Option Board SDI I/O v1

Option Board SDI I/O (O_DAP_SDI_a)

Standards

- Video complies with SMPTE 424/425M (3G, Level A and B), SMPTE 292M (HD), or SMPTE 259M (SD)
- Automatic format detection
- Audio embedding and de-embedding complies with SMPTE 299M (3G, HD) or SMPTE 272M -AC (SD)
- Metadata embedding and de-embedding complies with SMPTE 2020-2

Video Data Rate

- 2970/296Mbps (3G), 1485/1483.5Mbps (HD), 270Mbps (SD

Video Formats

- 1080p - 23.975, 24, 25, 29.97, 30, 50, 59.94, 60
- 1080i - 50, 59.94, 60
- 720p - 23.975, 24, 25, 29.97, 30, 50, 59.94, 60
- 625i - 50
- 525i - 59.94

Video Delay

- User selectable 0 ... 15 frames, can be disabled

Audio

- 24-bit, transparent forwarding of PCM and compressed audio
- Sample rate = 48kHz (SDI compliant)
- Channels = 16 inputs and 16 outputs (4 groups of 4 channels each)
- Delay = Embedder audio delay selectable 0 ... 320ms per channel

Metadata (RDD6)

- 1 channel input, 1 channel output, SDID selectable

BNC Input

- Impedance = 75Ohm
- Return loss = >15dB 5 ... 1485MHz; >10dB 1485 ... 2970MHz
- Maximum cable length = 250m (SD), 230m (HD), 140m (3G) using Belden 1694A cable
- Jitter tolerance = >0.7UI (alignment)

BNC Output

- Impedance = 75Ohm
- Output voltage = 0.8Vpp (typical)
- Return loss = >15dB 5 ... 1485MHz; >10dB 1485 - 2970MHz
- Output jitter = <0.2UI (alignment), <0.5UI (timing)

Latency

- Video latency input to output = 120 ... 200 pixel, depending on video standard
- Audio latency input to output, embedder and de-embedder combined = <0.6ms (HD, 3G), <2ms (SD)

General Features

- Power fail relay bypass (may be enabled/disabled via GUI)
- Lip-sync compensation for processed and non-processed audio signals
- Dedicated routing for non-processed channels; all channels (maximum 16) can be routed to/from the device or looped through
- Test pattern generator (no genlock)
- Master-sync capable
- ITU-R BT.1685 / ARIB STD-B39 metadata support

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