

## HD-SDI Cable | Accessories



HD-SDI (High Definition - Serial Digital Interface) Cables are designed and built for SMPTE broadcast video applications. These coaxial cables are built with high conductivity conductors, gas injected insulation and premium shielding. The SMPTE Standards range from 480i through 12G 4K resolutions, and require high quality cables to carry these signals.

### Standards:

Standards	Name	Bitrates	Video Formats Resolution
<b>SMPTE 259M</b>	SD-SDI	270 Mb/s	480i
<b>SMPTE 344M</b>	ED-SDI	540 Mb/s	480p
<b>SMPTE 292M</b>	HD-SDI	1.485 Mb/s	720P   1080i
<b>SMPTE 372M</b>	Dual Link HD-SDI	2.970 Gb/s	1080p60
<b>SMPTE 424M</b>	3G SDI	2.970 Gb/s	1080p60
<b>SMPTE 2081</b>	6G SDI	6 Gb/s	1080p120   2160p30
<b>SMPTE 2082</b>	12G SDI	12 Gb/s	2160p60 4K Single Link

### Bulk Cables: 12G SDI

Catalog No.	RG Size	Cond. Type & Nom. DCR	Insulation Type & Thickness	Shielding	Jacket Type & Thickness	Nom. O.D	NEC Type	Nom. VP	Nom. Impedance
			Inches			Inches			
<b>6450</b>	RG6/U	18 AWG Silver Copper	Gas Injected PE .180	Bi-Foil 100% Tinned Copper 95%	PVC	.275	CMR	85%	75 Ohms
<b>256450</b>	RG6/U	18 AWG Silver Copper	Foam FED .168	Bi-Foil 100% Tinned Copper 95%	Plenum PVC	.229	CMP	85%	75 Ohms

### Connectors: BNC Male 12G

**CN-BNC6-12G-50**



## Bulk Cables: 6G SDI



Catalog No.	RG Size	Cond. Type & Nom. DCR	Insulation Type & Thickness	Shielding	Jacket Type & Thickness	Nom. O.D	NEC Type	Nom. VP	Nom. Impedance
			Inches			Inches			
<b>6350</b>	RG6/U	18 AWG Bare Copper	Gas Injected PE .180	Bi-Foil 100% Tinned Copper 95%	PVC	.275	CMR	82%	75 Ohms
<b>256350</b>	RG6/U	18 AWG Bare Copper	Foam FEP .170	Bi-Foil 100% Tinned Copper 95%	Flex Plenum PVC	.236	CMP	83%	75 Ohms

## Connectors: BNC Male 6G

- DB6BNCHD-50**
- CN-BNC6MCV**



Catalog No.	RG Size	Cond. Type & Nom. DCR	Insulation Type & Thickness	Shielding	Jacket Type & Thickness	Nom. O.D	NEC Type	Nom. VP	Nom. Impedance
			Inches			Inches			
<b>819</b>	RG59/U	20 AWG Bare Copper	Gas Injected PE .142	Bi-Foil 100% Tinned Copper 95%	PVC	.232	CMR	82%	75 Ohms
<b>25819</b>	RG59/U	20 AWG Bare Copper	Foam FEP .135	Bi-Foil 100% Tinned Copper 95%	Flex Plenum PVC	.200	CMP	83%	75 Ohms

## Connectors: BNC Male 6G

- DB59BNCHD-50**
- CN-BNC59MCV**



## HD-SDI Transmission Distances:

Data Rate	270 Mb/s	360 Mb/s	1.5 Gb/s	3.0 Gb/s
Specs	SMPTE 259	SMPTE 259	SMPTE 292	SMPTE 424
Cable #	Distance (ft)	Distance (ft)	Distance (ft)	Distance (ft)
<b>6450</b>	1336	1171	383	269
<b>6350</b>	1376	1203	367	255
<b>256350</b>	1319	1134	327	215
<b>819</b>	1127	975	304	212
<b>25819</b>	1017	883	262	175

Data Rate/ Link	3 Gb/s	6 Gb/s	12 Gb/s
Specs	SMPTE ST 425-4 (3 Gb/s - stereo) ST 2081-1 (6 Gb/s - dual link) ST 2082-1 (12 Gb/s - quad) ST 2083-1 (24 Gb/s - octal link)1	ST 2081-1 (6 Gb/s - single link) ST 2082-1 (12 Gb/s - dual link) ST 2083-1 (24 Gb/s - quad link)1	ST 2082-1 (12 Gb/s - single link) ST 2083-1 (24 Gb/s - dual link)1
Cable #	Distance (ft)	Distance (ft)	Distance (ft)
<b>6450</b>	538	374	257
<b>6350</b>	509	340	--
<b>256350</b>	430	280	--
<b>819</b>	425	287	--
<b>25819</b>	350	230	--

The serial digital interconnect standards are designed to operate where the signal loss at 1/2 the clock frequency does not exceed the approximate loss values listed below.

The recommended length values shown are based on typical attenuation values for the cables listed and the following criteria:

**Maximum length = 30 dB loss at 1/2 the clock frequency: SMPTE ST 259.**

**Maximum length = 20 dB loss at 1/2 the clock frequency: SMPTE ST 292 & ST 424.**

**Maximum length = 40 dB loss at 1/2 the clock frequency: SMPTE ST 425, ST 2081, ST 2082 & ST 20831**

The bit error rate (BER) can vary dramatically as the calculated distances are approached. BER is dependent on receiver design and the losses of the actual coax used.

Distribution and routing equipment manufacturers should be contacted to verify their maximum recommended transmission distance.