Maximum Transmission Distance at Serial Digital 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 259M		ITU-R BT. 601		SMPTE 259M		SMPTE 259M		SMPTE 292M		SMPTE 424M	
Application:	Composite NTSC		Composite PAL		Component Video		Component Widescreen		HDTV		Progressive Scan HDTV	
	Ft.	m	Ft.	m	Ft.	m	Ft.	m	Ft.	m	Ft.	m
179DT	500	152	450	137	380	116	340	104	110	34	80	24
1865A	810	247	760	232	600	183	520	158	170	52	N/A	N/A
8279	910	277	810	247	640	195	550	168	170	52	N/A	N/A
1855A–7787A	980	299	950	290	790	241	680	207	260	79	150	46
1855P	989	301	897	274	742	226	643	196	193	59	129	39
9209	1030	314	930	283	750	229	650	198	200	61	N/A	N/A
9209A	1030	314	930	283	750	229	650	198	200	61	N/A	N/A
1505A–7794A	1430	436	1360	415	1110	338	970	296	310	94	220	67
1505F	1160	354	1040	317	830	253	710	216	215	66	145	44
1506A	1360	415	1200	366	940	286	810	247	254	77	169	52
9231	1430	436	1270	387	1000	305	850	259	260	79	N/A	N/A
9141	1430	436	1270	387	1000	305	850	259	260	79	N/A	N/A
8281	1430	436	1280	390	1000	305	870	265	260	79	160	49
8281B	1430	436	1270	387	1000	305	850	259	250	76	146	44
8281F	1250	381	1100	335	860	262	730	222	240	73	152	46
88281	1300	396	1150	351	910	277	770	235	200	61	123	37
1694A–7710A	1880	573	1710	521	1430	436	1240	378	400	122	270	82
1694F	1500	457	1360	415	1070	326	910	277	285	87	190	58
1695A	1700	518	1550	472	1270	387	1090	332	310	94	220	67
7731A	2750	838	2480	756	2040	622	1760	536	550	168	360	110
7732A	2630	802	2360	719	1920	585	1640	500	440	134	270	82

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 maximum 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 259M, PAL, Widescreen.
Maximum length = 20 dB loss at 1/2 the clock frequency: SMPTE 292M.

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.

Return Loss Headroom (1694A)