MEMS Timing Solutions

Audio / Video – Broadcasting Equipment

Precision Timing in Audio / Video

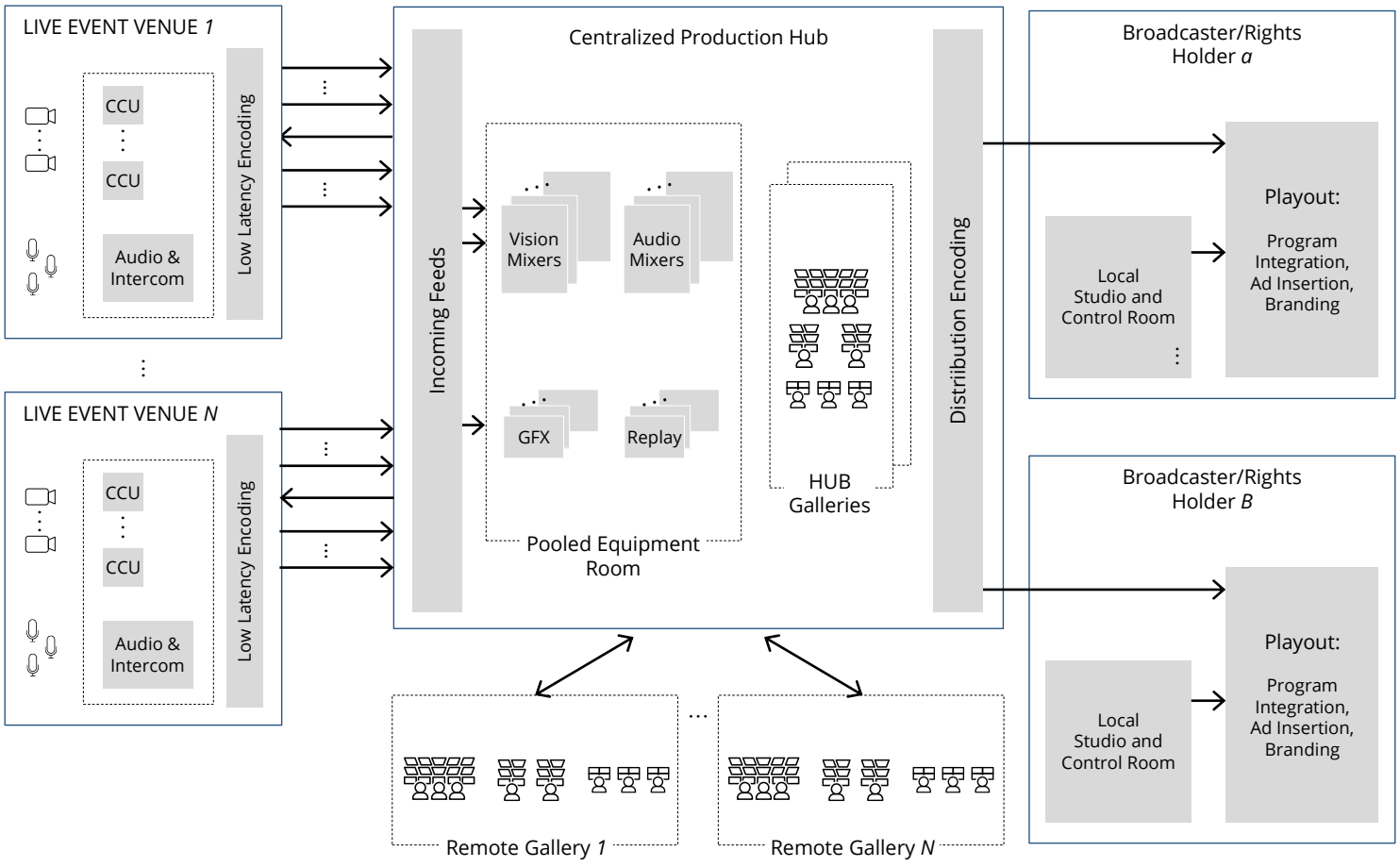
Audio video and broadcast equipment process vast amounts of data, all of which must be accurately clocked and synchronized. SiTime timing solutions provide benefits for these essential parameters

Video Production has evolved from on-site production to remote production and finally to centralized production. While on-site and remote had their advantages, production companies now can accomplish more with a centralized facility. This creates new challenges for data transmission which requires the use of precision timing devices.

Key Considerations

Lower Jitter

Frequency controllability



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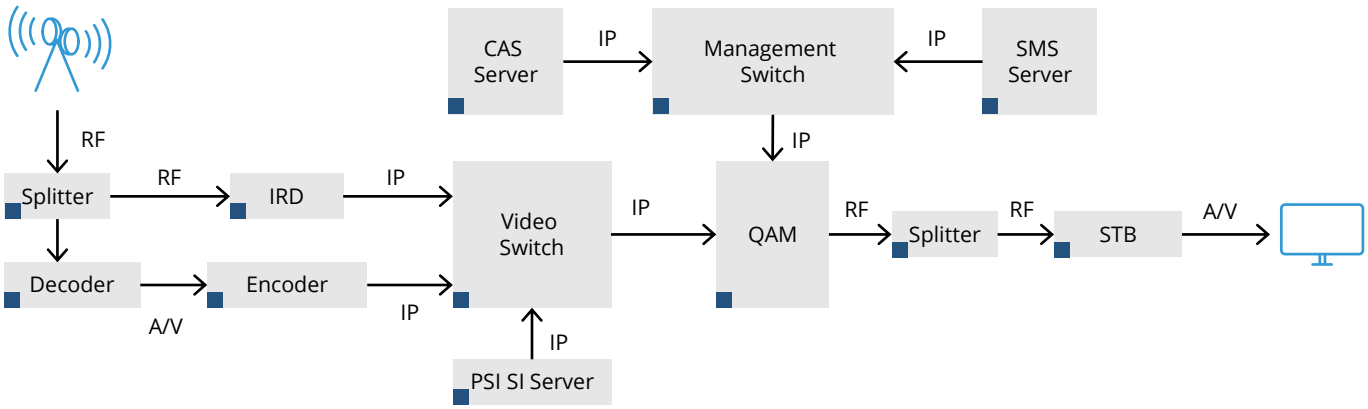
A typical broadcast network uses many types of transmission equipment. Each type of equipment requires multiple timing components, such as single-ended clocks for general-purpose clocking, differential low-jitter clocks for SERDES clocking, and possibly synchronization devices for IEEE 1588 or AVB/TSN.

Conventional Video Processing



- Every sub-system benefits from SiTime precision timing

Applications

- Film / broadcast editing
- Live performances
- Educational events / conferences
- Event broadcasting

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Timing Solutions

Type	Product	Frequency	Key Features	Key Values
Single ended oscillator	SiT8208	1 to 80 MHz	• Low jitter < 0.5 ps RMS[1] • ±10 ppm to 50 ppm frequency stability • Any frequency output • FlexEdge™ configurable output drive strength • 1.8 V, 2.5 V, 3.3 V	• Better frequency and jitter margin enhance system stability and robustness • Easy availability of any device configuration, 4-6 week lead time • Minimizes EMI from the oscillator
	SiT8209	80 to 220 MHz		
Differential oscillator	SiT9366	1 to 220 MHz	• Low jitter 0.23 ps RMS[1] • LVPECL, LVDS, HCSL • 2.5 to 3.3 V • -40°C to 105°C • 3.2 x 2.5 mm package	• Meets demanding jitter requirements • Small PCB footprint, easier layout • Easy design due to flexibility • MEMS reliability
	SiT9367	220 MHz to 725 MHz		
DCXO	SiT3921	1 to 220 MHz	• Digital frequency control • 1 ppb resolution	• Eliminates need for external DAC to control a VCXO • Better accuracy, lower noise due to digital control
	SiT3922	220 to 625 MHz		
Super-TCXO	SiT5356	1 to 60 MHz	• Low jitter: 0.31ps RMS[1] • ±0.1 ppm stability • 1ppb/°C • -40°C to 105°C	• Minimizes link drops due to shock, vibration, or temperature change
	SiT5357	60-220 MHz		

[1] 12 kHz to 20 MHz integration range

Learn more about Industrial solutions from SiTime

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