Eagle Eye Application Note - AN037

Selecting the Correct Eagle Eye Networks Local Video Viewing Solution

2023-10-04 Revision 2.0

Target Audience

This Application Note is intended for Resellers (Sales and technical staff) that want to better understand Eagle Eye's options for Local Viewing Solutions and that are looking to better understand these options and how to determine the best one to use for every customer scenario. This Application Note will walk through each option and explain how they differ. Example use cases are also provided to help ensure the right selection is made.

Overview

Security Operators interacting with the Eagle Eye Cloud VMS need several ways of monitoring live video and video playback depending on the specific use case being addressed (spot monitor, manager display, video wall, browser, mobile apps, etc). Their main focus is to quickly see video without latency, and with the highest resolution and frame rate possible. Eagle Eye QL Stream is designed and developed to enhance the experience of local video viewing for all Eagle Eye users that interact with the Eagle Eye Cloud VMS on the local network.

Eagle Eye Networks supports five Local Display solutions which provide live monitoring for cameras on the local area network. This Application Note describes all of the Local Display options available with the Eagle Eye Cloud VMS, presents common use cases, and highlights optimal solutions.

Eagle Eye Local Viewing solutions:
1. Local Display via Media Shortcut
2. Local Display via Monitor
3. Eagle Eye Viewer Application for iOS & macOS
4. Third-party Integrations
5. Eagle Eye Local Display Station (EN-DS200)

Local Display Solution Options

1. Local Display via Media Shortcut

Ex. User in Local Network
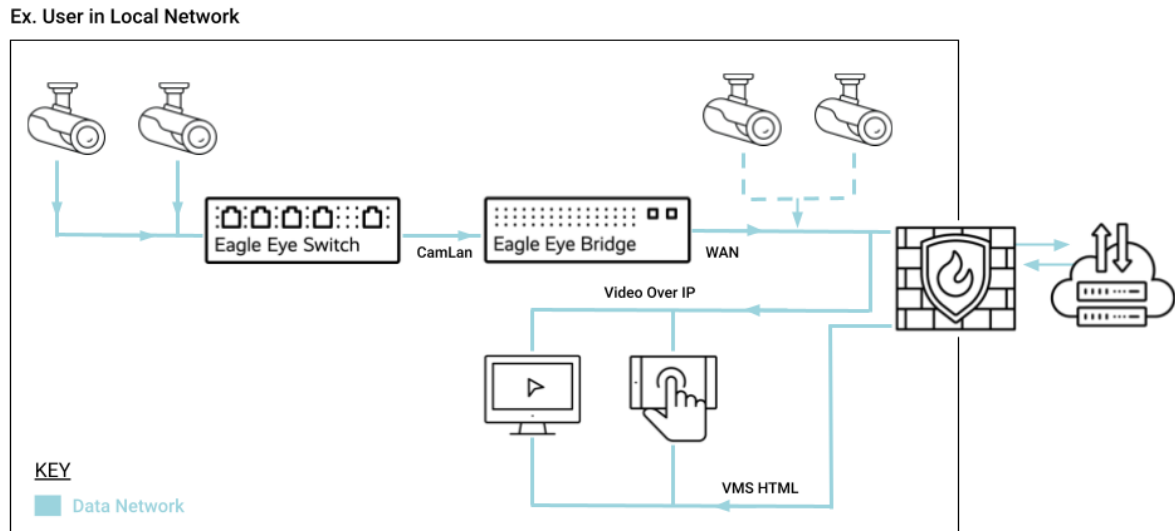
Local Display Architecture via Media Shortcut

The Media Shortcut option is provided for enhanced local viewing of video content when accessing the Eagle Eye Cloud VMS from a browser on the same local network as the Eagle Eye Bridge. This option provides the full VMS experience, including access to Video Playback, Full Video Live View, and Layout Preview Video, without requiring data transmission to the Eagle Eye Cloud. The Media Shortcut only works when the live video is accessed from the same local network to which the Bridge or CMVR is connected via the WAN.

Data passing between the CamLAN and WAN is routed through the Eagle Eye Networks' Bridge/CMVR's built-in firewall. Media Shortcut allows for improved load times, increased viewing quality, and lower latency. Customers utilizing the Local Display via Media Shortcut will be looking for a simple, low-cost method to support a single location with a smaller camera count, using only a network connection.

Differentiators:
- Zero-cost option
- Low-latency video preview and playback
- No hardware to install; simple setup (usually on by default)
- Live display shown on a browser-connected PC
- No additional cabling required
- Full Eagle Eye Cloud VMS experience

2. Bridge Local Display via Monitor

### Ex. Managers Office
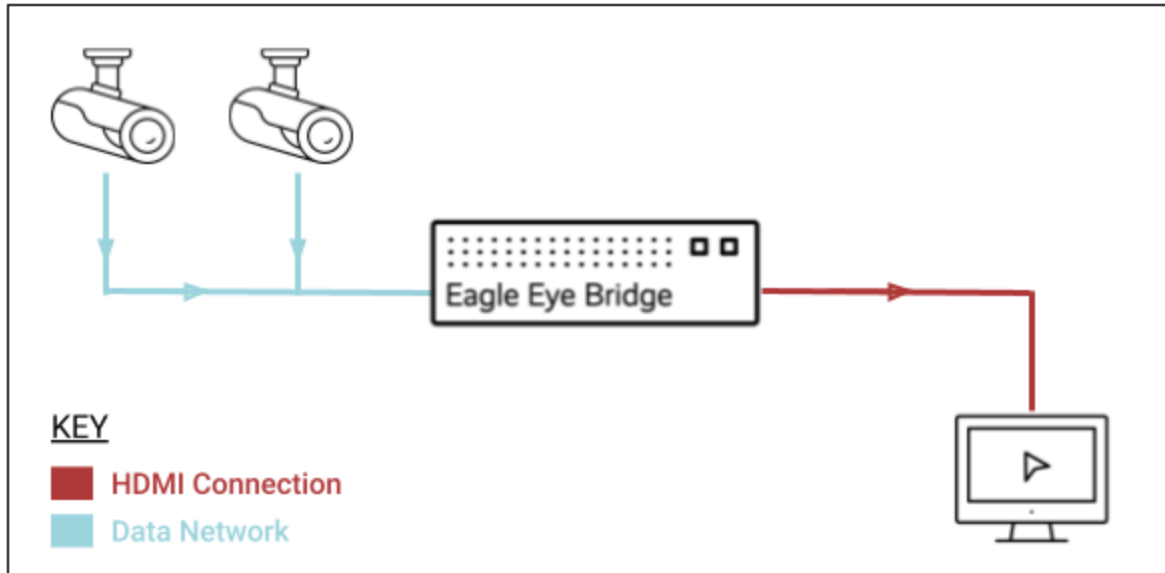
Local Display Architecture via HDMI

Local Display via Monitor provides live local video from multiple cameras via the HDMI (or in some cases VGA, DisplayPort, or DVI) connection from the Eagle Eye Bridge to a monitoring screen. This solution displays designated live video layouts on a single monitor from the cameras connected directly to the Bridge. Customers utilizing the Local Display via Monitor will be looking for a simple, low-cost method to support a single location with a smaller camera count.

Differentiators:
- No additional hardware cost
- Requires only a monitor and cabling
- Lower latency stream than normal browser view
- Resolution is limited to 640x360 (as of the posting of this Application Note)

3. Eagle Eye Viewer Application for Apple (iOS & macOS)
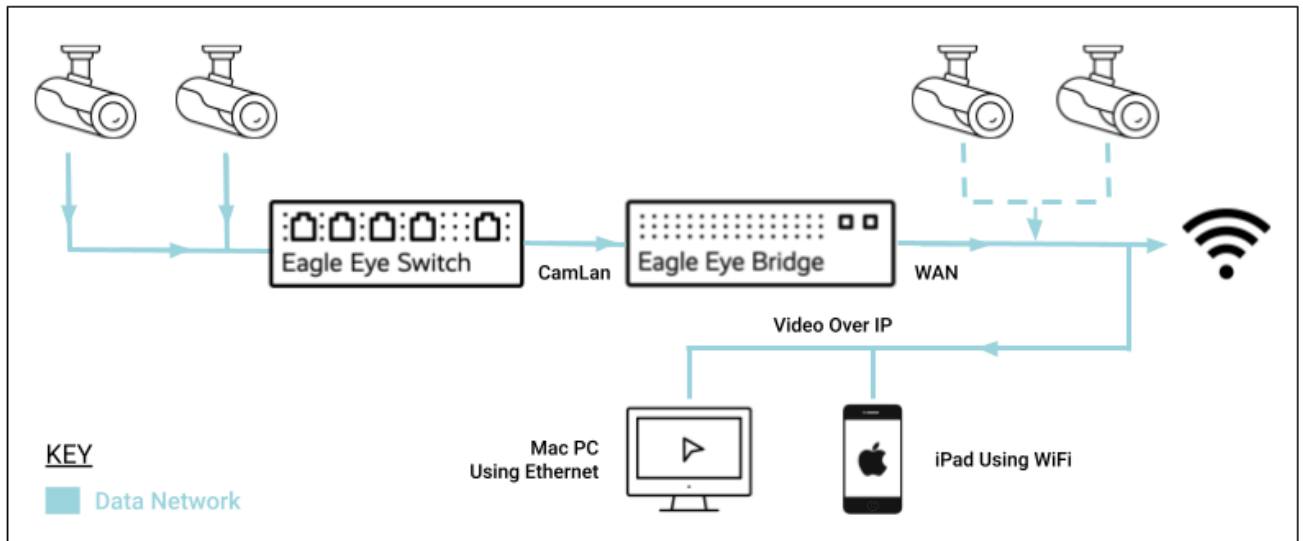
Local Display Using iOS / macOS Application Architecture

The Eagle Eye Viewer iOS application is an option for viewing local video in the user's chosen layout at the camera's full resolution, and framerate while using the application on the same network as the bridge. This option makes use of QL Stream (utilizing RTSP) and can display cameras from both the local network, and cameras that are on the CamLAN network of the Bridge.The Eagle Eye Viewer iOS Application is available for iPad, and Mac.

This option can be useful for utilizing an iPad or macOS desktop for a simple Receptionist view, or Manager station. Similar to Media Shortcut, but with the benefit of higher-resolution preview images for local cameras.

Differentiators:
- Lower latency than browser
- Full-resolution preview display
- Supports customizable layouts
- Full Cloud VMS experience
- Android (coming soon as of the posting of this Application Note)
- Cameras in Layout have limited total MP capacity (18MP for M1 processor for example; see AN061)

4. Third-Party Integration via QL Stream (RTSP) Streaming from Bridge

Ex. Office Building
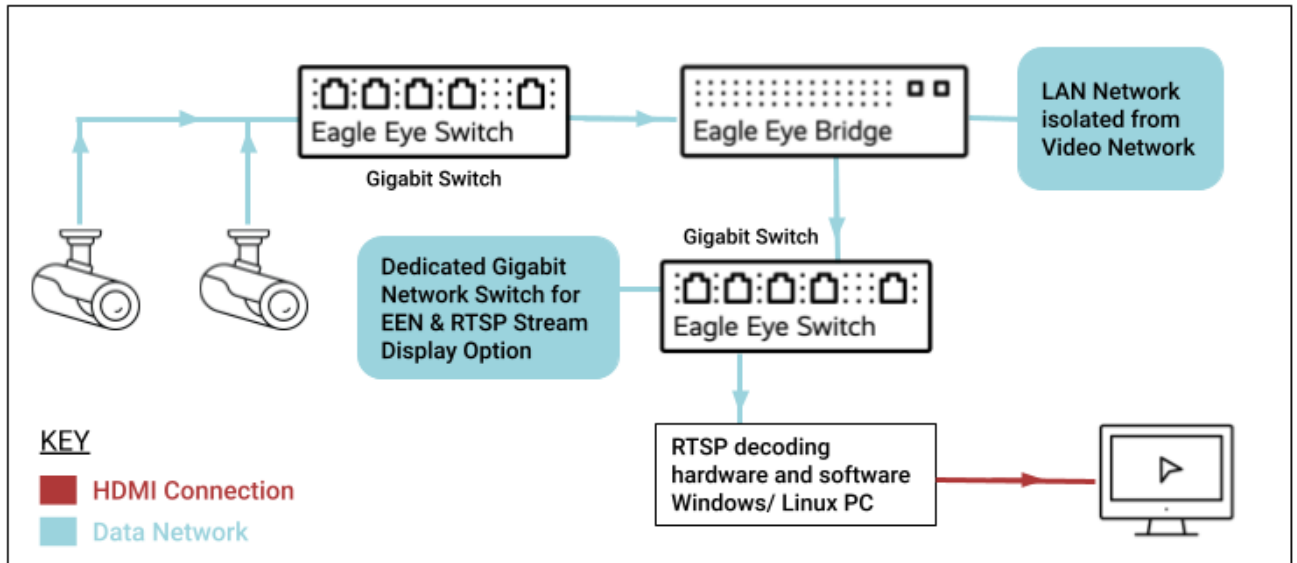
Local Display Integration With Third-Party Architecture

Eagle Eye Networks QL Stream allows for connection to many services that support RTSP Decoding. This option allows for access to the full-resolution stream of all cameras attached to the local Bridge/CMVR. These streams are accessed with a URL that can be integrated with Video Wall software, or third-party systems that can be scaled to fit the needs of the user by purchasing higher-end workstations or video servers with multiple displays and high throughput capabilities.
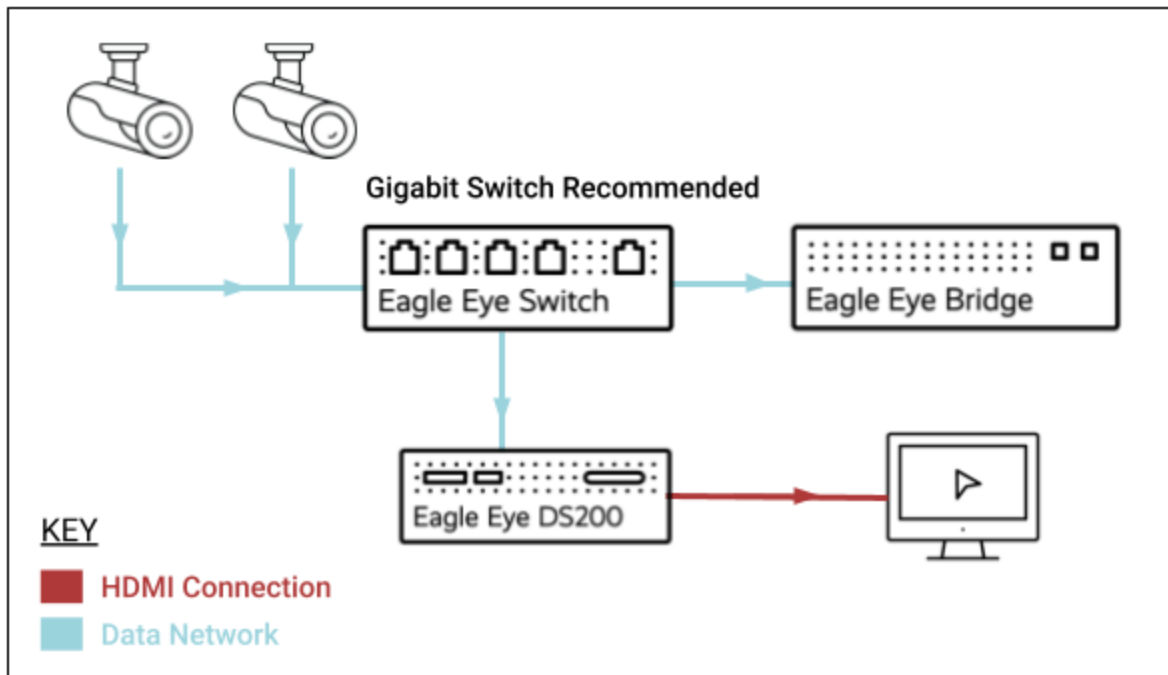
This option is best suited for a high-demand location, where access to live, local high-resolution video is imperative, such as a Security Operations Center actively patrolling camera views.

Differentiators:
- High scalability
- Highest performance
- Standards-based compatibility
- Lowest latency
- More complex setup
- No Cloud VMS experience required

5. Local Display Station (DS200)

Ex. Security Office

Gigabit Switch Recommended

Eagle Eye Switch

Eagle Eye Bridge

Eagle Eye DS200

KEY
- ■ HDMI Connection
- ■ Data Network

Local Display Station architecture

The Local Display Station option is Eagle Eye Networks' own Video Wall device, purpose-built to display local video in its full resolution on up to two monitors. The most feature-rich Local Display solution provides advanced functionality like PTZ control and tile/camera carouseling, as well as support for up to 5 customized Views derived from the user's Layouts configured in Eagle Eye Cloud VMS, that can be viewed on one or two displays. This dedicated video appliance is suited to a variety of use cases, from a simple public display or spot monitor to a professional video wall. Ongoing firmware updates provide new features and enhancements while ensuring the device has the latest security improvements.

Differentiators:
- Full resolution
- Low latency
- Supports up to two displays with up to 32 camera streams (16 per monitor).
- Offers video carouseling
- Supports customizable layouts
- Integration with Eagle Eye VMS User's top 5 layouts

Use Case Solution Chart

Use cases	Description	Eagle Eye QL Stream-enabled products				
		Eagle Eye Media Shortcut	Eagle Eye Viewer App	DS200 Local Display Station	Local via Monitor	API
Spot Monitor	Publicly displays live video - used as a deterrent or to provide the perception of customer safety			✓	✓	✓
Reception Desk Display	Displays people entering and leaving a building. Need ease of use, and may need full access to VMS features like 2-Way audio & History Browser	✓	✓			
Vehicle Spot Monitor	Provides visibility into vehicle access points and parking structures, useful for parking attendants or lot management	✓		✓		✓
Drive-Thru Vehicle Queue	Shows vehicles waiting in the order queue at a drive-thru, helpful for efficiency and accuracy			✓	✓	✓
Managers Display	Presents video of people and areas of interest on managers desk, helpful for operations, reducing shrinkage or fraud	✓	✓	✓	✓	✓
Security Patrol	Allows for on-foot patrol, with access to local camera feeds to be able to cover grounds more efficiently, and respond to situations effectively		✓			
Security Desk Display	Presents live video with PTZ control and the ability to carousel through multiple camera views for guard touring			✓		✓
SoC/PSIM Video Wall	Provides multiple live video streams on a multi-screen video wall, and may include other advanced features needed in a high security environment					✓

Local Display Via Browser

There is also an option within the Bridge Settings to enable Local Display via Browser.

This option allows you to enter the IP address of the Bridge/CMVR WAN connection as a URL in your browser and to log in with your User ID and Password. This option will display the same layouts that are available for Local Display via Monitor in a browser window from a locally connected PC. This option is limited to displaying the Preview Streams from the local cameras, similar to Local Display via

Monitor. Live Viewing requires Flash support. Note, however, that all major web browsers including Apple Safari, Google Chrome, Microsoft Edge, and Mozilla Firefox have already permanently removed Flash support since early 2021.

Additional Resources

Local Display via HDMI
- [Knowledge Base Article on Local Display via HDMI to Monitor](#)

Local Display via Browser (Media Shortcut)
- [Knowledge Base Article on Local Display via Media Shortcut](#)
- [AN002: Eagle Eye VMS Enhanced Local Viewing Using Media Shortcut](#)

Local Display Station
- [AN032: How to Sync Local Display Station with the Eagle Eye Cloud VMS](#)

QL Stream (RTSP Streaming)
- [AN059: Using Eagle Eye QL Stream for Enhanced Local Video Viewing Solutions](#)

Viewer Application for Apple (iOS & macOS)
- [AN061: Eagle Eye Cloud VMS Local Viewing Solutions Leveraging Mobile Apps, Mac Minis, or PCs](#)