

Serial digital interface (SDI)

The standard based on a **270 Mbps** transfer rate. This is a **10-bit**, scrambled, polarity independent interface, with **common scrambling for both component ITU-R 601 and composite digital video and four channels of (embedded) digital audio**. Most new broadcast digital equipment includes SDI which greatly simplifies its installation and signal distribution. It uses the standard **75 ohm BNC connector and coax cable** as is commonly used for analog video, and can transmit the signal over **600 feet (200 meters)** depending on cable type.

Serial digital transport interface (SDTI)

SMPTE 305M. Allows **faster-than-realtime transfers between various servers and between acquisition tapes**, disk-based editing systems and servers, with both **270 Mb and 360 Mb** are supported. **With typical realtime compressed video transfer rates in the 18 Mbps to 25 Mbps to 50 Mbps range, SDTI's 200+ Mbps payload can accommodate transfers up to four times normal speed.**

The **SMPTE 305M** standard describes the **assembly and disassembly** of a stream of 10-bit data words that conform to SDI rules. Payload data words can be up to 9 bits. The 10th bit is a complement of the 9th to prevent illegal SDI values from occurring. The basic payload is inserted between SAV and EAV although an appendix permits additional data in the SDI ancillary data space as well. A header immediately after EAV provides a series of flags and data IDs to indicate what's coming as well as line counts and CRCs to check data continuity.