

Genum Products

Key Features

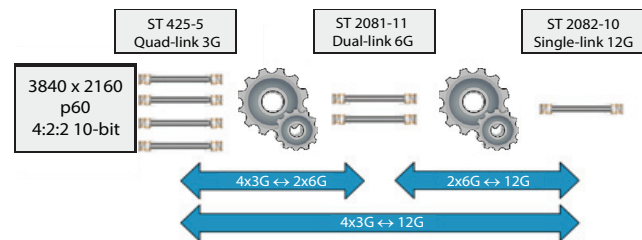
- Converts between 1.5G, 3G, 6G and 12G SDI
 - ◆ Quad Link 3G-SDI ↔ 12Gb/s
 - ◆ Dual Link 6Gb/s ↔ 12Gb/s
 - ◆ Dual Link (2 x 3Gb/s) ST 425-3 ↔ 6Gb/s
 - ◆ Quad Link (4 x 3Gb/s) ST 425-5/-6 ↔ Dual Link 6Gb/s
 - ◆ Quad Link HD-SDI (4 x 1.5Gb/s) ↔ 6Gb/s
- Serial Bypass modes for all support rates
- 4 Serial Differential Inputs
 - ◆ 100Ω differential inputs support DC-coupling to 1.2V CML Logic
 - ◆ Input trace equalization for up to 6" FR4 at 12Gb/s
- 4 Serial Differential Outputs
 - ◆ 100Ω differential outputs support DC-coupling to 1.2V CML Logic
 - ◆ Output de-emphasis to compensate for up to 6" FR4 at 12Gb/s
- Reference Clock/Crystal Input — 148.5MHz/27MHz
- GSPI serial control and monitoring interface
- Selectable 1.8V and 2.5V digital control I/O
- Automatic SMPTE ST 352 packet creation
- 14mm x 14mm 256-Ball BGA (0.8mm pitch)
- Pb-free and RoHS-compliant package

Applications

- UHDTV1 and 4K D-Cinema end-equipment: Cameras, Monitors, Switchers

Description

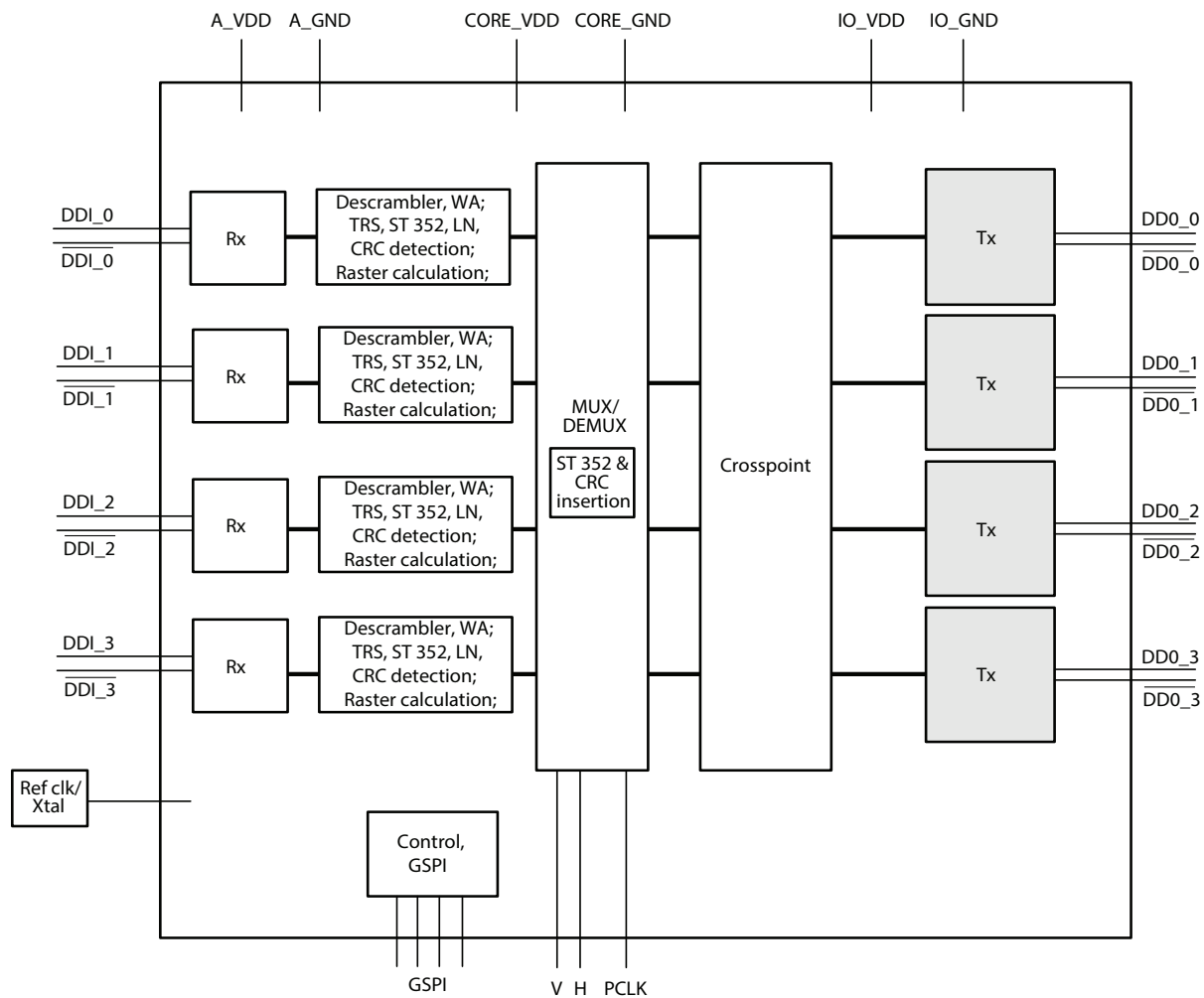
The GS12070 is an UHD-SDI Gearbox which performs the multiplexing and de-multiplexing necessary to facilitate conversions between the ST 425-3 and ST 425-5 multi-link 3Gb/s UHD-SDI Interface and the SMPTE ST 2081 (6Gb/s) and ST 2082 (12Gb/s) Interfaces. A conversion between 4 x 1.5Gb/s and 6Gb/s is also supported.



GS12070 Supported Conversions of SMPTE Standard Interfaces

The GS12070 features four high-speed differential signal inputs and four high-speed differential serial outputs which can be interfaced to 1.2V CML I/O. The high-speed inputs and outputs include programmable trace equalization and de-emphasis drivers to compensate for high-frequency losses associated with board-level interconnect.

The high-speed serial inputs and outputs support 270Mb/s, 1.5G, 3G, 6G and 12G nominal data rates. The supported conversions are performed by manually selecting the input and output rates. Unused output ports at 6G and 12G may be configured to output a copy of the primary converted output. A serial bypass mode is also available as a manually selectable option.



GS12070 Block Diagram



**DOCUMENT IDENTIFICATION
PRODUCT BRIEF**

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