vemotion

White Paper

A Buyers Guide to Vemotion Video Transmission Solutions

Abstract

This paper outlines the components and options available to those looking to put together a Video Streaming Solution using Vemotion products. It breaks down the process into stages and at each stage guides the thought process of potential buyers to ensure correct options are selected.

You may also wish to refer to our Guide to Video Streaming Solutions White Paper outlining the concept of Video Streaming.

BUYERS GUIDE

Vemotion's core strength and unique characteristics are its highly optimized and efficient compression techniques combined with intelligent transmission protocols.

With an underlying engine of such performance, applications have been developed to deliver this power to customers in an easy to use and reliable way.

All Vemotion products are built on the same technology platform. This ensures a consistent and high-quality user experience needing minimal effort.

In simple terms there are three elements to a Vemotion system: -

1. ENCODERS which capture the video, compress and transmit to the streaming server.

2. STREAMING SERVER handles all the video streams coming in from encoders and forwards them to viewers.

3. VIEWERS are where users log in to see the video streams coming from the encoders.

What you need to consider

There are some important considerations to make before choosing a video streaming solution. These apply whether you are starting from nothing or choosing which product to buy.

Give us a call to discuss your requirements or expand on any of these topics. We will help you to find the right product for your situation.

CAMERAS – one of the first decisions to make is what kind of camera do you need? There are many cameras on the market but Vemotion is compatible with most of them. Simply choose the right camera for your operational purposes and leave the rest to us.

Vemotion encoders can support multiple cameras at the same time. We also support analogue and IP cameras with no change of hardware. Once you have chosen your cameras, you then choose the Vemotion encoder which fits your requirements.

NETWORKS – know which networks you need to transmit across? (Cellular such as 2G/3G/4G/ADSL/WIFI. /Satellite/another network). This will enable you to choose the correct Vemotion encoder and hardware configuration.

ON BOARD RECORDING – how much storage do you need? Do you want to record high quality video on the encoder itself? If you do not want to record, and only transmit, there are Vemotion encoders for that too.

LOCAL VIEWING – How and where do you need to see cameras connected to the encoder? (Encoder vicinity/WIFI/Monitor-Keyboard-Mouse)

Vemotion encoders support all these options - and simultaneously too - providing unparalleled modes of operation.

DEPLOYMENT – where is the Vemotion encoder to be deployed? In a harsh environment, in a confined space? Vemotion encoders come in different shapes and sizes so you can match the hardware to the job in hand. Vemotion also offer bespoke hardware options if standard does not meet your requirements.

Once you are clear on the above you can select your encoder to suit your situation.

Encoder

The video encoder is a highly efficient video compression and transmission tool that allows Vemotion to transmit quality live video the network reliably and effectively. It is responsible for maintaining communications with the Vemotion Streaming Server and delivering live video from any camera in highly optimized form, therefore making efficient use of network bandwidth, whilst at the same time providing local recording from the cameras attached at very high quality such as HD.

Encoding parameters can be controlled and managed so that the optimal settings can be found for any particular network conditions. A very low bitrate transmission will save on data costs or, where bandwidth allows, the encoding quality can be increased to take advantage of higher transmission speeds and deliver high quality live video images. An operator can quickly and easily change the encoding parameters, either working locally to the encoder or remotely from a central location.

Vemotion Video Encoders can capture video from almost any video source, including analogue and IP cameras all at the same time from a single box.

Vemotion can also provide integration to many DVR/NVR installations, allowing video feeds from any cameras attached to a CCTV system to be brought into the Vemotion Streaming Server and made available for remote viewing by users in the field.

Once the encoder is deployed, it requires a network connection. This can be provided in many ways, depending upon the situation, but a common way is to provide a 3G, 4G or GPRS SIM card. This will use the mobile network to connect to the internet and then the encoder can begin sending live video data to the Vemotion Streaming Server.

The encoder is not just for transmission. It can record any number of cameras attached to it to local storage meaning no matter what the network conditions are, you always are assured of capturing the images to disc at the highest quality possible. These high-quality images can then be replayed remotely or even downloaded by the remote user, giving the best of both worlds.

After the encoder you need to choose your streaming server.

Streaming Server

Streaming servers have two mode options: -

1. Normal operational modes: the server is installed 'in the cloud'. This means the server is on a hosted network. The network can be hosted by the customer by Vemotion. The latter has the advantage of leveraging Vemotion's data centre services. (see data centre).

A key differentiator of Vemotion is that using a hosted server in the cloud, negates the need for specific SIM cards to operate in each encoder. Some systems state that each encoder must have a static or fixed IP address SIM card to operate. These are both expensive and inflexible and are not required to operate a Vemotion system if the server is hosted in the cloud network.

2. Advanced operational mode: you can choose to run the server on the encoder itself. This provides point to point connections to the encoder, or both remote and point to point at the same time. This unique feature lets you connect to the encoder box locally - even without a backhaul network available.

Viewer

Once you have chosen your encoder, and you know where you will install your streaming server, then all that is left is to decide which method of viewing the live streams you need.

Vemotion has its own bespoke video viewing software applications running on a variety of devices such as iOS, Android/Windows O/S.

From the viewing software you can log in to the streaming server, see authorised streams, and carry out a multitude of operations including viewing live streams, controlling PTZ cameras, reviewing recordings and downloading footage. All securely and effectively over any given network.

Whilst using a Vemotion software application to view live video, the video is encrypted. Vemotion V-TX transmission protocols deliver a superior viewing experience compared to other video applications.

You also have the option of using other applications or Video Management Systems to view Vemotion streams. Vemotion Vproxy software effectively converts the V-TX protocol into open standard ONVIF and RTSP format.

You can also use a thin client browser to log in and view live streams from any browser, natively by using the Vproxy.

Please visit the Products Section on our website to select options for your project

If you require help, would like to know more about Vemotion's products or capabilities, please use the contact details below and we will be happy to discuss requirements for your own situation.

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