



**Cloud CCTV as a Service
(Eagle Eye Networks, a Brivo Solution)**

G Cloud 15

Service Definition Document

Presented by Ajar Technology

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1. Introduction

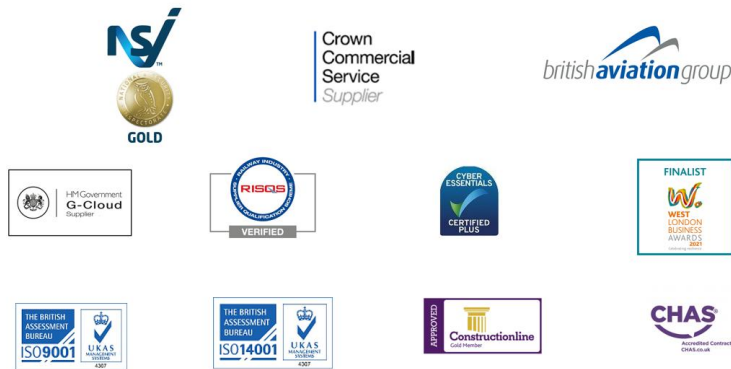
Ajar Technology is an IP Security & Audio Visual Solutions System Integrator

The company mission is to apply agnostic, strategic thought leadership to identify and implement quality user-intuitive technologies that are appropriate for the use case and that deliver a value for our client organisations.

We have been working with clients and technology partners to deliver digital transformation projects across sectors since 2005. We are proud to have worked with a number of high profile clients that are recognised as critical national infrastructure ranging from the British Airport Authority, the Home Office, Ministry of Justice, and Network Rail, to the wider UK Police Service, and significant housing projects.



We are trusted by clients, partners and vendors, holding high levels of industry accreditations. In addition we invest heavily in our teams' professional development and ensure that they hold the right levels of certification to deliver and support the solutions we provide.



Our ability to work effectively alongside clients and partners and understand their agenda for change has resulted in long standing and successful relationships. The results are demonstrably innovative; technology supports the realisation of transformational business change.

- Technology solutions providing operational excellence, driving down the end to end cost of operations and service provision whilst maintaining and enhancing service quality
- Disaggregating, re-using, optimising, sharing and modernising technologies improves productivity and efficiency by leveraging open standards and system interoperability to deliver a common technology infrastructure
- Collaborative and communicative technology solutions to equip the workforce with the tools to operate

flexibly , work remotely and to rationalise legacy and diverse technology estates

- Technology solutions providing real time situational awareness and centralised system management reporting to ensure regulatory compliance is proven and evidential

Our approach aims to incorporate and address the key challenges and enablers in social and critical infrastructure and technology. In putting together this proposal, we have been informed not only by the need to incorporate the challenges and values above, but also through our fundamental principle of adding value through innovation.

Our objective is to ensure the technologies map effectively to the principles that underpin transformational service delivery and support the push for the desired outcomes and efficiencies. There is no one solution to all needs and no single emphasis on a single technology. We continue to deliver an integration approach and one that is infinitely adaptable to the challenges that operational excellence presents. Our approach is to provide a means to exploit these 'multiple channels' of service delivery and 'multimedia' to effectively and strategically deliver the reality of genuinely transformed services and working processes. – and the outcomes that result as a consequence of these.

Audio Visual

Control rooms

Collaboration spaces

Boardrooms

Auditoriums

Meeting rooms

Security

CCTV

Access control

Biometrics

Intruder alarms

ANPR

Specialised Integrated Solutions

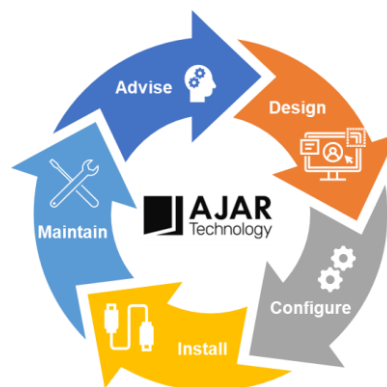
Lidar technologies

Automated public address (AI)

Military training simulators

Smart building design

Custody suites



2. Cloud CCTV as a Service

Ajar Technology's Cloud CCTV as a Service G Cloud 15 offering provides comprehensive video surveillance for demanding, single/multi-site security applications. Underpinned by the client's network and access to the cloud, our true cloud, open-platform software integrates with any existing CCTV camera and offers unlimited scalability for centrally managed, command & control, security solutions via a single GUI with storage in the cloud. Market-leading integration services ensure legacy compatibility enabling a cost-effective, phased analogue CCTV to IP migration path.

Our approach is underpinned by the notion that modern video security systems do not have to be difficult to install and complicated to use. The goal is to bring video security from the back room to your back pocket and that goal has been achieved with Eagle Eye Security Camera Video Management system. The solution has been developed specifically for the cloud from the ground up, leveraging the latest in modern technology.

Architecture

A Cloud Service isn't only about where executable software lives; it's a cradle-to-grave approach to delivering a comprehensive solution. Most of the successful cloud services in other industries have been designed and implemented specifically as a managed service, and the Eagle Eye Security Camera VMS is no different.

The reason this is important is because it is a true fresh approach, not an attempt to shove an existing on-premise video product into a cloud shape. These design considerations are reflected not only in the technical details of the solution, but also throughout the culture of the company.

The Eagle Eye Security Camera VMS is powered by multiple Tier IV datacentres that use proprietary Dual Storage technology, ensuring video is always available, even if one of the data centres suffers a natural or man-made disaster. It is important to note, the Eagle Eye infrastructure is not managed by a 3rd party vendor, it is completely managed by expert Eagle Eye personnel. This architectural and cultural decision was made in order to provide the most reliable, responsive, and secure solution possible

Eagle Eye has designed and built proprietary, on-premise devices which are put in place at each customer's location. These cloud managed devices can be thought of as a video gateway from the cameras to the cloud.

There are two types of these devices; **A Bridge**, which provides local caching of video with footage fully stored in the cloud, and a **Cloud Managed Video Recorder** (CMVR), which provides long-term, on-premise video storage in accordance with organisational and operational requirements.

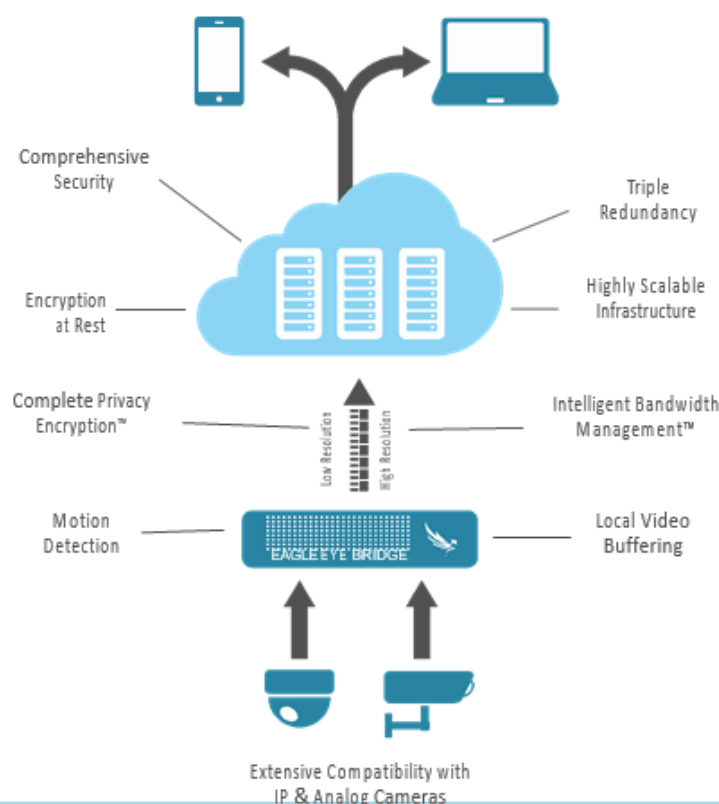
Customers who choose to deploy a Bridge onsite automatically have all of their video stored in the cloud. Those customers that use a CMVR have the option of Eagle Eye's first of a kind, Cloud-Premise Flex Storage™ technology, allowing customers to choose where their video is stored. They are no longer limited to the confines of on-site hardware. Customers can now choose to store some, or all of their video, in the cloud or on the local device.

Customers with more than one location benefit from being able to view video from multiple locations in a single user interface. They can even create layouts that show video from different locations in the same video matrix. In other words, they could choose to view all of the cash registers at the same time, even if they have stores scattered throughout the country.

The entire Eagle Eye platform is built upon the REST based Eagle Eye API. This API is available for to extend the functionality of the core product. Extensions could include integration with point of sale or access control systems, or even more in-depth integration such as video analytics for real time or post processing of video. A completely new user interface could even be developed. The possibilities are only limited by the imagination of the developer.

AJAR Technology

Most customers will use the Eagle Eye infrastructure, which eliminates the need for customers or resellers to manage servers and software. However, a few customers may choose to make use of the Private Cloud option that Eagle Eye offers. While not for everyone, some customers may find the additional overhead of server management and infrastructure maintenance worthwhile.



Eagle Eye Networks' on-premise devices are grouped into two families, Bridges and Cloud Managed Video Recorders (CMVR). The difference between the two families is one of video storage. Bridge devices do not have long-term video storage capabilities while CMVRs do. Other than that, they behave the same way.

The on-premise devices are available in a variety of form factors and capabilities - but above all, they are designed to be easy to setup. They handle all of the communication with the cloud, so there is no need to configure firewalls or routers. There is no need to get static IP addresses or configure DDNS or VPNs. The Bridge and CMVRs are essentially all of those devices rolled into one.



Once a bridge is connected to the Internet, it immediately connects to the Eagle Eye Cloud. It establishes a secure connection using Eagle Eye Complete Privacy Encryption™.

Whether the Bridge model chosen supports only IP cameras or Analog + IP, connecting cameras is simple too. The Bridge will automatically detect the cameras and configure the network appropriately. It's just a single click to add each camera. Eagle Eye builds profiles for each camera model supported, so the resolution, frame rate, and codec are set automatically when they are connected. Eagle Eye default camera configurations can be changed from a web browser or mobile app.

Eagle Eye has developed Intelligent Bandwidth Management™ technology to deal with the reality of limited bandwidth. Earlier cloud recording systems faced challenges with bandwidth consumption. Eagle Eye's unique, multi-layered bandwidth management technology means the system works with both small and large camera installations without requiring additional bandwidth.

The Bridge sends low-resolution video to the cloud immediately, usually at about one frame per second. That way there is always some video on the cloud for customers to see. Additionally, there is an algorithm that determines when high-resolution video is sent to the cloud. The algorithm uses several factors including available bandwidth, motion detection, time of day, and user demand. Once video is copied to the cloud storage, it is marked for deletion from the local cache.

The Eagle Eye Security Camera VMS supports both IP and Analog cameras. All Bridges and CMVRs are compatible with IP cameras. Select models also support analogue cameras. Eagle Eye works with most ONVIF cameras, giving customers the flexibility of hundreds of camera manufacturers and thousands of models.

Analog cameras do not require encoders. Coaxial cables connect directly to the Eagle Eye Bridge using BNC connectors. Once the camera is connected to the Bridge, it is treated exactly like an IP camera. Aside from the resolution, users will not know the difference between analogue and IP cameras.

The CMVR family of on-premise devices gives customers the flexibility to adjust the portion of video stored in the cloud and the portion stored on premise. With Eagle Eye Cloud-Premise Flex Storage™ Video can be stored entirely on premise, entirely in the cloud, or in any combination, based on the customer's security requirements. Variables include eliminating the risk of evidence or system tampering, available bandwidth, number of cameras, and the customer's application. The user has the same smooth experience with real-time video search and access, regardless of the video storage location or where the user is located.

User Interface

The Eagle Eye Security Camera VMS is accessible from anywhere there is an Internet connection. There are two options for using this system, either a modern web browser or a mobile app. The user interface (UI) is intuitive and does not require extensive training. In fact, it uses design patterns that are familiar to most consumers.

The user interface provides access to both live and recorded video. If the camera has a microphone, audio is also supported. The UI allows users to define Layouts, which group cameras in a way that makes sense. Arranging the video tiles is accomplished with drag and drop and changing the size of a video tile is just a click of the mouse.

The Eagle Eye Security Camera VMS provides motion detection analytics, independent of the camera's capabilities. It allows users to search video based on when there was activity, using a visual indicator called the history browser.

The user interface allows customers to configure alerts. Alerts can range from a camera going offline to motion during non-business hours. Alerts can be delivered via email or SMS message. Smart Search Functionality enables quick searches for people attributes, clothing, vehicles and other objects such as bags.

Companies can view their live and historic video, with audio from mobile devices or any major web browsers from anywhere in the world. Businesses can set up email and SMS alerts for important items spanning activity,



They can also easily specify appropriate permission levels for different users to view and download video. The system is web/browser based, with role based management, therefore access can be given to different departments of the business for both security and operations management.

The VMS can be used for traditional security and loss prevention, as well as to achieve broader operations and business goals, such as training, verifying compliance, reducing slip and fall risk, optimizing product placement, store quality, raising customer service levels, and verifying operational hours.

Camera Subscriptions

The Eagle Eye Cloud Security Camera VMS is delivered via a few simple subscription options. These subscriptions provide the cloud management system and cloud recording. All subscriptions include Web and Mobile Access. Each camera managed by a Bridge will need a subscription.

For example, if you have a site that has 5 HD cameras running at 720p and you want to store 7 days of video, you will need 1 Bridge and 5no. subscriptions for the HD1-7 subscription. If you don't see a subscription that fits your needs, just ask us. We have other options available with more storage and higher resolution, please refer to the price list for the "off the shelf" configurations currently available.

Resolution	Analog Resolution upto 640 x 480		720p Resolution upto 1280 x 720		1080 p	
Cloud Storage	7 days	30 days	7 days	30 days	7 days	30 days
Subscription	SD-7	SD-30	HD1-7	HD1-30	HD2-7	HD2-30

Subscription Pricing Notes

The pricing is calculated on a per connected device basis on a pre-paid monthly or annual subscription model according to camera resolution and storage duration. There is a discount for a prepaid annual subscription as per the pricing document accompanying this submission.

There is an initial "Location Set up Fee" which is a one off cost at the beginning of the subscription according to the initial requirements.

Resolution

SD/Analogue	Resolution up to 640x480
HD1	Resolution up to 1280x720 (HD – 1 Megapixel)
HD2	Resolution up to 1920x1080 (HD – 2 Megapixel)
HD3	Resolution up to 3 Megapixel
HD4	Resolution up to 4 Megapixel
HD5	Resolution up to 5 Megapixel
HD10	Resolution up to 10 Megapixel

If the camera resolution falls between 5 Megapixels and 10 Megapixels, the pricing for that camera device will be the pricing for a 10 Megapixel device.

Storage

The storage in the cloud is calculated on a per camera/device basis and ranges from a minimum of 7 days up to 5 years. Additional/longer term storage is available upon request.

Multiple bridges and CMVR devices can be stacked as required to equate to the number of camera devices on any customer CCTV estate.

3. Solution Dependencies

Standard Solution Assumptions

All required power, structured cabling, containment & networking provisions will be provided by others. Any required network and power points are to be within 1m of the proposed solution installation locations.

Access to power and data for connectivity, or Ajar issued network solutions can be provided, such as 4G / 5G router connectivity.

Existing camera hardware is fit for purpose and compatible with the solution.

It is assumed that the customer will provide for the appropriate networking and port connections in addition to the internet connection to access the cloud.

It is assumed that any existing cabling to be reutilised is in full working order.

All strengthening works for any mounting walls will be provided by others.

All required ground and/or civil works will be provided by others unless otherwise stated.

All required specialist plant and/or access equipment will be provided to Ajar Technology on a free of charge basis unless otherwise stated.

Free and unrestricted access will be provided to all required installation locations prior to and during installation works via the use of a goods lift as required. Any specialist access accreditations will be issued free of charge to Ajar Technology personnel.

All installation works will be conducted during normal hours working (Mon-Fri 09:00-17:30) unless otherwise specified. Out of hours works can be quoted upon request

All installation works are concurrent unless otherwise stated

All proposed installation locations are to be provided by/agreed with the client prior to any installation commencing unless otherwise agreed

On-site parking will be provided free of charge to Ajar Technology

All installation works will take place at a single client site unless otherwise stated

It is assumed that any existing client equipment to be repurposed for the project is in full working order and is provided to Ajar Technology free of charge

It is assumed that any third party equipment supplied by others is in full working order and is provided to Ajar Technology free of charge

It is assumed that all making good/post completion decorative works are to be completed by others.