

FireLight™

BANDWIDTH EFFICIENT VIDEO STREAMING PLATFORM

BEST-IN-CLASS VIDEO COMPRESSION & TRANSMISSION
FOR MISSION-CRITICAL APPLICATIONS



Reliable Real-Time Video, Anywhere

What Is FireLight™?

FireLight™ is a user-friendly platform designed to manage camera feeds and stream real-time video over unreliable networks, including cellular, satcom, mesh and radio, even in the most challenging conditions.

It delivers reliable, bandwidth efficient video compression and real-time streaming, without the need for technical expertise.

Built for demanding environments, it maintains uninterrupted streaming, ensuring you can view and manage your remote assets from anywhere in the world, where conventional systems fall short.

Unmatched video quality over any given bitrate and the highest level of performance – it works when you need it most.

What Gives Us the Edge?



Reliable Wireless Video Transmission in Any Environment

FireLight™ ensures that real-time video is transmitted from remote cameras over any network, whether onshore, offshore, on the ground, or airborne. It provides instant access to critical footage, ensuring frontline teams and remote command centers receive essential visual intelligence and situational awareness without disruption.



Unmatched Performance in Limited Bandwidth Conditions

Other video systems may struggle with network congestion, signal loss, and bandwidth constraints, often failing in critical moments. **FireLight™** overcomes these limitations with highly tuned adaptive video encoding, dynamically adjusting compression settings to maintain a secure, reliable feed.



Seamless, Low-Latency Streaming for Operational Control

Designed for high-stakes operations, **FireLight™** delivers real-time video with ultra-low latency, ensuring remote teams, command centers, and operational leaders can react instantly and make informed decisions without delay. Whether deployed for government operations, defense missions, border surveillance or industrial monitoring.

Critical visual intelligence to maintain control in high-pressure, rapidly changing environments.

CONTACT US FOR A LIVE DEMO :

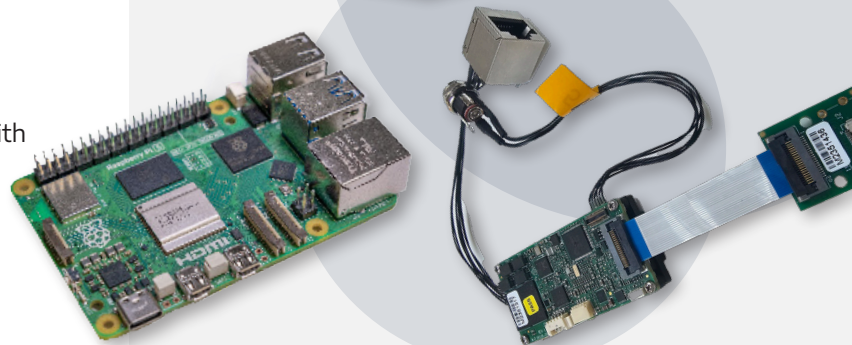
info@videosoftglobal.com | +44 (0) 333 242 0563 | www.videosoftglobal.com



Deployment & Integration

FireLight™ can be deployed as:

- **Software-Only Solution** – Install on Raspberry Pi, Jetson Nano, embedded computers, third-party routers for seamless integration.
- **Turnkey System** – Use with Videosoft's encoding hardware for an optimized plug-and-play setup.
- **On-Premise or Cloud-Based Deployment** – Works with on-premise or cloud servers, ensuring flexible scaling and security to meet operational needs.
- **Adaptable Integration & AI-Driven Optimization** – Layer onto existing infrastructure, leverage AI-driven enhancements, and maintain full control over your technology stack, ensuring seamless deployment and future-ready adaptability.



Key Capabilities

- **Bandwidth efficient Video compression** – Streams from just 1 kbps, reducing data costs and maximizing efficiency in bandwidth-constrained environments, built to perform across a wide range of scenarios.
- **Dynamic Compression & Transmission** – Optimized encoding dynamically adapts to network conditions or user-defined settings, ensuring reliable low-latency video at any bandwidth, if there's a signal, we will get images through!
- **Multi-Network Flexibility** – Delivers real-time video across satellite, cellular, mesh and radio, without reliance on fixed infrastructure.
- **Seamless Integration** – Deploy as a standalone software solution or with Videosoft's encoding hardware for a complete system. Enables turnkey deployment, remote rollout, and cost-effective scalability. Integrate with third party camera systems, AI, VMS and C4I platforms.
- **Total Recall Technology** – Retrieve high-resolution pixels from the edge for analysis and event confirmation, minimizing data costs while preserving critical details.
- **Military-Grade Security** – FIPS-compliant AES-128/AES-256 encryption safeguards data transmission, ensuring secure and resilient communication across all networks.



The trusted choice for mission-critical sectors where real-time, uninterrupted video is non-negotiable.



Defense & Security

- Situational awareness for ISR operations
- Unmanned systems (UAVs, ROVs, UGVs, USVs) with BVLOS capabilities
- Dismounted soldier systems
- Secure, encrypted video feeds over low-bandwidth tactical networks



Energy & Critical Infrastructure

- Remote monitoring of pipelines, remote offshore installations, and industrial sites
- Resilient video transmission in extreme weather conditions
- Integrated CCTV and VMS solutions



Drones and Aviation

- Live stream from airborne platform
- Extending range of LOS operations
- Enable BVLOS video streaming over satcom
- Commercial and Military applications



Emergency Response & Public Safety

- Real-time field intelligence for first responders
- Incident management and disaster response coordination



Government & Border Security

- Border surveillance and security – monitor remote crossings, maritime borders, and high-risk areas
- Combatting smuggling and trafficking – Deliver live video feeds to enforcement teams.

The **Edge Gateway software** is the main video and data processing component of the solution and is the powerhouse of the system. All Videosoft hardware gateways come complete with Edge Gateway software, and it can also be sold separately for integration into many other hardware platforms such as Raspberry Pi, embedded computers and third-party equipment such as routers.

You connect **multiple cameras** and other devices to the edge gateway which will then **record video, audio and data locally in full quality and on demand** (or alarm activated), stream live to the remote user or Video Management System over wireless networks.

Our **two-way communication** protocol means that full functionality can be maintained such as PTZ control and alarm notifications, either within our software or via the client VMS.

The Gateway will **encode the video before transmission using highly optimized and efficient compression** techniques specifically designed for low bandwidth and low latency. From **as little as 1kbps** it will also adapt the video encoding dynamically in response to **network bandwidth conditions** ensure reliable and real-time video delivery.

A unique feature of the gateway is that **multiple streams can be transmitted simultaneously**, each having its own bandwidth level and encoding parameters, which can also be changed dynamically by the user. Each stream can be set to a **selected area of interest** in the main scene to provide more detail from parts of the camera image.



Whole Scene.....>



Single Camera +
FireBird F-100 Encoder



.....> Areas of Interest

The **Total Recall™ feature** enables you to retrieve high-resolution images or videos from the recordings on the gateway when the encoded live stream fails to provide the necessary level of detail. This functionality proves invaluable when identifying unique characteristics or easily recognising registered markings.

All streams and data from each product can be viewed and managed remotely by **Videosoft apps running on Windows, Android and IOS** or additionally, they can be passed to third-party VMSs for example to be incorporated as part of a wider system.

The system can run in full mode with central server requirements or can be run in point-to-point mode for direct connection to video clients.



Edge Gateway Capabilities

In addition to video capabilities, the gateway offers extensive compatibility with a wide range of devices. It's not solely limited to video; there exist abundant opportunities for connectivity and functionality.



Video
cameras



Audio
Devices



GPS



Remote Control
Systems
(serial and IP)



IOT
Sensors



Alarm
inputs



Analytics
services

**Bespoke interfaces
can be added:**

Contact us for more information
if you have a service type you
would like to add.

Technical Features:

Configuration Interface:	Local Web interface and remote manual and automatic configuration upload
Inputs:	IP Cameras, Analogue Cameras, USB Cameras, Serial and IP I/ Os, Video files, Audio, Analytics, Alarms (IP, Onvif, Serial). See Videosoft hardware products for specific physical interfaces
Output Streams:	Multiple simultaneous video encoded streams Multiple simultaneous data streams (for each input type) Multiple areas of interest for allocating bandwidth to parts of a scene
Video Encoding Features:	High efficiency and performance for low bandwidth applications
Variable Encoding Rates:	1kbps to multi-Mbps, varying resolutions and fps, user-definable Videosoft's unique technology – dynamic, automatic encoding adjustments to match available network bandwidths Full native mode (no transcoding) for high rate streaming direct from camera
Recording Features:	Full rate recording of all input types in native formats Local disc - internal or removable Encrypted video files Remote playback and download Total Recall™ hi-res image or video retrieval during live viewing or playback
Encryption and Security:	Recorded data encrypted Stream encryption Full SSL certificate management FIPS compliant AES128 bit and AES256 encryption
Viewing Software:	Windows Videosoft Client Viewer Android / IOS RTSP MJPEG Onvif APIs available All major VMS supported

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