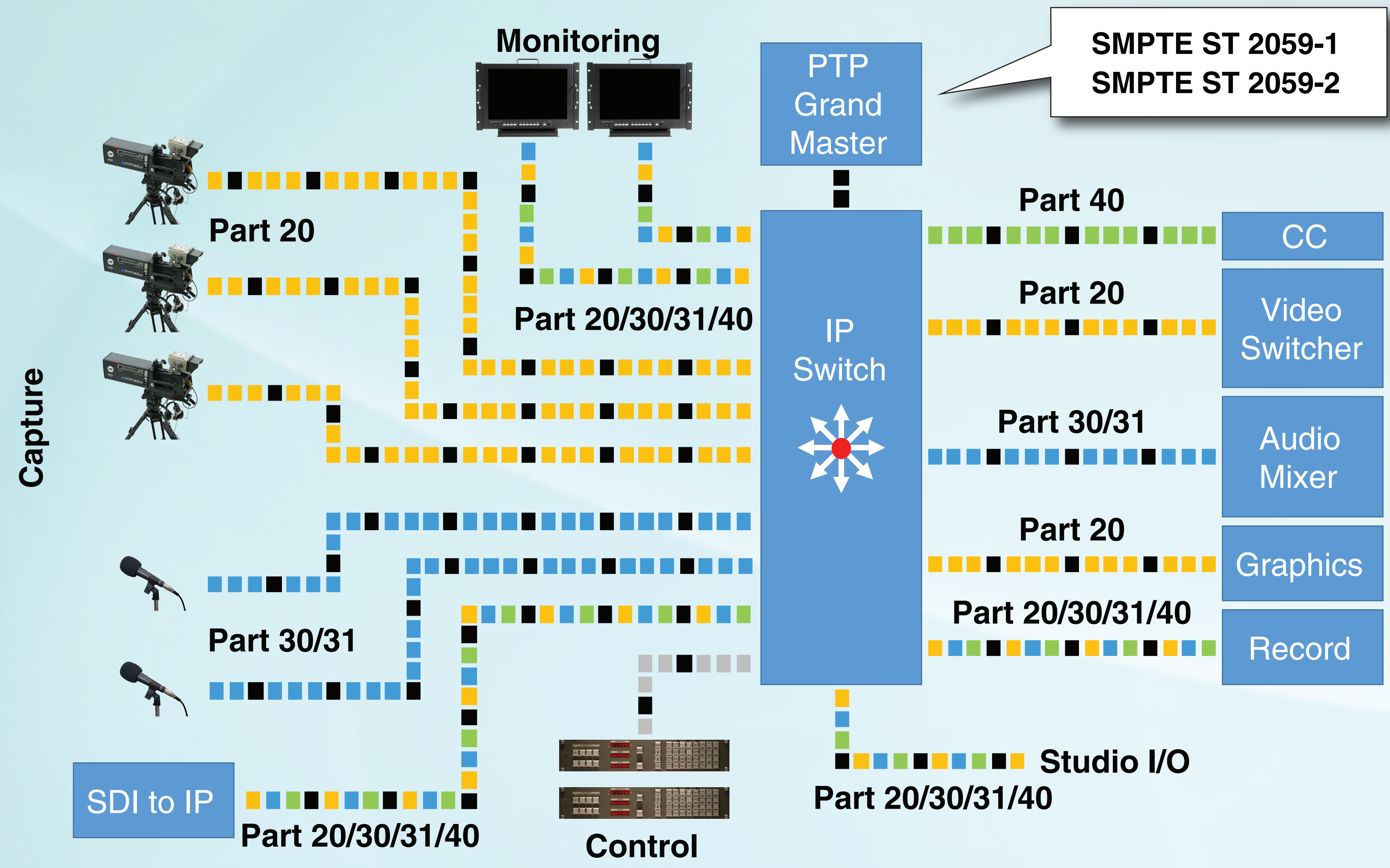




SMPTE ST 2110 Professional Media over IP Infrastructure

- Video RTP Packet
- PTP Sync Packet
- Audio RTP Packet
- Control Packet
- Data RTP Packet



SMPTE ST 2059-1
SMPTE ST 2059-2

Part 10

Professional Media Over Managed IP Networks:
System Timing and Definitions
This standard specifies the system timing model and the requirements common to all essence streams. It defines the various system clocks and RTP timestamp creation based on IEEE 1588:2008, SMPTE ST 2059-1 & 2 as well as AES67.
Reference Documents:
SMPTE ST 2059-1
SMPTE ST 2059-2
IETF RFC 3550 (<https://tools.ietf.org/html/rfc3550>) - RTP
IETF RFC 791 (<https://tools.ietf.org/html/rfc791>) - IP
IETF RFC 768 (<https://tools.ietf.org/html/rfc768>) - UDP

Part 20

Professional Media Over Managed IP Networks:
Uncompressed Active Video
This standard specifies the real-time, RTP-based transport of uncompressed active video essence over IP networks. An SDP-based signaling method is defined for image technical metadata necessary to receive and interpret the stream. It includes among other metadata for HD, UHD, HDR (PQ & HLG) and HFR formats.
Reference Documents:
IETF RFC 4175 (<https://tools.ietf.org/html/rfc4175>) - Uncompressed Video

Part 21

Professional Media Over Managed IP Networks:
Traffic Shaping and Delivery Timing for Video
This standard specifies a timing model for SMPTE ST 2110-10 video RTP streams as measured leaving the RTP sender, and defines the sender SDP parameters used to signal the timing properties of such streams.
Reference Documents:
SMPTE RP 168:2009
Recommendation ITU-R BT.601 SDTV image formats
Recommendation ITU-R BT.656-5 Interfaces for digital component video signals in 525-line and 625-line television systems operating at the 4:2:2 level of Recommendation ITU-R BT.601
Recommendation ITU-R BT.709-5 Parameter values for the HDTV progressively-captured image format
Recommendation ITU-R BT.1847-1 1280x720, 16:9 progressively-captured image format
Recommendation ITU-R BT.2020-2 (10/2015) Parameter values for UHD TV systems

Part 30

Professional Media Over Managed IP Networks:
PCM Digital Audio
This standard specifies the real-time, RTP-based transport of PCM digital audio streams over IP networks by reference to AES67. An SDP-based signaling method is defined for metadata necessary to receive and interpret the stream. Non-PCM digital audio signals including compressed audio signals are outside the scope of this standard.
Reference Documents:
IETF RFC 3190 (<https://tools.ietf.org/html/rfc3190>) - Linear PCM AES67

Part 31

Professional Media over Managed IP Networks:
AES3 Transparent Transport
This standard specifies the real-time, RTP-based transport of AES3 signals over IP networks, referenced to a network reference clock.
Reference Documents:
AES3
Ravenna AM824 RTP Payload (<https://www.ravenna-network.com/resources/>)

Part 40

Professional Media over Managed IP Networks:
SMPTE ST 291-1 Ancillary Data
This standard specifies the real-time, RTP payload based transport of SMPTE ST 291-1 Ancillary (ANC) Data packets related to digital video data streams, over IP networks, referenced to a common reference clock.
Reference Documents:
SMPTE ST 291-1:2011
IETF RFC 8331 (<https://www.rfc-editor.org/rfc/rfc8331.txt>) - SMPTE ST 291 in RTP

Leveraging IP Standards

