

Bridging Low Latency Video Streaming with Machine Learning from Commercial to Defense

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videon
simply moving media

Videon and Amazon Web Services (AWS) have partnered to bring commercially available low latency video distribution with real time edge analytics to small form factor and low power devices that can be used by the warfighter under the most challenging battlefield situations.

You know AWS, but who is Videon?

- Twenty years of leadership in digital video
- Developed and deployed commercial products using Qualcomm Snapdragon silicon-on-chip (SoC) technology.
- AWS partner for deployment of video streaming products and solutions.
- Technology is designed and manufactured in the US
- Solutions have passed penetration testing by AWS
- Developed and deployed avionic grade video solutions
- AS9100 certified

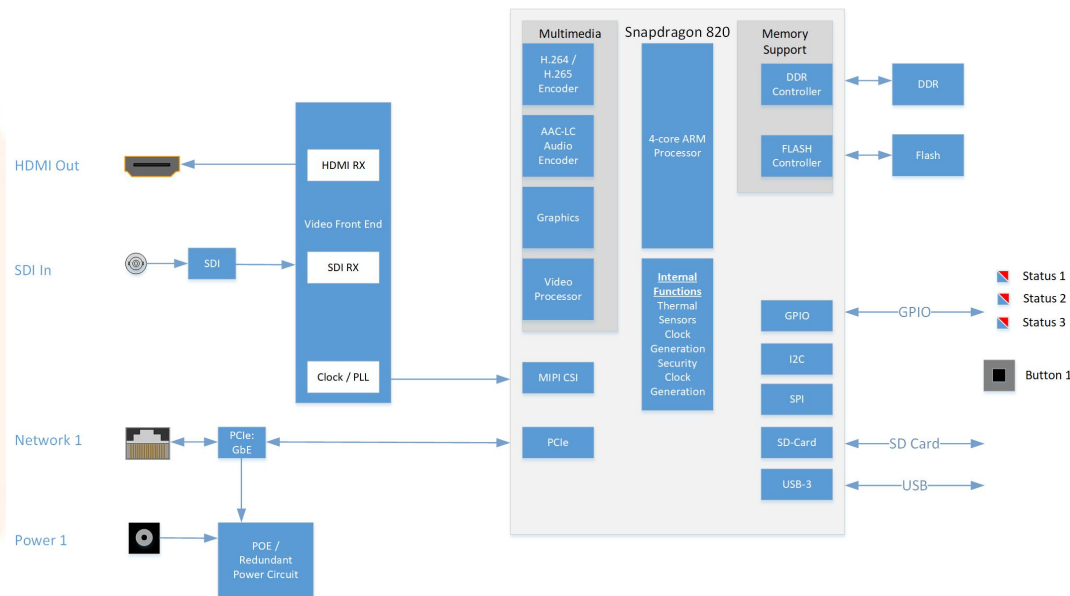


Commercial Cell Phone Technology Is Inflexible

Problem: Qualcomm technology has been developed with a dedicated camera that does not allow user selected video sources.

Impact: Broad application of Qualcomm video technology to the warfighter is limited

Solution: Videon developed unique IP that alters the Qualcomm a/v pipeline in order to support external video interfaces (HDMI & SDI)



Warfighters Need Real Time Video Analytics

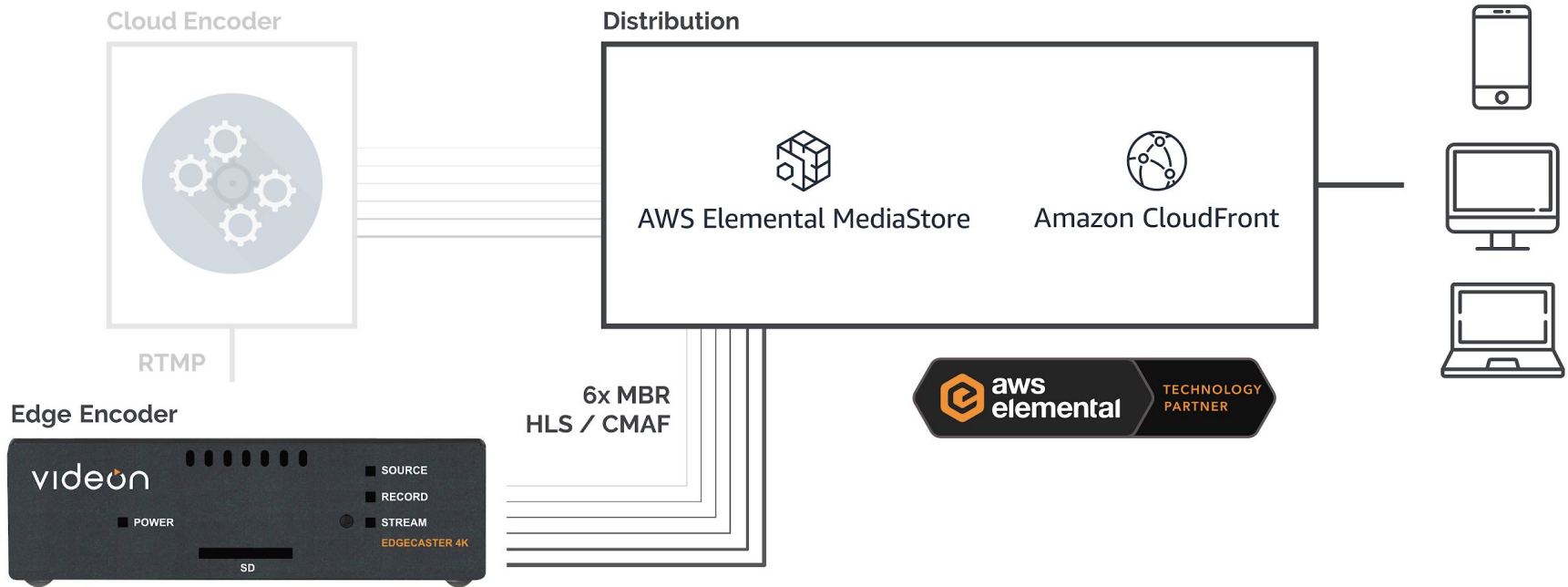
Problem: Video analytics enabled by cloud computing, while powerful, has latency

Impact: The warfighter is faced with tactical delays

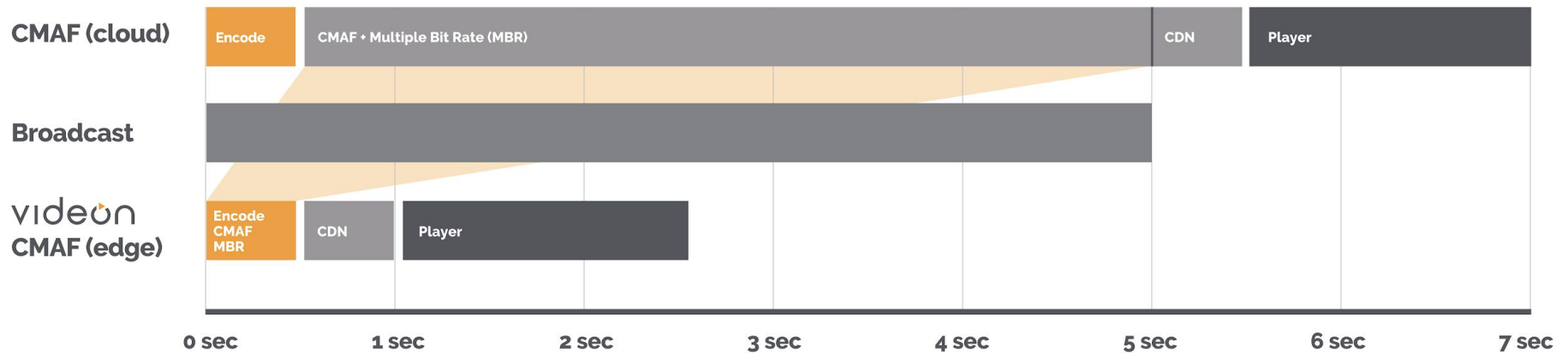
Solution: Videon's IP with Qualcomm unleashes the immense computing power of the device, enabling Cloud Compute to move to the tactical Edge and into the hands of the warfighter

- Low Power: Core Encoding ~7W
- Small form factor
- Available CPU
 - Snapdragon 820 - Quad Core, <25% of one core used
 - Snapdragon 845 - Octal Core, <15% of one core used
- Low latency video streaming
- Low latency AI/ML video analytics:
 - Object detection
 - Object tracking
 - Object identification
- Metadata tagging
- Custom applications

Solving Latency On The Edge

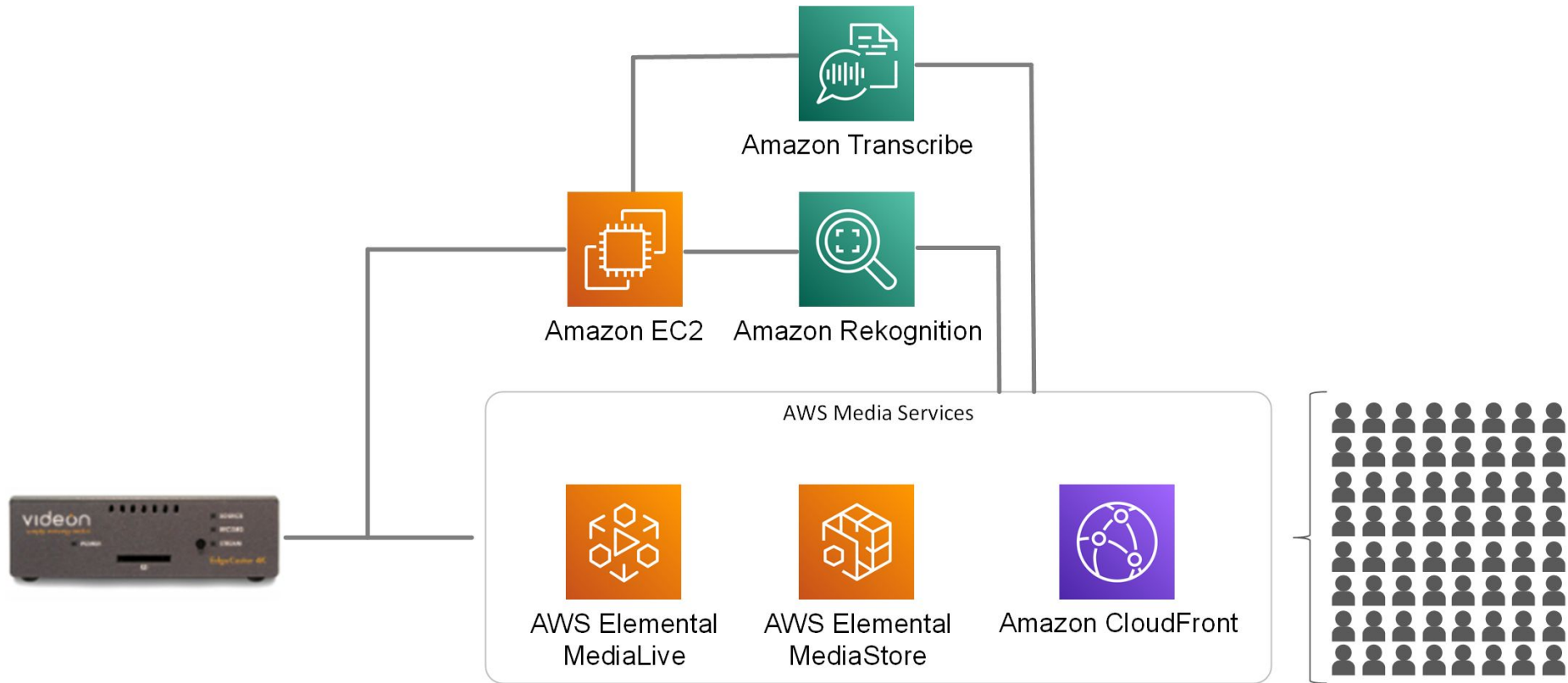


Reducing Latency with Edge Encoding

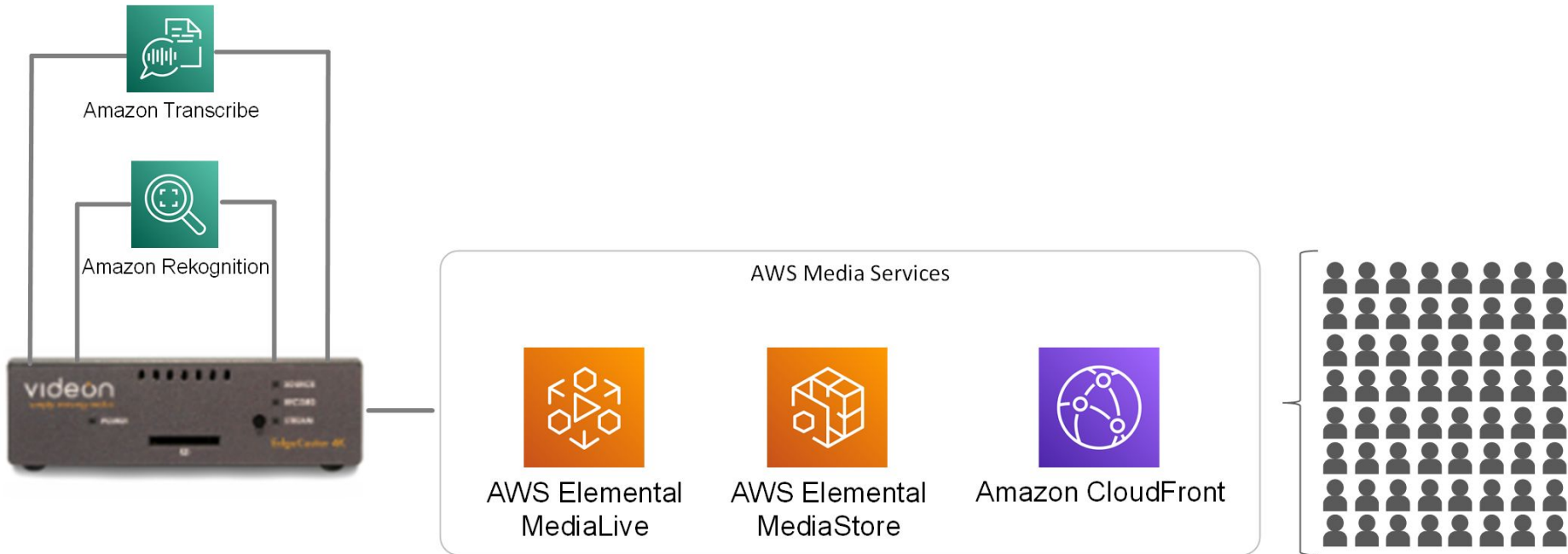


Videon's technology supports latency as low as 350ms glass to glass

Current Cloud Transcribe & Rekognition Workflow



Edge Assist AWS Transcribe & Rekognition



Qualcomm and 5G Technology

- Commercial solutions assumes the “wire” always exists
- Battlefield scenarios need options and redundancy
- Videon is partnering with Qualcomm to bring 4G and 5G technology to our solution

No Connectivity, Snowcone Solves The Problem

- AWS enables the cloud to be brought to the battlefield with Snowcone
 - Snowcone is an edge compute, edge storage, and data transfer device
 - Snowcone is ruggedized and weighs 4.5lbs
 - Snowcone contains 8TB of storage
 - Snowcone is secure

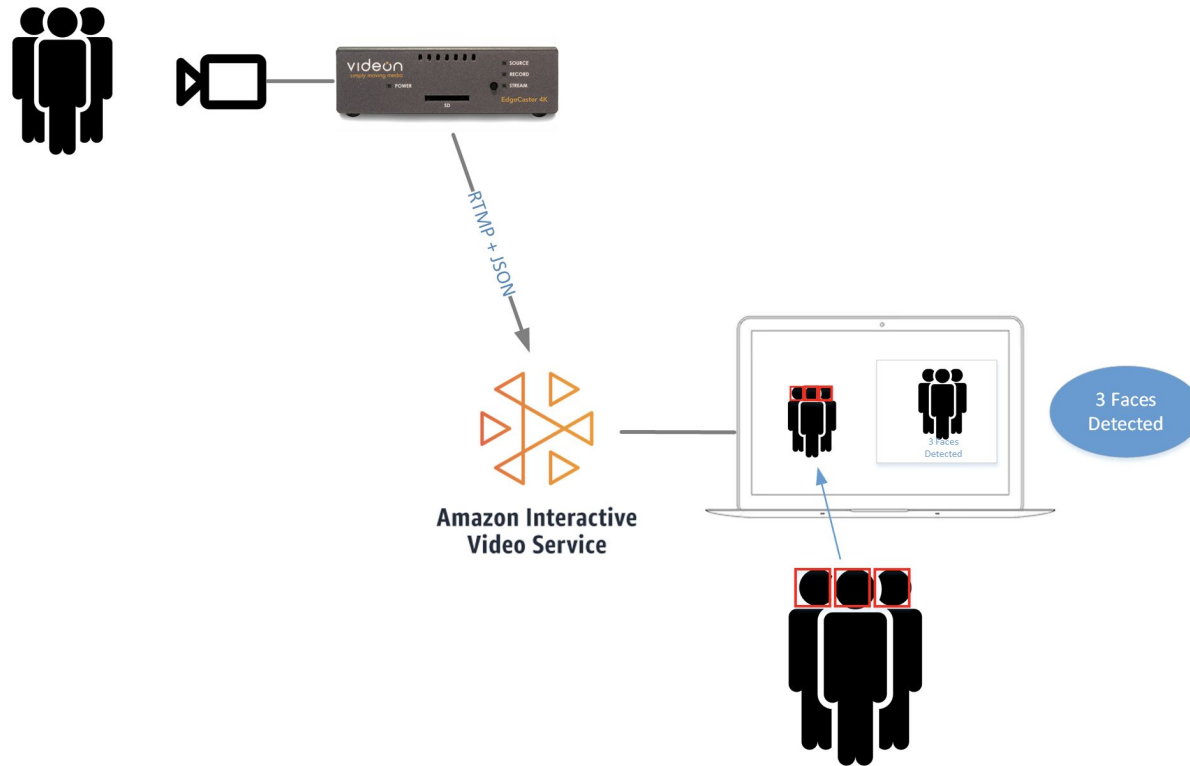


Low Latency Demo



<https://bit.ly/3ljXTWk>

Object Tracking Demo




<https://bit.ly/3nd21ry>

Commercial Technology For Defense Applications

- Videon has developed commercial technology that can be ruggedized and applied to defense applications
- Videon's partnership with AWS enables a broad range of capabilities
- With Qualcomm Snapdragon technology, Videon enables AWS capabilities to be placed in the hands of the warfighter

Videon seeks your guidance so that together we solve pressing problems that place the best possible technology in the hands of the warfighter.



Todd Erdley
CEO and Founder
Mobile: 814.883.5932
E: todd@videon-central.com

Paul Brown
President and CTO
Mobile: 814.883.8686
E: paul@videon-central.com

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