Making the Most of Your ES Products

Learn how to leverage the power of ES appliances in your security deployment

The Avigilon ES platform is designed for distributed security systems. Our innovative ES product line is designed to keep video analytics and storage at the edge of the network to help lower the amount of bandwidth required for monitoring remote sites and subsequently lower the system's total cost of ownership. Remote configuration, upgrades and management can all be performed through Avigilon Control Center (ACC) Client from a central location or on-site. Taking advantage of High Definition Stream Management (HDSM) technology, live and recorded playback can be remotely accessed through ACC™ Client or the ACC Mobile 3 app over a low bandwidth or unreliable connection.

Avigilon ES Appliances come pre-configured and licensed out of the box, with a built-in PoE switch that provides a convenient plug-and-play deployment. Additional licenses can be added to appliances to connect more devices. All Avigilon ES Appliances feature a signed and encrypted hardened Linux™-based firmware to help provide a secure and trusted platform for distributed and internet-connected deployments for those organizations with stringent cybersecurity standards.

The ES platform provides an effective solution for proactively monitoring many sites with limited resources. Instead of constantly watching live video, analytic alarms are designed to notify you of potentially critical events for quick verification and proactive response. Rules can be set based on object movement, loitering, entering restricted areas and more. These rules trigger alarms — which you can choose to receive via the ACC Client, ACC Mobile 3 app, or email along with a still image or a clip of the event causing the alarm — helping you focus your attention and resources on the events that matter most.

To learn more about ACC analytics, see the ACC Analytics Guide.

Comparison of the ES Appliances and Recorders

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Model	ACC ES 8-Port Appliance	ACC ES Analytics Appliance	ACC ES HD Recorder
Analytics with H4A Cameras	Yes	Yes	Yes
Analytics with Third-Party Cameras	No	Yes	No
Storage Capacity (TB)	4-8	2-4	
PoE Ports	8	4	
PoE Output	8 Ports (120W total)	4 Ports (60W total)	
Recording Bandwidth (Mbps)	120	80	
Playback Bandwidth (Mbps)	50		
Pre-Licensed Camera Channels	8	6	4

What Is the ES Line?

ES HD Recorder

The ES HD recorder is a convenient plug-and-play recording solution; simply plug in PoE cameras and optionally connect the recorder to the internet. The recorder comes with four ACC Enterprise Edition compatible licenses, pre-activated and ready for use and you have the option to add more channels as long as the total bandwidth limit is observed. With bandwidth to support even multiple Avigilon 7K cameras, system bottlenecks are less likely to occur. Rules and alarms can be set up to notify you of important events via ACC Client or the Mobile app.

ES Analytics Appliance

The ES Analytics Appliance can bring together the functionality of ES HD Recorder with the power of Avigilon video analytics and allow for analytics on Avigilon and third-party cameras. You can take advantage of the six included ACC Enterprise Edition compatible licenses, pre-activated and ready for use and you have the option to add more channels as long as the total bandwidth limit is observed. The appliance also comes with four built-in PoE ports and the additional camera network uplink port. Rules and alarms can be set up to notify you of important events via ACC Client or the Mobile app.

ES 8-Port Appliance

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The Avigilon Control Center (ACC) ES 8-port Appliance is the latest addition to the ACC ecosystem, providing a cost-effective, secure and flexible solution for distributed enterprise deployments. With up to 8TB of storage and a built-in PoE switch, the ACC ES 8-Port Appliance is an easy-to-deploy solution that can expand with your deployment as it grows.

To learn more about the ES Recorder and ES Appliances, see
http://avigilon.com/products/video-security/recorders/acc-es/

Common ES Deployments

Please refer to Appendix A for a detailed description of the Avigilon ES HD Recorder and ES Analytics Appliance ports available on the ES line of products.

Standalone Installation

Common Deployments: Convenience Stores, High-End Residences

- All cameras are connected to the internal PoE Switch. IP addresses are automatically assigned via Zero Config
    - Optionally static IP addresses can be set for cameras. This could be done by reserving an IP address for the Camera's MAC address via the Appliance internal switch UI or finding it on ACC Client.
- Connect the Corporate Network Uplink Port to the corporate LAN (or directly to the Internet)
    - If a DHCP server (such as an internet router) is a part of the corporate LAN, it will assign an IP address to the ES Appliance.
    - Optionally a static IP address can be set for ES Appliance. This could be done by reserving an IP address for the ES Appliance MAC address on the DHCP server.
- Optionally, the Camera Network Port can be used to connect additional cameras to the ES Appliance.
- If the LAN is connected to the internet, live and recorded playback, along with notifications, can be accessed remotely via an ACC Client or a Mobile 3 Client connected to the internet. Alternatively, these services can also be accessed by a client connected to the LAN. Third-party central stations can also receive notifications (SMTP/SIA) by developing integrations using the ACC SDK/API.

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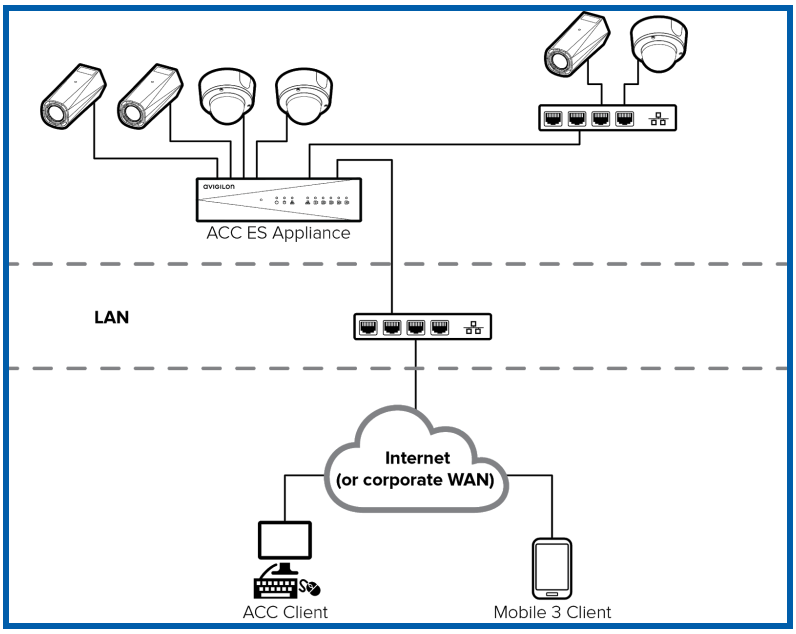
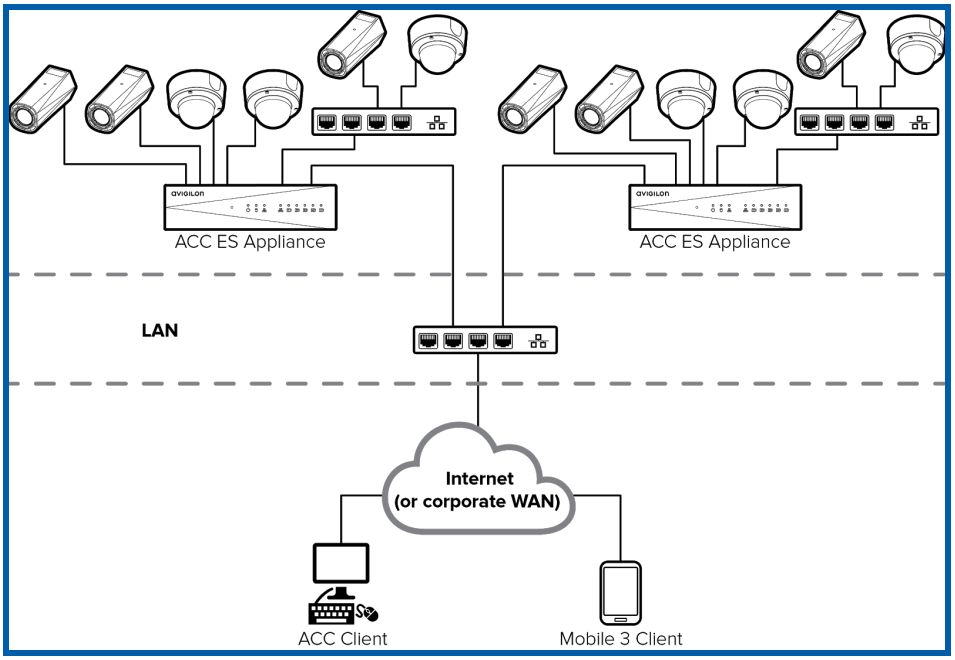


Multiple Appliance Installation

Common Deployments: Large Parking Lots, Large Retails Spaces

- Follow the same principles set out in Standalone Installation, but connect all appliances to the same corporate network.



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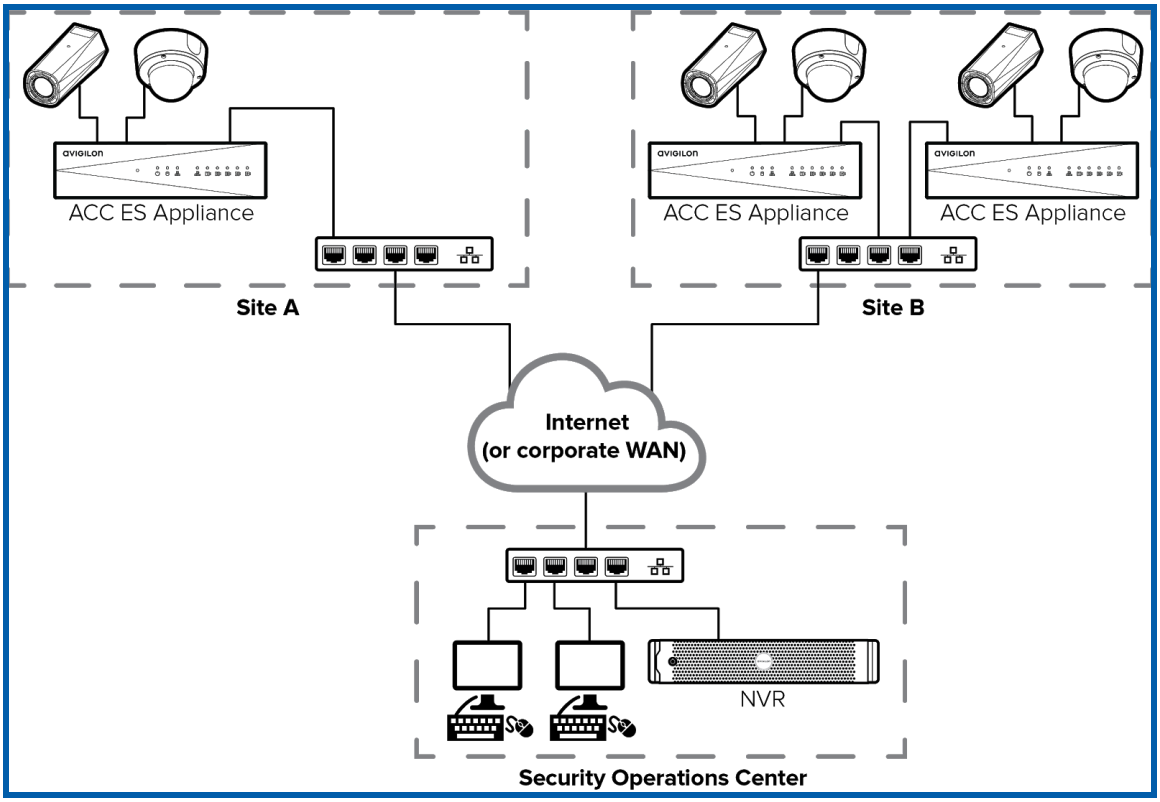
Geographically Dispersed Sites

Common Deployments: Gas Stations, Supermarket Chains, Cell-Towers, Power Substations

- Follow the same principles set out in Multiple Appliance Installation.
- ES recorders and appliances at a single location can be clustered together into an ACC site for easy administration and management or can be combined into a site family to simplify the management of a large number of sites.
- Windows Active Directory (WAD) can be used to manage sign-in for all connected ES Appliances. This allows users to sign into any connected appliance using their windows credentials. This requires that at least one Windows-based NVR is connected to the corporate network that host WAD to manage the integration.
- All sites can be remotely accessed together through the ACC Client or ACC Mobile 3 app.



Adding Redundancy

ES Appliances can be connected together to provide failover redundancy by connecting their Camera Network Ports. A failover appliance can be designated for any particular camera through ACC Client. Take note to ensure there are enough unused licenses on the failover appliance so that it will not exceed its maximum in the event of a failover.

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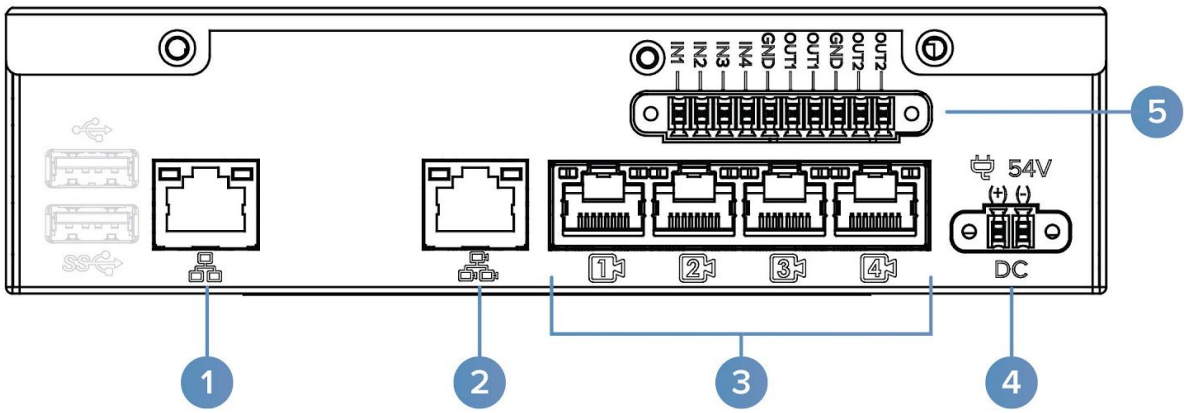
Sources

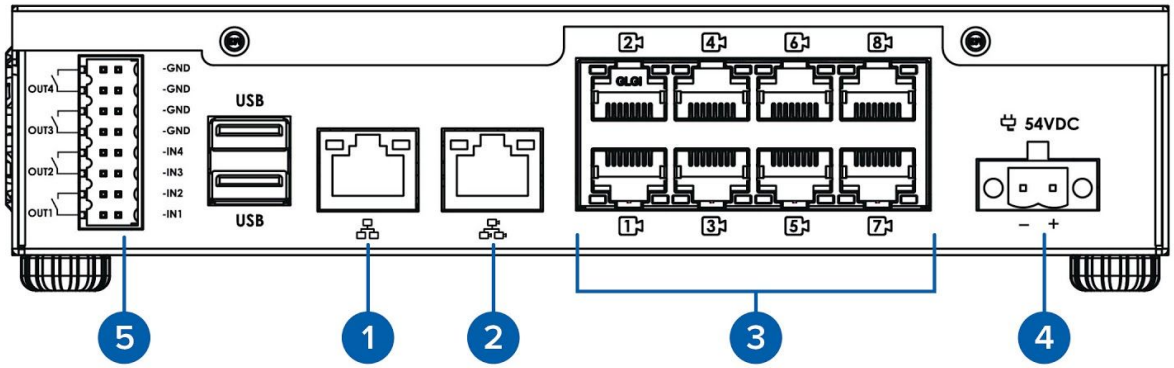
Appendix

Appendix A: Avigilon ES HD Recorder and Analytics Appliance Ports

ES HD Recorder



ES 8-port Appliance



1. Corporate Network Uplink Port — This isolated port connects to the site LAN for remote or local client connections to the appliance. Appliances that share the same LAN can be clustered into a single site from within ACC.
2. Camera Network Unlink Port — This port is used to connect additional cameras. It can also be used to connect two appliances together.
3. PoE Switch Ports — These ports connect to PoE enabled cameras on site. Cameras connected to this port will have their IP addresses assigned via Zero Config.

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4. Power Connection
5. Digital Inputs/Outputs — Connected digital inputs can be used to trigger alarms and connected digital outputs can be remotely triggered via ACC Client or the ACC Mobile 3 App.

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