

7555

HD/SD Video Processing Frame Sync

The 7555 HD Processing Frame Sync accepts a 1.5 Gb/s high definition video or standard definition video signal for processing, synchronization and timing.

Flexible Synchronization

An infinitely adjustable timing system genlocks to your house reference. The 7555 genlocks to either composite video (PAL or NTSC) or to Tri-Level Sync. The module can lock to the frame's master reference or reference can be connected directly to the module's external reference BNC. The serial output timing can be set anywhere within a frame of the selected input reference, which can be the module's external BNC reference or the frame's master timing reference.

Upon loss of signal, the 7555 provides freeze frame or black until the signal is recovered. In freeze mode, audio can be muted or passed as desired.

Uncompromised Pictures

The HD or SD SDI input is carried at full, uncompressed bandwidth throughout the entire module.

Complete Proc Amp Functions

The 7555 has a full-featured Proc Amp for adjustment of every signal parameter. Proc controls include Video and Chroma Gain, NTSC-style hue rotation, Black Balance, and Pedestal.

Audio Support

The 7555 includes a full-featured, sixteen-channel audio mixer. The channel swap and shuffle capability allows you to completely rearrange and remix audio channels. It provides precise control over audio level, with up to 12 dB of gain to compensate for low level sources. Delay is adjustable up to one second. The audio mixer can be used for embedded audio and for audio sourced from the AES or analog inputs. The 9615 AES and analog audio I/O software key option is required if you want to use the AES or analog inputs and outputs. The 9615 provides four AES input/output ports for eight channels of I/O and also provides four channels of analog audio I/O.

Dolby and AC-3

The 7555 can be fitted with Dolby™ and AC-3 encoding and decoding options. The 7615 decoding option can be fed from either an AES input or an AES stream disembedded from the incoming SDI signal. The resulting discrete surround signals are then selectable as inputs to the sixteen channel mixer/shuffler.

The 7630 Dolby encoder is fed from selected outputs of the sixteen channel mixer/shuffler. The resulting encoded bitstream can be output both on an AES output and embedded into the SDI output.

LevelTrack™ AGC and Compliance Options

The 9670 LevelTrack™ Audio Automatic Gain Control software key can be added as an option. LevelTrack provides control for keeping audio levels consistent in program material.

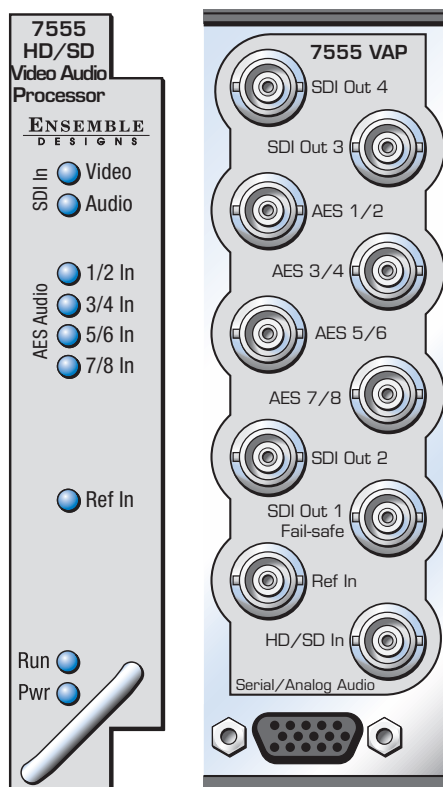
The 9690 Audio Compliance and Monitoring Software can be added for compliance verification and archiving.

Total Control

Every function and parameter on the 7555 can be controlled from an Avenue Touch Panel or the Avenue PC Control Application. Memory registers can be used to save the complete configuration of the module, making it easy to change instantly between different configurations.

Features

- **HD or SD SDI I/O**
 - **Full-featured Frame Synchronizer**
 - **Comprehensive Proc Amp controls**
 - **External genlock reference input**
 - **Internal Color Bar Generator**
 - **Fail-safe bypass in case of power failure**
 - **Passes embedded audio**
 - **AES option for 4 streams/8 channels**
 - **Analog audio I/O option**
 - **Data mux and demux as per SMPTE 337M**
 - **Dolby encoding and decoding options**
 - **Audio Loudness Control AGC option**
 - **Memory registers**
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Order Info

- 7555 HD/SD Video Processor module
- 7615 Dolby E, Dolby D, AC-3 Decoder sub module and software key option
Dolby processing options incur 1 frame of delay
- 7630 Dolby E Encoder sub module and software key option
Dolby processing options incur 1 frame of delay
- 7635 Dolby D/AC-3 Encoder sub module and software key option
Dolby processing options incur 1 frame of delay
- 9615 AES, analog audio, and data I/O software key option
- 9670 LevelTrack Audio Loudness Control AGC software key option
- 9690 Audio Compliance and Monitoring Software

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HD/SD Video Processing Frame Sync

Input

| | |
|------------------|--|
| Number | One |
| Signal Type | HD Serial Digital 1.485 Gb/s, SMPTE 274M, 292M or 296M or SD Serial Digital 270 Mb/s, SMPTE 259M |
| Impedance | 75 Ω |
| Return Loss | >15 dB DC to 1.5 GHz |
| Max Cable Length | 270 Mb/s 300 meters Belden 1694A 1.485 Gb/s 100 meters Belden 1694A |

Automatic Cable Input Equalization

Standards Supported

1080i 50, 59.94 or 60 Hz, SMPTE 274M -4,5,6

720p 50, 59.94 or 60 Hz, SMPTE 296M -1,2,3

525i 59.94, 625i 50

Data, SMPTE 337M

Output

| | |
|-------------|--|
| Number | Two (one fail-safe bypass) |
| Signal Type | HD or SD Serial Digital, follows input |
| Impedance | 75 Ω |
| Return Loss | >15 dB DC to 1.5 GHz |
| Delay | Up to 8 frames |

Reference Input

| | |
|-------------|---|
| Number | One external (modules BNC) One internal (frame master ref BNC) |
| Signal Type | PAL or NTSC composite video or Tri-Level Sync |
| Return Loss | >40 dB (applies to external ref input) |

AES/EBU Digital Inputs (requires 9615 option)

| | |
|-----------------|--|
| Number | Four (total of eight channels selectable as inputs or outputs) |
| Type | AES3id or data (SMPTE 337) |
| Connector | Coaxial, 75 Ω |
| Bit Depth | 20 and 24 bit |
| Sample Rate | 30 kHz to 100 kHz (sample rate converted internally to 48 kHz) |
| Crosstalk | <144 dB |
| Dynamic Range | >144 dB |
| Reference Level | -18 or -20 dBFS (selectable) |

AES/EBU Digital Outputs (requires 9615 option)

| | |
|-----------------|---|
| Number | Four (total of eight channels) selectable as inputs or outputs |
| Type | AES3id or data |
| Connector | Coaxial, 75 Ω |
| Bit Depth | 20 and 24 bit |
| Sample Rate | 48 kHz, synchronous to video output |
| Reference Level | -18 or -20 dBFS (selectable) |

Analog Audio Inputs (requires 9615 option)

| | |
|---------------------|---------------------------------------|
| Number | Four, selectable as inputs or outputs |
| Type | Balanced |
| Connector | 15 pin D |
| Impedance | >15K Ω |
| Maximum Input Level | 24 dBu |
| CMRR | >60 dB, 20 Hz to 10 KHz |
| Quantization | 24 bits, 128 x oversampled |
| Sample Rate | 48 KHz |
| Reference Level | -10 dBu or +4 dBu |
| Frequency Response | ± 0.1 dB, 20 Hz to 20 KHz |
| Crosstalk | <106 dB |
| Dynamic Range | >106 dB |

Analog Audio Outputs (requires 9615 option)

| | |
|----------------------|---------------------------------------|
| Number | Four, selectable as inputs or outputs |
| Type | Balanced, transformerless |
| Connector | 15 pin D |
| Impedance | 30 Ω |
| Maximum Output Level | 24 dBu |
| Resolution | 24 bits, 128 x oversampled |
| Reference Level | -10 dBu or +4 dBu |
| Frequency Response | ± 0.1 dB, 20 Hz to 20 KHz |
| Crosstalk | <106 dB |
| Dynamic Range | >106 dB |

Dolby Metadata Inputs/Outputs (requires 9615 option)

| | |
|-------------|---|
| Signal Type | Dolby metadata, RS-422, RS-485 |
| Number | Four, selectable as inputs or outputs, share with analog audio I/O |
| Connector | HD-15, balanced |

Embedded Output (In SDI Outputs)

| | |
|--------------|--------------------|
| Group Assign | Cascade or replace |
| Channels | Sixteen |
| Bit Depth | 24 Bit |

General Specifications

| | |
|-------------------|-----------------------------------|
| Power Consumption | 10 watts |
| Temperature Range | 0 to 40°C ambient (all specs met) |
| Relative Humidity | 0 to 95%, noncondensing |
| Altitude | 0 to 10,000 ft |

