

HD-SDI Cable Distance Chart

Data Rate:	270 Mb/s	360 Mb/s	1.5 Gb/s	3.0 Gb/s
Specs:	SMPTE ST 259	SMPTE ST 259	SMPTE ST 292	SMPTE ST 424
Application:	Component SD-SDI	Widescreen SD-SDI	HD 1.5G	HD 3G SDI
Cable Part Number	Distance (ft)	Distance (ft)	Distance (ft)	Distance (ft)
819	1082	949	301	209
25819	1014	847	265	177
6350	1338	1179	370	255
256350	1258	1085	321	210
6450	1338	1179	383	269

Data Rate per Link:	3 Gb/s	6 Gb/s	12 Gb/s
Spec:	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
Application:	UHDTV1, UHDTV2	UHDTV1, UHDTV2	UHDTV1, UHDTV2
Cable Part Number	Distance (ft)	Distance (ft)	Distance (ft)
819	418	285	
25819	353	233	
6350	510	346	
256350	420	274	
6450	538	374	257

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, SMPTE ST 259, SMPTE ST 259, SMPTE ST 292.

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.