AD-5300 HD/SD Analog to Serial Digital Converter

General:

The Maxtron AD-5300 is a dual-rate universal 10-bit Analog-to-SDI converter for conversion of SD (YUV, RGsB) or HD (SMPTE-274M, YUV, RGsB) analog video to 480i, 480p, 576i, 576p, 720p, 1080 24p, and 1080i SDI formats (SMPTE-259/292/296). The AD-5300 integrates analog sources into an HD/SDI digital video environment where a mix of analog and SDI sources is required. Applications include video monitors, disk recorders, broadcast production, nonlinear editing stations, and rental and staging events. HD analog is sampled at 74.25MHz while SD inputs are oversampled to 54 MHz and in both cases the output circuitry includes a VCXO filter to miminize serializer jitter. A digitally controlled processing amplifier with memory allows digital adjustment of R/V, B/U, G/Y gain, ABLC on/off, RGB/YUV input format, and auto or manual sampling clock phase.

The Maxtron AD-5300 is especially suited for adding HD-SDI outputs to most HDV cameras or decks by using the component outputs of such devices. The AD-5300 also provides both Color Bars and the SDI Checkfield (Pathological) test patterns to facilitate transmission path testing.

Powered by standard 5V wall mounted power supply (provided), and protected with automatic reset fuses, these units incorporate built-in power surge and transit protection. All Maxtron products are RoHS and Green compliant.

Specifications:

- Inputs:
  HD/SD: YUV, RGsB (SMPTE-274), 3x BNC
- Outputs:
  SD/HD: SDI, HD-SDI, SMPTE-259/292/296, with EDH, BNC
- Frequency Response:
  HD: Y/G/R/B -0.5db to 30 MHz, UV ± 0.25db to 13.5 MHz
  SD: Y/G/R/B ± 0.25db to 5.5 MHz, UV ± 0.25db to 2.5 MHz
- Output Jitter:
  HD/SD: < 0.15 UI measured with color bar input
- Sampling:
  HD: 10-bit @ 74.25MHz SD: 10-bit @ 54MHz
- Formats Supported:
  HD: 1080i @ 50/59.94/60 Hz; 1080psf @ 23.98/24/25 Hz
  1035i @ 50/59.94/60 Hz; 720p @ 50/59.94/60 Hz
  SD: 525 @ 59.94Hz, 625 @ 50Hz