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AV, SECURITY & NETWORKING SOLUTIONS

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 tocarry these signals.

Standards:

Standards	Name	Bitrates	Video Formats Resolution
SMPTE 259M	SD-SDI	270Mb/s	480i
SMPTE 344M	ED-SDI	540Mb/s	480p
SMPTE 292M	HD-SDI	1.485Mb/s	720P | 1080i
SMPTE 372M	Dual Link HD-SDI	2.970Gb/s	1080p60
SMPTE 424M	3G SDI	2.970Gb/s	1080p60
SMPTE 2081	6G SDI	6Gb/s	1080p120 | 2160p30
SMPTE 2082	12G SDI	12Gb/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			
6450	RG6/U	18 AWG Silver Copper	Gas Injected PE .180	Bi-Foil 100% Tinned Copper 95%	PVC	.275	CMR	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 (Inches)	Shielding	Jacket Type & Thickness	Nom. O.D (Inches)	NEC Type	Nom. VP	Nom. Impedance
6350	RG6/U	18 AWG Bare Copper	Gas Injected PE .180	Bi-Foil 100% Tinned Copper 95%	PVC	.275	CMR	82%	75 Ohms
256350	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

1. DB6BNCHD-50
2. CN-BNC6MCV

Catalog No.	RG Size	Cond. Type & Nom. DCR	Insulation Type & Thickness (Inches)	Shielding	Jacket Type & Thickness	Nom. O.D (Inches)	NEC Type	Nom. VP	Nom. Impedance
819	RG59/U	20 AWG Bare Copper	Gas Injected PE .142	Bi-Foil 100% Tinned Copper 95%	PVC	.232	CMR	82%	75 Ohms
25819	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

1. DB59BNCHD-50
2. CN-BNC59MCV

HD-SDI Transmission Distances:

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

Data Rate/ Link	3Gb/s	6Gb/s	12Gb/s
Specs	SMPTE ST 425-4 (3Gb/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.)
6450	538	374	257
6350	509	340	--
256350	430	280	--
819	425	287	--
25819	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.

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