

Recommended Transmission Distance at Serial Data Rates

Data Rate:	143 Mb/s		177 Mb/s		270 Mb/s		360 Mb/s		1.5 Gb/s		3.0 Gb/s	
Spec:	SMPTE ST 259		SMPTE ST 259		SMPTE ST 259		SMPTE ST 259		SMPTE ST 292		SMPTE ST 424	
Application:	Composite SD-SDI (NTSC)		Composite SD-SDI (PAL)		Component SD-SDI		Widescreen SD-SDI		HD 1.5G-SDI		HD 3G-SDI	
Cable Part Number	Ft.	m	Ft.	m	Ft.	m	Ft.	m	Ft.	m	Ft.	m
179DT	542	165	498	152	410	125	357	109	115	35	81	25
1865A	686	209	627	191	508	155	441	134	134	41	90	27
1855P	986	301	904	276	733	223	632	193	190	58	125	38
1855A*	1022	312	932	284	766	233	670	204	214	65	149	45
4855R	1066	325	968	295	800	244	694	212	221	67	155	47
1505F	1173	358	1060	323	839	256	721	220	220	67	147	45
1506A**	1354	413	1243	379	1014	309	874	266	265	81	177	54
1694F	1460	445	1312	400	1046	319	901	275	279	85	188	57
1505A***	1440	439	1317	401	1082	330	949	289	301	92	209	64
4505R	1474	449	1321	403	1079	329	942	287	307	94	217	66
1695A	1706	520	1566	477	1258	383	1085	331	321	98	210	64
1694A****	1791	546	1650	503	1338	408	1179	359	370	113	255	78
4694R	1903	580	1714	522	1397	426	1211	369	386	118	270	82
1794A	2276	694	2078	633	1702	519	1479	451	469	143	319	97
4794R	2231	680	2045	623	1715	523	1512	461	494	151	343	105
7732A	2575	785	2335	712	1877	572	1614	492	451	137	283	86
7731A	2791	851	2613	796	2091	637	1838	560	582	177	390	119
4731R												

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	Ft.	m	Ft.	m	Ft.	m
179DT	161	49	111	34		
1865A	179	55				
1855P	249	76	168	51		
1855A*	298	91	203	62		
4855R	310	94	215	66	149	45
1505F	294	90	197	60		
1506A**	353	108	233	71		
1694F	376	115	225	69		
1505A***	418	127	285	87		
4505R	433	132	302	92	208	63
1695A	420	128	274	84		
1694A****	510	155	346	105		
4694R	540	165	375	114	258	79
1794A	637	194	432	132		
4794R	686	209	471	144	321	98
7732A	565	172	355	108		
7731A	780	238	529	161		
4731R						

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.

* Includes cables that use 1855A as a constituent through 3Gb/s, such as 7787A, 7788A, 7789A, 7790A, 7791A, 7792A, 1855S3, 1855S5, 1855S6.

** Includes cables that use 1506A as a constituent through 3Gb/s, such as 1283S3, 1283S5, 1283S6.

*** Includes cables that use 1505A as a constituent through 3Gb/s, such as 7794A, 7795A, 7796A, 7798A, 1505S3, 1505S5, 1505S6.

**** Includes cables that use 1694A as a constituent through 3Gb/s, such as 1694WB, 7710A, 7711A, 7712A, 7713A, 1694S5, 1694S6, 1694D.