ADLINK TECHNOLOGY INC.



eBrief

Real-Time Video Decoding for Surveillance

Video surveillance technologies are widely used in urban security systems today. Intelligent video analytics are an important aspect of video surveillance technology, utilizing image recognition processing to identify the existence of security threats that have already occurred or may occur in the future and alerting users in real-time.

The growing need for real-time video analytics and the resulting increased demand for video processing capacity present a big challenge to video surveillance providers today. Real-time video analytics requires that videos be collated and processed immediately, providing meaningful, actionable data that can be used in real-time.

The ADLINK Media Cloud Server (MCS-2040) Application Ready Intelligent Platform (ARiP) is an 8-system high density 2U server, providing high performance video decoding capabilities and application prototypes with ADLINK MediaManager middleware for video analytics, allowing customers to take advantage of its GPU hardware acceleration capabilities and shorten time to market.

System Overview

Media Cloud Server (MCS-2040)
Processor : Intel® Core™ i7-4790
@ 3.60GHz (up to 8 CPUs)
Memory: 16GB DDR3 1600 MHZ
Graphics: Intel® HD Graphics 4600



System Features

- 8-system high density
- High C/P ratio platform with integrated GPU to accelerate video processing
- ADLINK MediaManager middleware provides end-to-end video server prototype solution to speed up product development

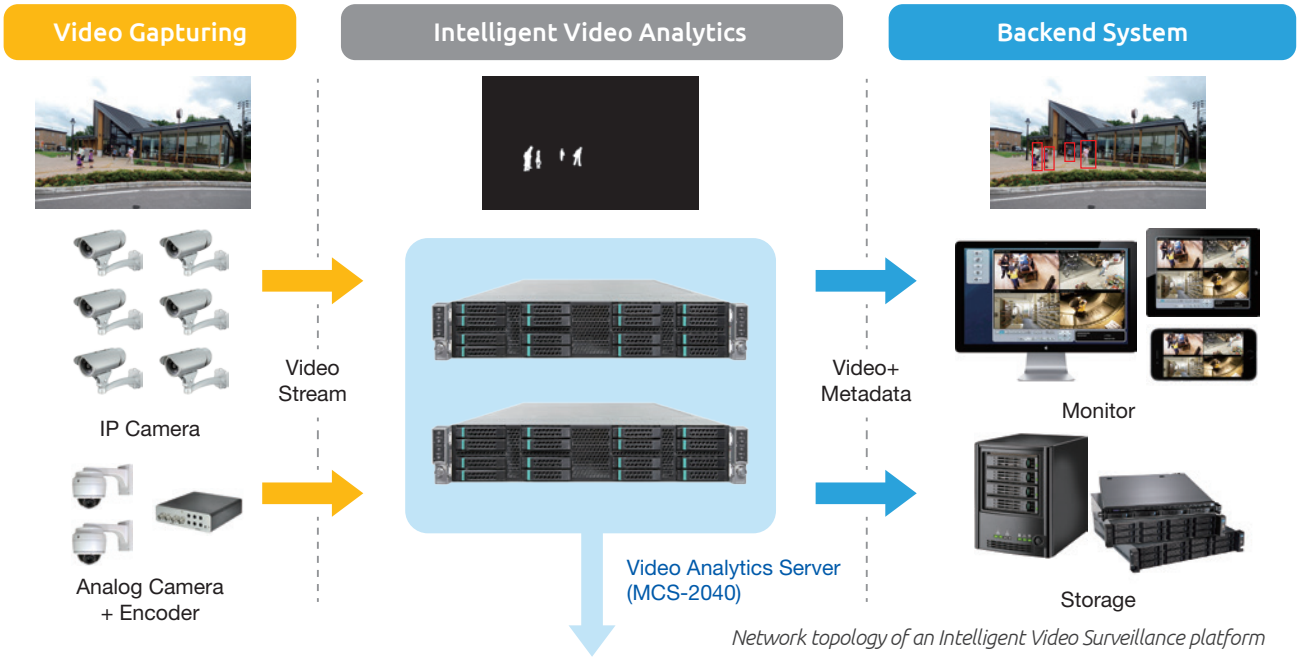
Supported Codec

- H.264
- MPEG-2
- MJPEG/JPEG
- VC-1
- MVC

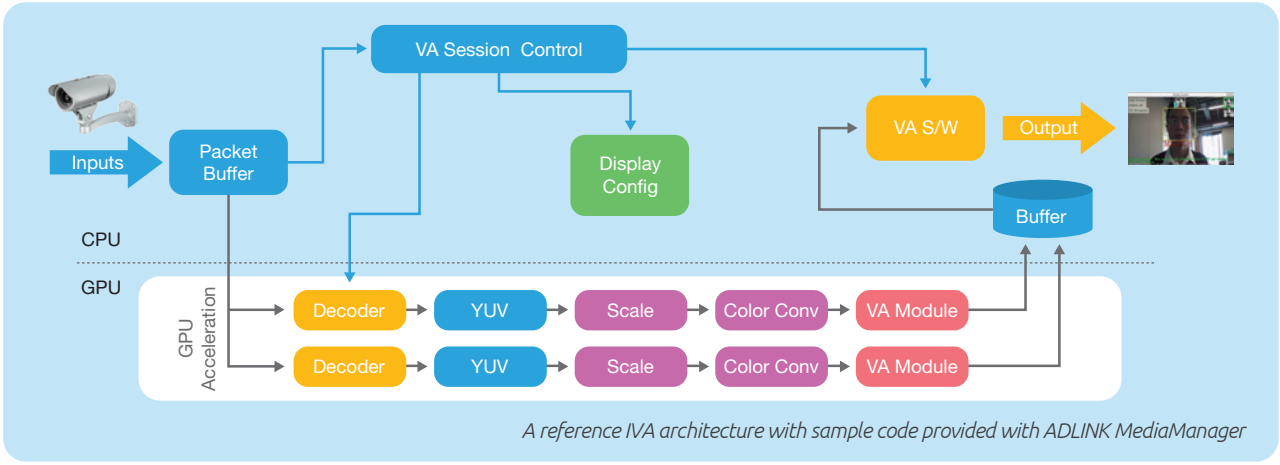
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Video decoding for intelligent video surveillance
Up to 256 channels real time HD video analytics

- Integrated GPU to accelerate decoding, scaling, color converting and video analytics
- Reduced CPU loading with integrated GPU and MediaManager middleware frees up resources for further video analytics application use
- High Performance data sharing between CPU and GPU



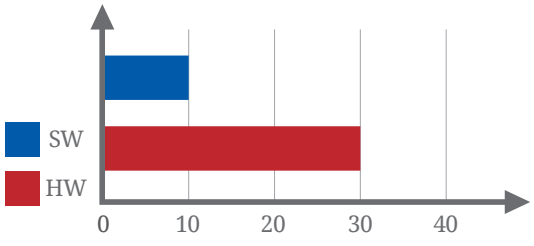
Network topology of an Intelligent Video Surveillance platform



A reference IVA architecture with sample code provided with ADLINK MediaManager

Real-time HD decoding performance comparison (per system)

The chart on the left shows a performance comparison between hardware decoding on an ADLINK MCS-2040 Media Cloud Server and pure software decoding on a general purpose server with the same CPU. The MCS-2040 is a dedicated platform for video processing applications and uses the integrated GPU in the Intel® Core™ i7 processor enabled by ADLINK MediaManager to optimize decoding, resulting in performance 3 times higher than that of pure software decoding. If the entire platform is compared, the 8-system 2U MCS-2040 has 24 times the decoding performance of a single system general purpose server.



Pure software decoding (max. 10 channels)

Hardware decoding with ADLINK MediaManager (max. 30 channels)

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