Pros and Cons Of SMPTE 2110

CONFIGURATION COMPLEXITY

SDI

Configuration:

2110

CONFIGURATION COMPLEXITY

SDI

Almost nothing is configurable

One Video essence

16 Channels of Audio

VANC / HANC

2110

Everything needs to be configured.

Media Network switch ports

Unicast Address
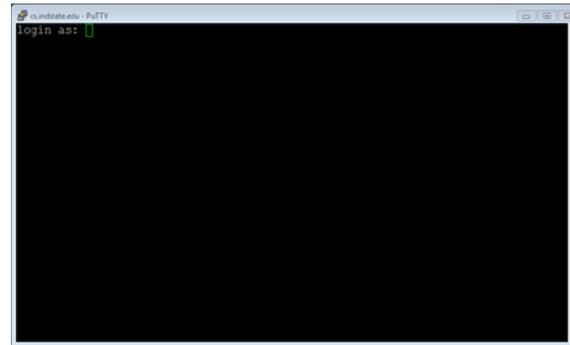
Multicast addresses

Video

Audio

Metadata

TESTING and TROUBLESHOOTING

SDI

2110

TESTING and TROUBLESHOOTING

SDI

Very Physical

Simple patching easily taught

More difficult to perform remotely without advanced systems in place.

2110

Very abstract

Command line tools need more training and NOT for every user.

As long as physical connections are correct, remote troubleshooting is very common

DENSITY

SDI

288 signals

2110

2688 signals

DENSITY

SDI

One signal per cable (uncompressed)

Lower density of failure points, but often requires more equipment

2110

100G fiber connection could have 32 signals on a duplex or MPO connection

Higher density of failure points - reduces cable tray requirements, but increases the importance of redundancy

DOCUMENTED SPECIFICATIONS

SDI

- (HD) 1080i 50, 59.94, 60
- (HD) 1080p 23.98, 24, 25, 29.97, 30
- (HD) 720p 50, 59.94, 60
- (SD) 625i, 525i

- SMPTE-259/274/292/296 SD/HD-SDI, 1 x BNC

- HDMI with embedded audio, 24-bit (selectable by internal jumper: 2 or 8-Channels)
- Audio, 2-Channel RCA style outputs at -10dBu (nominal), Channel 1 and 2
- 1 Looping SD/HD-SDI output of the SDI input (75 ohm, unterminated)

- Standard Type A connector
- Video:
  - 8-bit RGB 4:4:4 or 10-bit YCbCr 4:2:2 (selectable by internal jumper)
- Audio:
  - 24-bit, with 2 or 8 embedded channels (selectable by internal jumper)

- The Hi5 does not encode the HDMI output with HDCP encryption. By definition, SD/HD-SDI inputs to the Hi5 are unencrypted. The HDMI specification requires HDMI monitors to support unencrypted inputs.

- 4.6" x 2.4" x 1" (117mm x 61mm x 25mm)

2110

CONTACT US

"IT
DEPENDS"

2110 UNIQUE CHALLENGES

◎ AUDIO - multiple standards - channel choices

◎ NOT All formats are always supported 720P - 1080P

◎ Installation can be much quicker, but much more time is required for testing

2110 UNIQUE CHALLENGES

◎ 2022-7 Sometimes not all signals are redundant

◎ Currently not all devices implement the same control protocols (ember +, API, IS-04/05)

◎ Installation can be much quicker, but much more time is required for testing

2110 UNIQUE ADVANTAGES

◎ REMOTE Configuration is easy

◎ Complex workflows can be achieved since EVERYTHING can be on the same router
   ○ Video, Audio, Intercom, Eventually Tally

◎ Installation can be much quicker, but much more time is required for testing

2110 UNIQUE ADVANTAGES

◎ Eventually Hardware will be more IP specific / more VM based

◎ Complex workflows can be achieved since EVERYTHING can be on the same router

◎ Eventually licensing and products could move to OpEX vs CapEX

2110 UNIQUE ADVANTAGES

◎ Eventually licensing and products could move to OpEX vs CapEX

◎ Installation can be much quicker, yet much more time is required for testing