3G-SDI Testing Solution
Signal Generation & Physical Layer Compliance Test

The 3G-SDI standard provides a high resolution format in the RGB domain, for use in high-end production to emulate the look of film, allowing digital masters to be made of the content. Working in the RGB domain maintains the quality of the master, allowing easier integration with special effects and telecine applications. Testing through the technology life cycle begins in semiconductor design and evaluation, continues with system integration, (like routers), and ends with cable and equipment installation.

3G-SDI Analysis with the WFM8300 Waveform Monitor

- SD, HD, Dual Link (4:2:2, 4:4:4, alpha channel, 10 bit, 12 bit) and 3G-SDI (Level A and Level B) formats

- Auto-detection of HD/SD-SDI and multiple Dual Link video formats (including RGB and XYZ color space support)


3G-SDI Eye Pattern Measurements

- Automated eye amplitude, automated rise/fall time, automated overshoot/undershoot measurements

- Key signal parameters such as signal strength, cable loss and estimated cable length measurements

3G-SDI Jitter Characterization

- Unique capabilities such as reporting jitter levels above 1 UI and providing various jitter filters from 10 Hz to 100 kHz for SD/HD/3G-SDI signals

- Easy-to-interpret gauge provides direct readout for jitter measurements

- Configure timing jitter and alignment jitter readouts to be displayed simultaneously to effectively isolate the sources of jitter

- Jitter waveform display to view jitter related to line and field rates

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The TG700 with the HD3G7 module

- Wide variety of standard test signals
- Generates all 1080-line formats of SMPTE 425 includingh YPbPr 4:2:2/4:4:4 10/12-bit, RGB 4:4:4 10/12-bit and XYZ 4:4:4 12-bit
- Complete coverage of both Level A and Level B mappings
- Two signal outputs
- HD-SDI input for up-converter function
- Trigger output (frame pulse or 148.5 MHz clock) for external oscilloscope synchronization
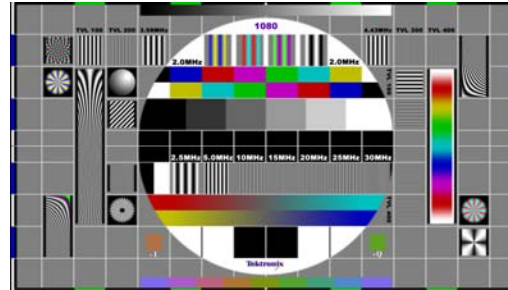
3G-SDI Generation

- Support for every 1080-line format described in SMPTE 425, including 4:4:4 and/or 12-bit sampling structures for both Level A and Level B mappings
- Includes the 2K formats used by digital cinema applications, and the Level B 2×1.5Gb/s formats that can be used for 3D television applications
- A total of 244 different Level A and B format combinations are supported
- Embedded audio generator, with up to 32 independent channels for Level B formats
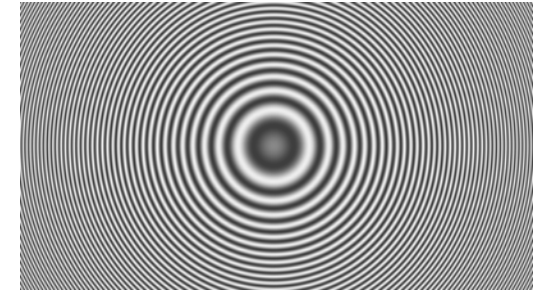
Additional tools for Video generation

- Real-time parametric zone plate test signal
- A/V delay mode
- Time code insertion in ancillary data space
- User-defined ancillary data packet insertion, which can be used for testing Active Format Description (AFD) or Closed Captions

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