-learning video analytics, Unusual Motion Detection)	Yes	Yes	Yes
Joystick support	Yes	Yes	Yes
ACC Mobile 2 app / HTML5 Web Client / Gateway	Yes	Yes	Yes
ACC Mobile 3 Preview app / Web Endpoint	Yes	Yes	Yes
Saved views	No	Yes	Yes
Maps with configurable icons and camera thumbnail previews	No	Yes	Yes
Web pages	No	Yes	Yes
Active Directory import	No	No	Yes
Windows user authentication	No	No	Yes
Two Factor Authentication	Yes	Yes	Yes
Password strength meter	Yes	Yes	Yes
Editable Site View	Yes	Yes	Yes
Intelligent Virtual Matrix	No	No	Yes
Collaborative investigations	No	No	Yes
Multi-camera export with optional password protection	Yes	Yes	Yes
Multi-camera privacy blurred export from Appearance Search	No	No	Yes
Live export	Yes	Yes	Yes
Hourly configurable recording schedule	Yes	Yes	Yes

SEARCHING	CORE	STANDARD	ENTERPRISE
Avigilon Appearance Search Technology	No	No	Yes
Search for a person by selecting specific physical descriptions (Gender, Hair color, Upper body clothing color, Lower body clothing color)	No	No	Yes
Search for a person by Identity supplied by ACM	No	Yes	Yes
Unusual Motion Detection Timeline filtering with Skip Play	Yes	Yes	Yes
Intelligent motion search	Yes	Yes	Yes
Thumbnail search	Yes	Yes	Yes
Event search	Yes	Yes	Yes
POS transaction search	No	Yes	Yes
Alarm search	No	No	Yes
License plate event search	No	No	Yes

ADD-ON MODULES AND INTEGRATIONS	CORE	STANDARD	ENTERPRISE
Point of Sale Transaction Engine	No	Yes	Yes
Avigilon developed and supported integrations	No	Yes*	Yes
3rd party system integrations	No	Yes	Yes

\*CommScope iPatch, RS2 AccessIt, DDS Amadeus 5 and DSX only

AVIGILON'S ACCESS CONTROL MANAGER (ACM) AND ACC SYSTEM INTEROPERABILITY	CORE	STANDARD	ENTERPRISE
ACM system door and panel input event triggers	No	Yes	Yes
ACM system door access grants	No	Yes	Yes
ACM system shared operator access	No	Yes	Yes
ACM Identity Verification	No	Yes	Yes
ACM Identity Search	No	Yes	Yes

ADDITIONAL FEATURES	CORE	STANDARD	ENTERPRISE
E-Mail event notification (motion & system event)	Yes	Yes	Yes
Central station notifications including ANSI/SIA DC-09-2013	No	Yes	Yes
Digital input email trigger	No	Yes	Yes
Manual digital output trigger	No	Yes	Yes
Audio recording	No	Yes	Yes
Audio output	No	Yes	Yes
Rule triggers	No	51	Unlimited
Avigilon Presence Detector event trigger	No	Yes	Yes
Self-learning video analytics event configuration	No	Yes	Yes
Avigilon Artificial Intelligence Appliance analytics configuration	No	No	Yes
Redundant recording	No	No	Yes
Failover connections	No	No	Yes
Alarm escalation	No	No	Yes
One-time Video Archive	No	No	Yes
Tiered Storage Management with Continuous Archive	No	No	Yes
License Plate Recognition with multiple match lists	No	No	Yes
Two person authenticated recorded video viewing	Yes	Yes	Yes
Camera Replacement	Yes	Yes	Yes
Standby/Privacy mode for cameras	No	Yes	Yes

For the most current list of integrations and add-ons supported by Avigilon Control Center software, please visit [avigilon.com](http://avigilon.com).

# System Requirements

**NOTE:** For all Windows versions, it is recommended that the latest Microsoft service pack is deployed. NVR recording throughput and retention times can vary according to the number of cameras, camera resolution, estimated percent of motion, continuous recording settings and predefined retention period. For full server performance, choose an Avigilon Certified Solution option.

## AVIGILON CONTROL CENTER CLIENT SOFTWARE

AVIGILON CERTIFIED SOLUTIONS	DISPLAY MODEL NUMBER	KEY FEATURES
2 Monitor Professional High Performance Remote Monitoring Workstation	HD-RMWS3-2MN	<ul style="list-style-type: none"> <li>Preloaded with Avigilon Control Center (ACC) Client software.</li> <li>Supports high resolution monitors.</li> <li>Includes the adapters and accessories for quick deployment.</li> <li>Avigilon warranty and support included.</li> </ul>
4 Monitor Professional High Performance Remote Monitoring Workstation	HD-RMWS3-4MN	
SOFTWARE SYSTEM REQUIREMENTS	MINIMUM	RECOMMENDED
Operating System	Windows 7 (32-bit or 64-bit), Windows 8.1 (32-bit or 64-bit) or Windows 10 (32-bit or 64-bit) Microsoft .NET 4.6.2	Windows 10 (64-bit) Microsoft .NET 4.6.2
Processor	Intel® dual-core CPU (2.0 GHz)	Intel® Core™ i5 (Quad-core, 3.3 GHz)
System RAM	4 GB DDR3	8 GB DDR4
Video Card	PCI Express, DirectX 10.0 compliant with 256 MB RAM	NVIDIA® Quadro P620
Network Interface	1 Gbps	1 Gbps
Hard Disk Space	500 MB	500 MB

## AVIGILON CONTROL CENTER SERVER SOFTWARE

AVIGILON CERTIFIED SOLUTIONS	DISPLAY MODEL NUMBER	KEY FEATURES
HD NVR Premium	HD-NVR4-PRM-64TB / 96TB / 128TB / 157TB	<ul style="list-style-type: none"> <li>Optimized for video surveillance applications in a 24/7/365 environment</li> <li>ACC Server software is preinstalled, configured and enhanced for optimal system compatibility</li> <li>Certified for the Avigilon surveillance environment - ACC software, LPR, Mobile Gateway, Analytics, HDSM and 1-30MP cameras</li> <li>High throughputs of up to 1800 Mbps</li> <li>Documented network architecture for a wide variety of applications</li> <li>Avigilon enhanced warranty and premium support included</li> <li>Access to Avigilon System Design Tool (SDT) to calculate storage requirements</li> </ul>
HD NVR Standard	HD-NVR4-STD-16TB / 24TB / 32TB / 48TB	
HD NVR Value	HD-NVR3-VAL-3TB / 6TB / 12TB / 18TB	
SOFTWARE SYSTEM REQUIREMENTS	MINIMUM	RECOMMENDED
Operating System	Windows Server 2012, Windows Server 2012 R2, Windows 7 (64-bit), Windows 8.1 (64-bit) or Windows 10 (64-bit), Windows Server 2016	Windows Server 2016
Processor	x86 64 bit dual-core (1.9 GHz)	Intel® Xeon® E5 v3 (6 cores, 1.9GHz)
System RAM	4 GB DDR3	16 GB DDR4
Network Interface	1 Gbps	4 x 1 Gbps
Hard Drives	SATA-II 7200 RPM Enterprise Class Hard Drives	SATA-III 7200 RPM Enterprise Class Hard Drives

## AVIGILON CONTROL CENTER SERVER WORKSTATION

AVIGILON CERTIFIED SOLUTIONS	DISPLAY MODEL NUMBER	KEY FEATURES
HD Video Appliance	VMA-AS2-8P2 / VMA-AS2-8P4 / VMA-AS2-16P06 VMA-AS2-16P09 / VMA-AS2-16P12 / VMA-AS2-24P12 VMA-AS2-24P18 / VMA-AS2-24P24	<ul style="list-style-type: none"> <li>Preloaded and configured with Avigilon Control Center (ACC) video management software</li> <li>High-performance recording capacity</li> <li>Throughputs of up to 400 Mbps</li> <li>Avigilon warranty and support included</li> <li>Access to Avigilon System Design Tool (SDT) to calculate storage requirements</li> </ul>
ACC ES HD Recorder	VMA-RPO-4P2 / VMA-RPO-4P4	
ACC ES Analytics Appliance	VMA-RPA-4P2 / VMA-RPA-4P4	
HD NVR Workstation	HD-NVRWS3-8TB	
SOFTWARE SYSTEM REQUIREMENTS	MINIMUM	RECOMMENDED
Operating System	Windows Server 2012, Windows Server 2012 R2, Windows 7 (64-bit), Windows 8.1 (64-bit) or Windows 10 (64-bit)	Windows 10 (64-bit)
Processor	Intel Quad-core CPU (2.0 GHz)	Intel Core i5 (Quad-core, 3.3 GHz)
System RAM	4 GB DDR3	8 GB DDR4
Network Interface	1 Gbps	1 Gbps
Video Card	PCI Express, DirectX 10.0 compliant with 256 MB RAM	NVIDIA Quadro P620
Hard Drives	SATA-II 7200 RPM Hard Drives	SATA-III 7200 RPM Hard Drives

## AVIGILON APPEARANCE SEARCH TECHNOLOGY

Avigilon Appearance Search technology requires the ACC Analytics Service to be installed on the same computer as the ACC Server software, and must meet the listed system requirements:

AVIGILON CERTIFIED SOLUTIONS	DISPLAY MODEL NUMBER	KEY FEATURES
Analytics Kit for Avigilon Appearance Search Software	HD-NVR-ANK2-1	Tested and verified to provide enough processing power to run Avigilon Appearance Search feature.

### SOFTWARE SYSTEM REQUIREMENTS

NVIDIA CUDA Compute Capability	5.0 or above; Windows x86_64 Driver Version 397.44 or above
GPU Memory	4 GB or above

## AVIGILON CONTROL CENTER GATEWAY

Avigilon Control Center Gateway can be installed on the same computer as the ACC Server software, but for optimal performance results it is recommended that the Gateway be installed separately. The Gateway can handle up to 36 concurrent video streams if installed on a computer with the listed requirements (with recommended specs).

SOFTWARE SYSTEM REQUIREMENTS	MINIMUM	RECOMMENDED
Operating System	Windows Server 2016, Windows Server 2012, Windows Server 2012 R2, Windows 7 (64-bit), Windows 8.1 (64-bit) or Windows 10 (64-bit) Microsoft .NET 4.6.2	Windows 10 (64-bit) Microsoft .NET 4.6.2
Processor	Intel quad-core CPU (2.0 GHz)	Intel Core i5 (Quad-core, 3.3 GHz)
System RAM	4 GB DDR3	8 GB DDR4
Hard Disk Space	500 MB	500 MB

## AVIGILON CONTROL CENTER WEB CLIENT

Avigilon Control Center Web Client can be accessed from the listed web browsers.

Web Browsers	Internet Explorer version 9.0 or later Chrome version 20 or later	Firefox® version 15 or later Safari version 9.0 or later
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## AVIGILON CONTROL CENTER MOBILE 2.X SOFTWARE

Avigilon Control Center Mobile (ACC Mobile) version 2.x is currently only available for the listed device platforms.

Platforms	Android version 4.x or 5.x	iPad with iOS 7, 8 or 9 iPhone with iOS 7, 8 or 9 iPod touch with iOS 7, 8 or 9
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## AVIGILON CONTROL CENTER MOBILE 3.X SOFTWARE PREVIEW

ACC Mobile version 3.x is currently only available for the listed device platforms and requires the ACC Web Endpoint software. The ACC Web Endpoint software comes pre-installed on ACC ES HD Recorder and ACC ES Analytics Appliance. For NVR systems and HD Video Appliances, it should be installed on the same server as the ACC Server software.

Platforms	Android version 5.0 or later	iPad with iOS 9 or later iPhone with iOS 9 or later iPod touch with iOS 9 or later
Procesesor	n/a	64-bit (Apple A7 or later)

## AVIGILON CONTROL CENTER LPR PLUGIN

Avigilon Control Center LPR Plugin is supported on the listed operating systems.

Operating System	Windows Server 2012, Windows Server 2012 R2, Windows 7 (64-bit), Windows 8.1 (64-bit) or Windows 10 (64-bit), Windows Server 2016
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Avigilon certified solutions are recommended for LPR solutions.