



## SOLUTION BRIEF

# PIXTREE High Density IP Monitoring System – Enabled by Artesyn

### All-IP system supports next generation video delivery

- IP input based stream analyzing and error check module
- Remote video with alarm streaming
- MPEG-2/AVC(H.264)/HEVC (H.265) service monitoring
- Reduced CapEx/OpEx (50% reduced CapEx)
- Reduced rack space (75% less)
- Integrated system management
- Provides additional functions (PVR/DVR, jitter check, etc.)

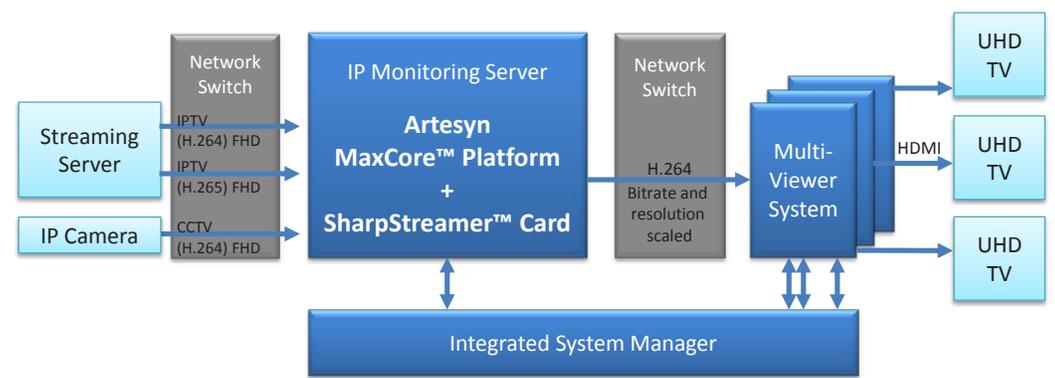
### Introduction

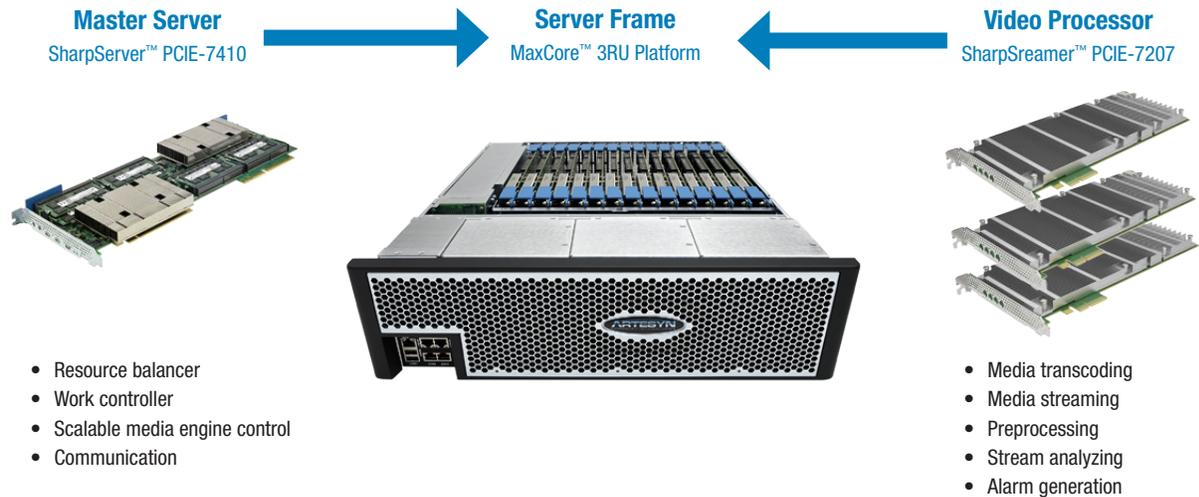
The explosion of IP video has created changes in every part of the network. Carriers, OTT providers and social media companies are all implementing networks designed to deliver increased video content. In support of the movement to IP video, PIXTREE has introduced their high-density, all-IP monitoring solution for providers of video content. Built on the MaxCore™ PCI Express based compute platform from Artesyn, the PIXTREE IP Monitoring System delivers unprecedented density in stream monitoring while dramatically reducing costs for operators.

### Monitoring Change

The PIXTREE IP Monitoring System combines all of the functions needed for video monitoring into a single system. Previous monitoring systems often had separate components for monitoring, viewing and display, and management. These functions are now available in a single, innovative and scalable unit with up to 448 channels monitored real time in a single 3U system.

The heart of the system is the high-density IP monitoring server. This element supports Multicast or Unicast input in either UDP or RTP input stream format.





Stream Error detection and alarm generation is provided on each input stream. The system can monitor Full HD streams from either server or camera inputs in MPEG-2, H.264, or H.265 formats and compares inputs to transcoded outputs. Input streams are transcoded locally to convert resolution and bitrate for the targeted output device and the MultiViewer remote monitoring client. Monitoring functions include QoS check, with stream error detection in accordance with TR 102 290 Priority #1, and jitter check for UDP and RTP use cases. QoE checks include Video Black detect, Video Still detect, and Audio mute detect.

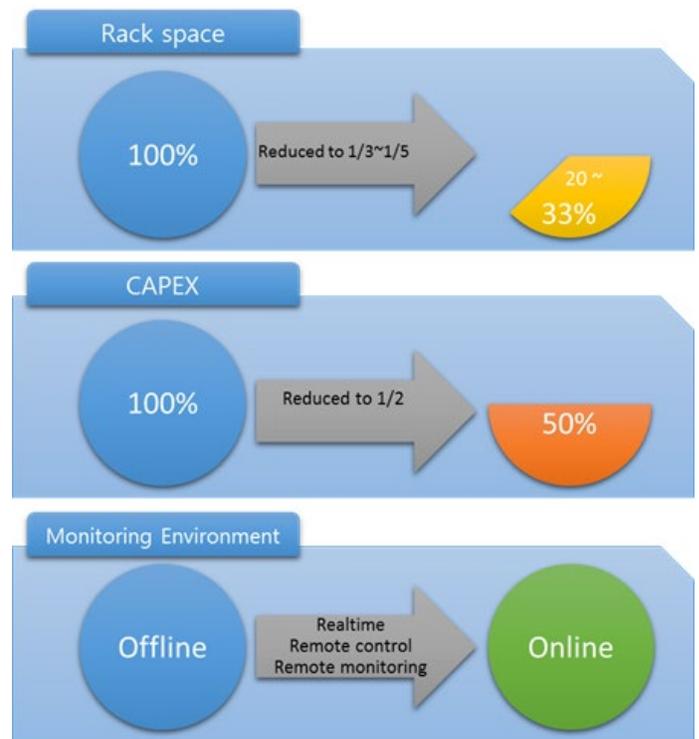
The Multiviewer element provides a configurable mosaic layout. The scalable output can process as many as 32 full HD outputs per add-in card. In addition to MxN layout control the system allows position changes within and between monitors using simple drag & drop movement. The system also allows simultaneous display on multiple monitors. Errors can be displayed through Red-framing, Alarm, and video x2 upscaling.

### Cost Savings

In an analysis of a 200-stream input, considerable cost savings were found in all aspects of the system when compared to previous generation, multi-component systems. The multi-component system occupied almost two complete racks, making monitoring for thousands of streams impractical. By contrast a 200 stream capability in the PIXTREE system occupied only 18RU, a 75% reduction in space. System cost was reduced nearly 50% in capital outlay while operating cost dropped dramatically due to the use of low power processors for transcoding jobs. At the same time considerable functionality is added in the form of multi-output options, QoS checking, and output display and control options.

### Summary

When compared to previous multi-components systems the PIXTREE IP Monitoring System provides CapEx & OpEx savings while increasing scalability and reducing space. By moving away from the old paradigm of SDI input and HDMI output the all-IP system can live anywhere in the network. It has the ability to monitor streams near a camera or broadcast source for increased security or sit at the edge of the network to closely monitor output stream quality. Additional uses of the IP Monitoring system include multi-screen control rooms, surveillance systems, multi-feed news rooms, and other places where multiple monitors are displayed. The Artesyn compute platform provides unprecedented density and when combined with PIXTREE software, enables CapEx and OpEx reduction while increasing flexibility and performance.



## About PIXTREE

PIXTREE, Inc. is a digital multimedia solution provider established in July 2002 by a group of world-class audio / video / system experts in the MPEG industry. PIXTREE provides specialized solutions and equipment to customers in the multimedia streaming and broadcasting industries with cutting-edge technologies such as their Cloud Media Platform solution, High Density Software Defined Video Processing platform, UHD 4K/8K broadcasting systems and Mobile Multimedia Framework solutions. The PIXTREE High Density IP Monitoring System is the first all-IP monitoring application product integrating the High Density Media Processing platform and the Software Defined Video Processing platform.

[www.PIXTREE.com](http://www.PIXTREE.com)



## About Artesyn Embedded Technologies

Artesyn Embedded Technologies is a global leader in the design and manufacture of highly reliable embedded computing solutions for a wide range of industries including communications, military, aerospace and industrial automation. Building on the acquired heritage of industry leaders such as Motorola Computer Group and Force Computers, Artesyn is a recognized leading provider of advanced network computing solutions ranging from application-ready platforms, single board computers, enclosures, blades and modules to enabling software and professional services. For more than 40 years, customers have trusted Artesyn to help them accelerate time-to-market, reduce risk and shift development efforts to the deployment of new, value-add features and services that build market share. Artesyn has over 20,000 employees worldwide across ten engineering centers of excellence, four world-class manufacturing facilities, and global sales and support offices.

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