Seneca xCompress Video Compression Solution

intel.

ARROW   :Seneca

Maximize Video Surveillance Capabilities with xCompress Video Stream Optimizer

Enable High-Resolution Video Streaming with Enhanced Storage Efficiency

Video surveillance is an indispensable tool for businesses and governments to ensure safety and security. Round-the-clock surveillance using high-resolution cameras is crucial to responding promptly to security incidents. Managing the vast amounts of data generated poses many challenges for stakeholders. These include addressing high compute and storage requirements, increased bandwidth for streaming and transmission, and privacy concerns. In addition, complying with regulations that mandate the retention of video for extended periods further increases operational costs and the complexity of data management.

Arrow brings to market the Seneca xCompress video compression solution, a hardware and software stack designed to overcome the challenges associated with operating mission-critical surveillance installations. It offers an innovative solution that helps reduce the high storage and network bandwidth costs needed for transmitting high-resolution video files. The solution enables video compression of up to 90%*, maximizing file transmission, minimizing storage requirements, and allowing longer retention while maintaining video quality.
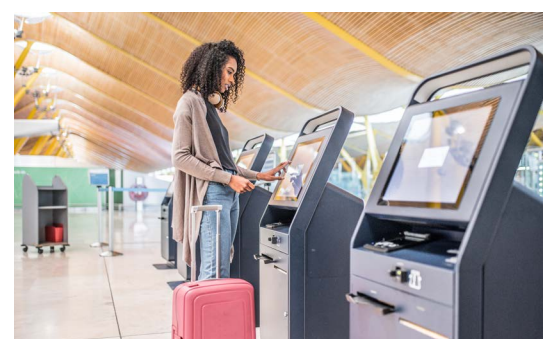
The xCompress video stream optimizer appliance, powered by the xCompress video compression software, offers efficient file compression compatible with an industry-leading video management system (VMS). It encodes camera streams at a low bit rate while retaining resolution and frame rate. The compression of video streams before transfer to VMS reduces the storage and processing required in the NVR (network video recorder) lowering bandwidth and allowing transmission of large files otherwise deemed too large to send. Overall the xCompress suite reduces storage hardware and networking costs and adapts to poor network conditions while ensuring system security. The ready-to-deploy solution helps build robust and efficient surveillance applications scalable to meet future needs and enable new use cases at the edge.

Use Cases and Applications

Remote video transmission
– LTE, satellite communications

Remote storage
– ATM, oil & gas

Local storage
– Transportation, media van

Large storage
– Cannabis industry, education (6 months +retention)

Cloud storage

*Compression will vary based on camera configurations

Benefits

– Lowers storage investments
– Provides long-term retention with existing storage
– Reduces cost of video transmission
– Enables high-quality remote video applications

Key Features

– Turnkey video compression solution
– Secure compression with FIPS certification (FIPS AES-256)
– Up to 90%* compression per stream
– Only solution in the market that supports multiple CODECs (H264, H265, MJPEG, etc.)
– Full remote software configuration
– Compatible with RTSP/ONVIF protocol
– Ruggedized versions available
– Easy to deploy centralized model

Solution Overview

We can tailor the xCompress solution to suit business requirements and diverse deployment scenarios. The video compression takes place at the edge, with options for motion, quality, and resolution customization based on business needs. In addition to supporting raw recordings at the edge, compressed recordings can be stored centrally or at the edge. Even in unfavorable network conditions, xCompress can modify the video stream to obtain the desired bitrate required for video transmission. Additionally, the system provides video stream encryption, a feature not typically found in traditional video solutions. Without the need for static IP addresses, camera placement at the edge is simple, operators can fully enable firewalls, and configure all systems centrally.

Deployment Scenarios

– I**n a standard NVR deployment**, video compression cuts down storage and network bandwidth requirements, leading to reduced costs and longer video retention

– **In a remote camera deployment**, video compression improves video quality and transmission speed over cellular networks while also reducing transmission costs

Featured Hardware

xCompress Desktop Appliance

– **Semi-Rugged:** VESA and DIN mount
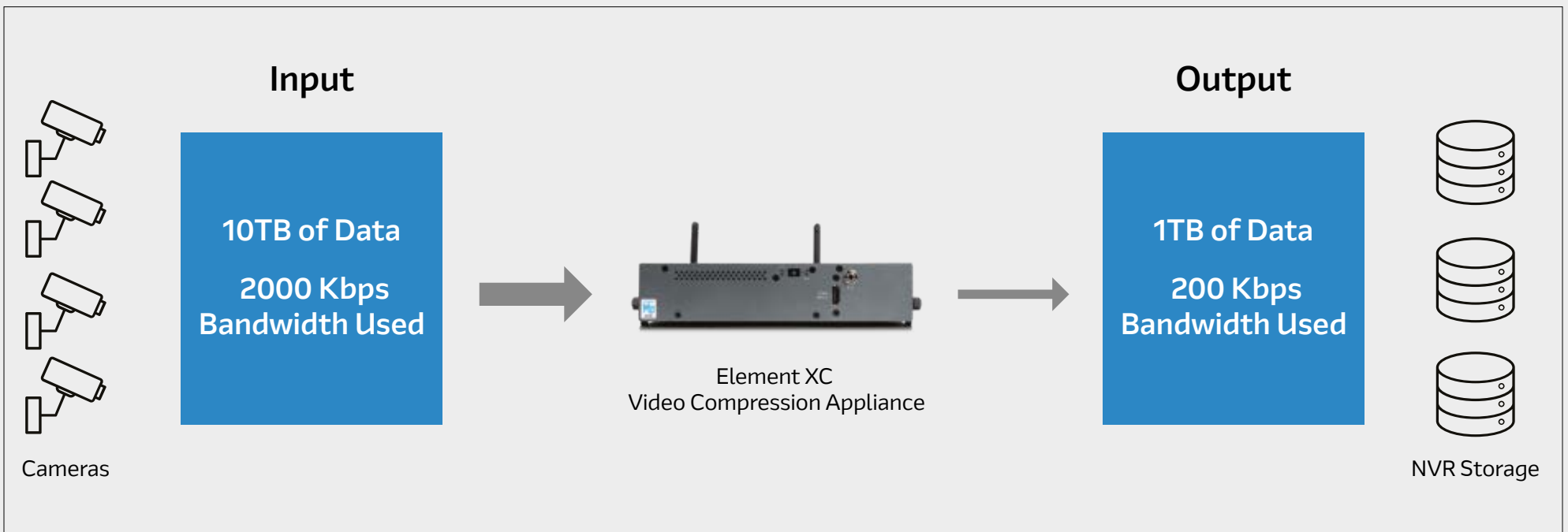
– Traditional use

xCompress Tower Appliance
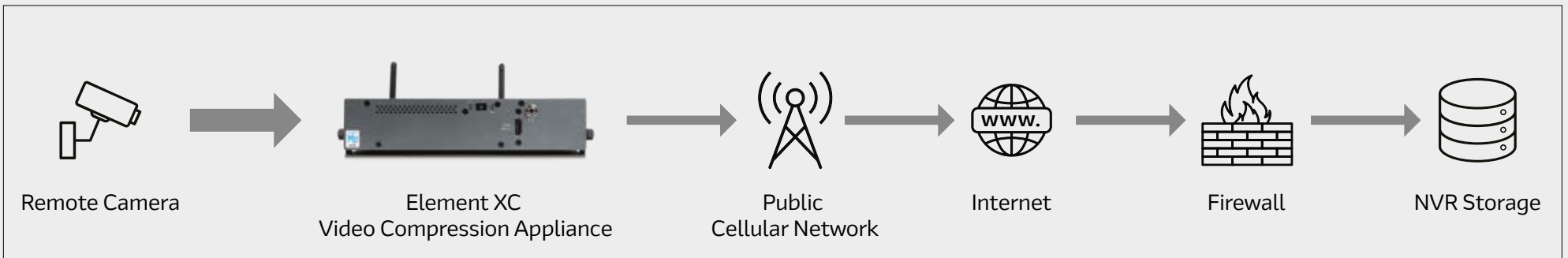
– Single/dual GPU

– Light-commercial use

xCompress solution just won an honorable mention in the "ISC West New Product Showcase" Video Surveillance Data Storage category.

Solution Architecture

Standard Network Video Record (NVR) Deployment

Input

10TB of Data

2000 Kbps
Bandwidth Used

Element XC
Video Compression Appliance

Output

1TB of Data

200 Kbps
Bandwidth Used

Cameras

NVR Storage

Remote Camera Deployment

Remote Camera | Element XC
Video Compression Appliance | Public
Cellular Network | Internet | Firewall | NVR Storage

Solution Stack

Seneca
– xCompress Desktop Appliance
– xCompress Tower Appliance
– xCompress Software

Intel
– Intel® Core™ i3, i5, i7, or i9 Processor

Arrow Intelligent Solutions
– **Products:** For edge, on-premise, or cloud based solutions

– **Product services:** Design, support, and professional services

– **Manufacturing services:** Supply chain, integration, and logistics

Features and Specifications

SYSTEM		
Product	xCompress Desktop	xCompress Tower
Processor	Intel® Core™ i3, i5 or i7 Processor	Intel® Core™ i3 or i9 Processor
OS	Windows 10 IOT Enterprise 2019 LTSC	Windows 10 IOT Enterprise 2019 LTSC
Memory	8 GB (2 x 4 GB)	16 GB (2 x 8 GB)
Software	Video Compression Channel License	Video Compression Channel License
Networking	2x 1GbE	2x 1GbE
Video Outputs	4x HDMI Ports	4x HDMI Ports
Graphics	Intel® UHD Graphics	Single or Dual NVIDIA A2000
USB	4x USB 3.1 Gen2	1x USB 2.0, 2x USB 3.1 Type C
Warranty	3-Year Hot Swap	3-Year Hot Swap
MECHANICAL		
Form Factor	Small Form Factor	Tower
OS Drives	1x M.2 SATA	1x SATA
Power Supply	60 W AC Adapter	460 W
Dimensions - (L x W x H)	6.69 x 4.27 x 1.75 in 170 x 108.4 x 44.5 mm	6.95 x 16.3 x 19.11 in 176.6 x 418 x 518 mm
Weight	4 lbs. (1.8 kg)	22 lbs. (10 kg)

ARROW

Contact Information

Email: IntelligentSolutions@arrow.com

Online: arrow.com/AIS

ARROW

Five Years Out