



2110 Based OB Solution

Mobile Application

IP SHOWCASE THEATRE AT IBC – SEPT. 14-18, 2018



The Challenge

- Design a COTS based infrastructure solution for
- Customers core requirements:
 - COTS based infrastructure - Arista
 - Standards based –ST-2110
 - Mixed Reference Environment – Black Burst and PTP
 - Signal agnostic – HD 1080i 60 and UHD
 - Future-ready - HDR (High Dynamic Range) and 1080p
 - Simplified wiring– multi-mode and single-mode fiber



The Challenge

- Technical requirements:
 - 8+ Simultaneous Productions
 - As Much IP at the Edge as Possible
 - IP Switchers
 - Very large IP multi-viewer requirement 960x80
 - Extensive IP Connectivity with Video & Audio Processing
 - Remote Production Requirement
 - Flexible FPGA processing



The Challenge

Key that the users don't know or care about the technology



How did we do it?

- COTS IP Core
 - Arista 7508R
 - Customer required COTS core
 - Large Single Chassis allows for simple non-blocking architecture



How did we do it?

- Gateways
 - Small failure block was key to high availability solution design
 - Flexible FPGA core
 - MV



How did we do it?

- IP Multi-viewers
- IP Switchers / Vision Mixers
- SDN Control and Flow Management
- Unified facility monitoring and configuration
- As much IP at the edge as possible



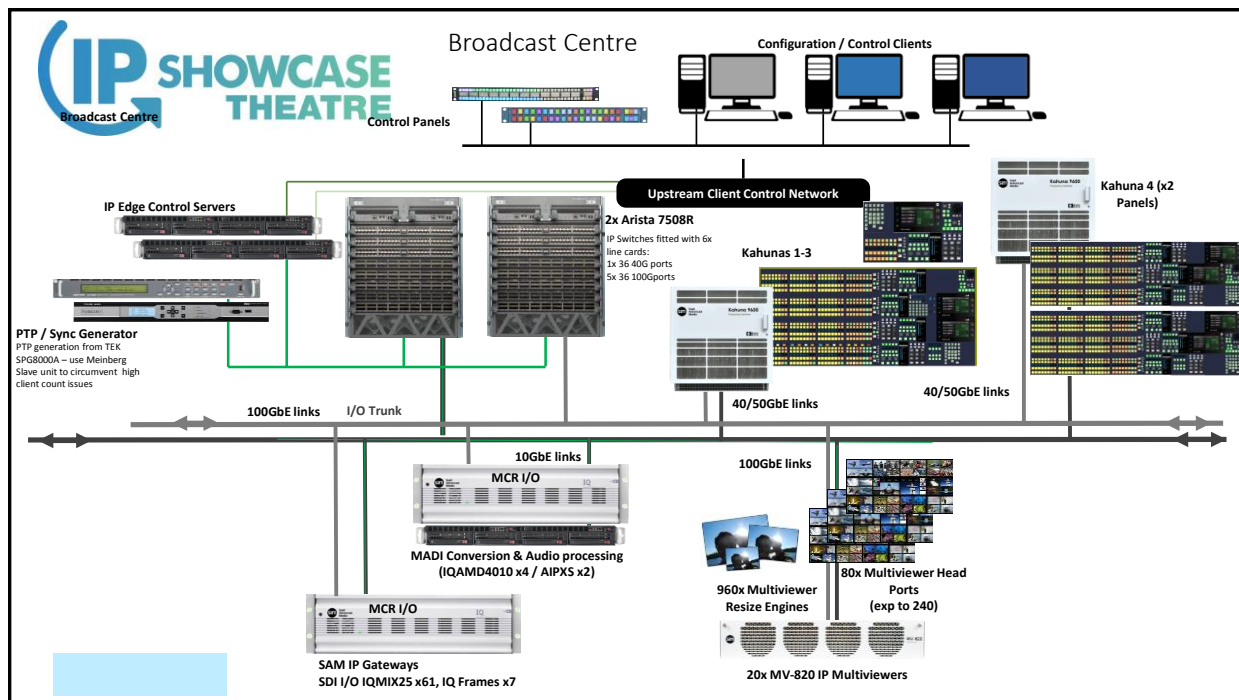
Solution Topology



- Solution Comprised of three designs
 - Broadcast Center
 - Remote Fly Packs
 - Mid-Sized Production Truck



Broadcast Center Overview

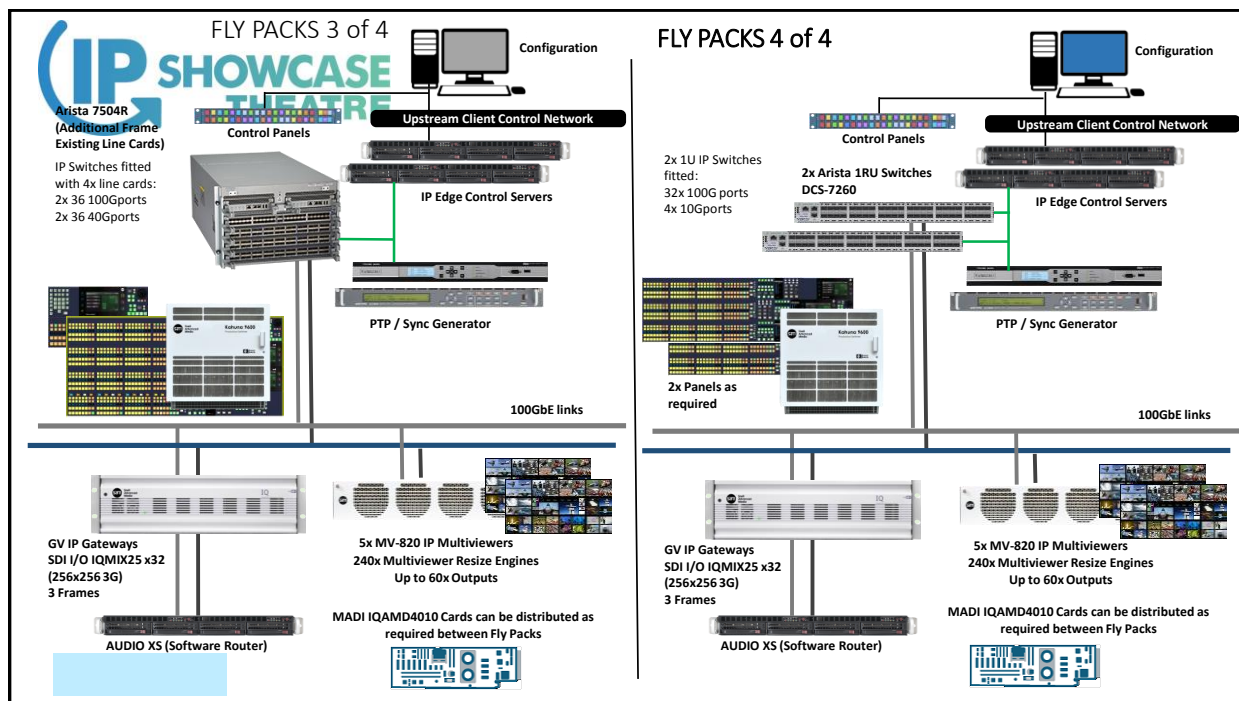
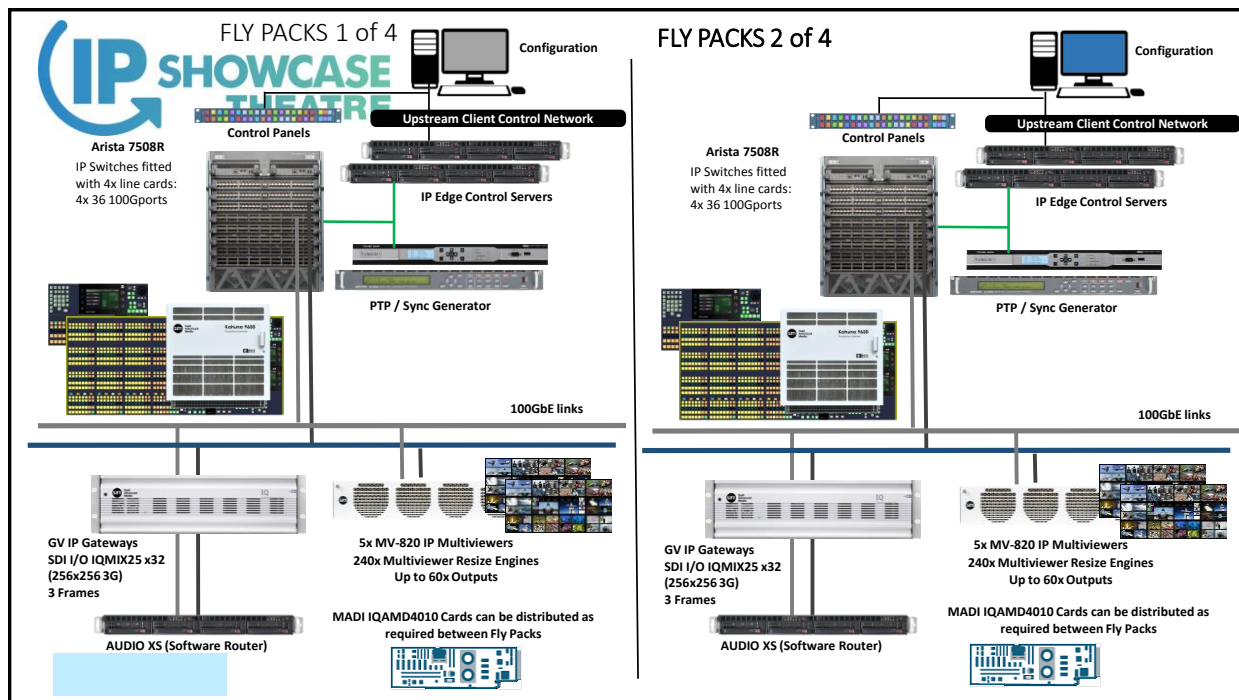


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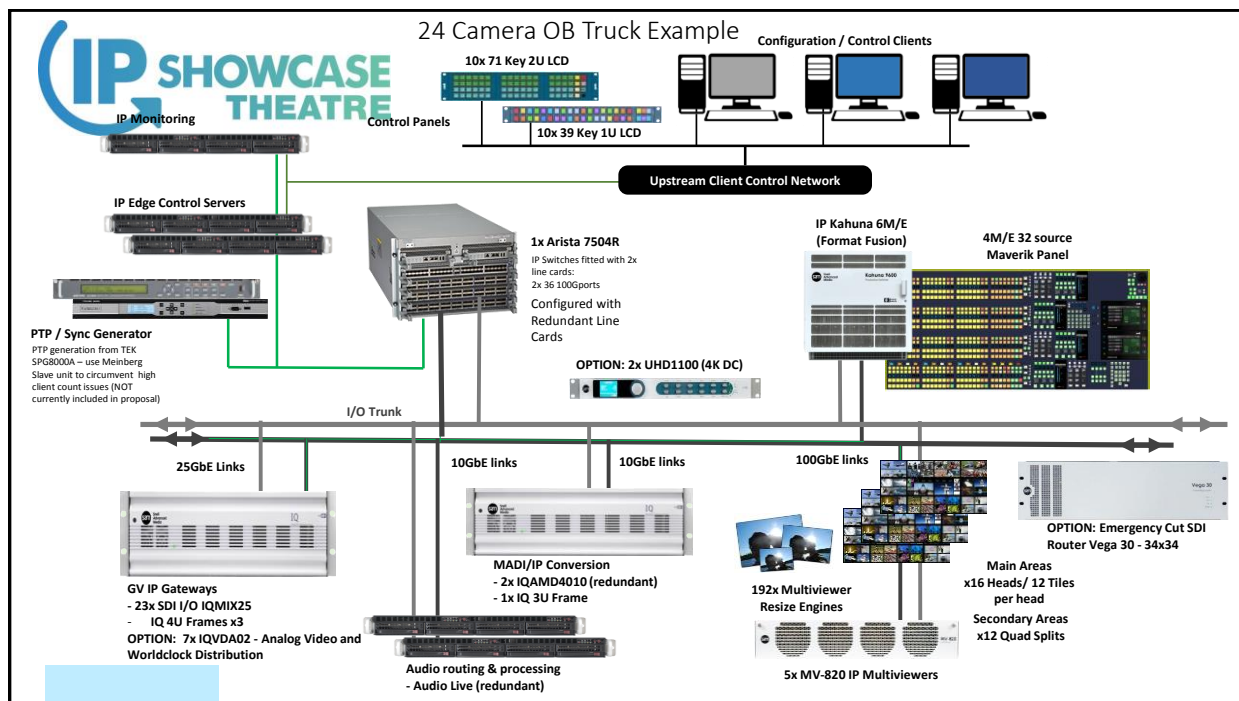
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VIDEO SERVICES FORUM

Remote Site Overview

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Mid-side Remote Truck





Challenges

- Audio Routing
 - How do you feed proper audio to IP endpoints
 - Audio Channel Swaps
 - Multiple 2110-30 Levels in play
- Flexible FPGA platform
 - Licensing?



Decisions

- Audio Routing
 - How do you feed proper audio to IP endpoints
 - Audio Channel Swaps
 - Multiple 2110-30 Levels in play
- Flexible FPGA platform
 - Licensing?



Thank you! Questions?