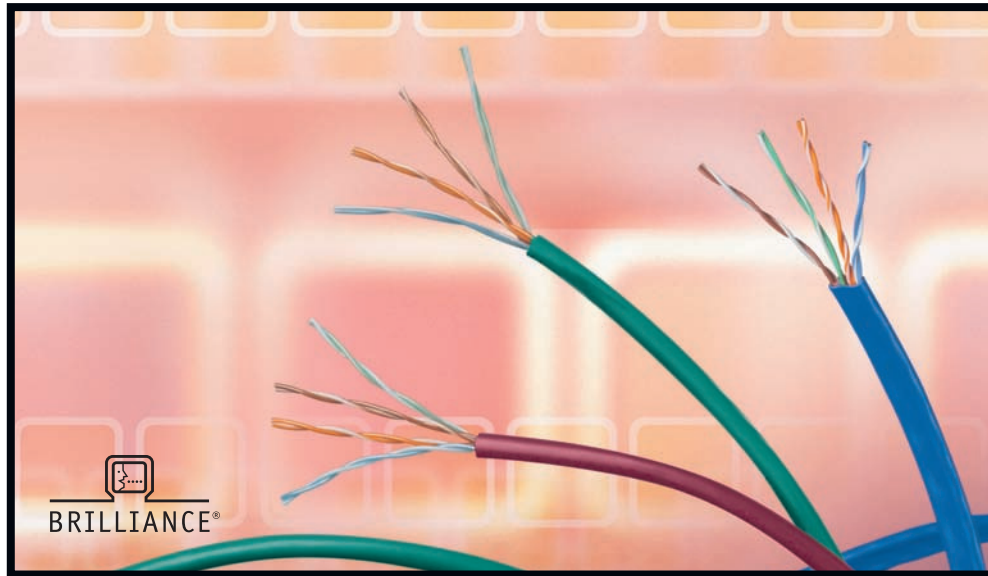


NP 212

Brilliance VideoTwist® Cables

Brilliance VideoTwist cables are the optimum solution for professional video/data installations — providing superior pure video, KVM (keyboard, video and mouse) and data transmissions over Unshielded Twisted Pairs (UTPs).



Belden® Brilliance VideoTwist UTP Cables Offer Superior Low Skew Performance for Component Video Applications Plus They Adhere to Applicable TIA/EIA Category Standards

Today's high resolution video displays require high performance cables that exhibit low signal skew and low return loss. Typically, these systems utilize bundled coax for the cable interconnect. Increasingly, however, system designers are turning to unshielded twisted pair (UTP) transmission equipment to distribute component RGB video due to UTP's economy over coax. The use of UTP cables also allows for the facility owner to use the same cable for premise LAN wiring — eliminating the need for two separate cables.

To meet this new video/data UTP requirement, Belden has designed a new series of cables: Brilliance VideoTwist UTP cables. These cables offer the best low skew and return loss performance in the marketplace for superior video quality, plus they meet applicable TIA/EIA standards for data transmissions.

Component RGB and Skew

Component RGB video systems transmit each component of a video signal, i.e., red, green and blue, through separate cables. Such transmissions require that each signal arrive at the video display at the same time in order to produce a sharp and clear video image. UTP cables, by design, have different twist lengths for each pair which means that each pair has a different physical length. This difference in length causes a signal delay

difference from pair to pair which is known as skew. The resulting skew limits the overall transmission distance of the UTP cable. The higher the skew, the shorter the distance.

For this reason, most UTP cables are limited to transmission distances of 328 to 600 feet, unless costly skew compensation equipment is utilized. Belden's new VideoTwist UTP cables can extend video transmission distances out to 1300 feet and beyond, depending on transmission equipment parameters.

Component Video and Return Loss

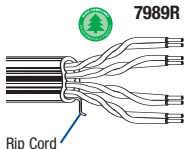
Cable return loss is another electrical component that can effect both video quality and transmission distance. Poor cable return loss can cause picture quality problems such as ghosting, poor pixel alignment and picture sharpness. VideoTwist's superior return loss performance minimizes these problems, ensuring the best video quality possible.

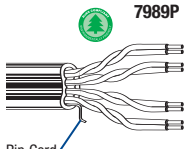
Brilliance VideoTwist®

Low Skew UTP Cables for Video Transmission. Category and Non-Category Styles

Description	Part No.	UL NEC/ C(UL) CEC Type	No. of Pairs	Standard Lengths		Standard Unit Wt.		Insulation Thickness		Nominal OD		Max. DCR (Ω/ 100m)	Max. DCR Unbal. (%)	Max. Cap. Unbal. (pF/ 100m)	Freq. (MHz)	Max. Atten. (dB/ 100m)	Min. PSUM NEXT (dB)	Min. PSUM ACR (dB/ 100m)	Min. PSUM ELFEXT (dB/ 100m)	Input Imped. (Ω)	Min. RL (dB)
				Ft.	m	Lbs.	kg	Inch	mm	Inch	mm										

Category 6 • 23 AWG Bonded-Pairs Solid Bare Copper • Skew 10.0ns/100m Nominal • Rip Cord

Non-Plenum • Polyolefin Insulation • Blue PVC Jacket																							
 <p>Rip Cord</p>	7989R	NEC:	4	A-1000	A-304.8	38.0	17.3	.009	.23	.365	9.27	9.0	3.0	49.2	1	2.0	72.3	70.3	64.8	100±15	20.0		
		CMR		1640	500.0	58.0	26.3	x	x							4	3.8	63.3	59.5	52.7	100±15	23.0	
		CEC:															8	5.3	58.8	53.4	46.7	100±15	24.5
		CMR FT4															10	6.0	57.3	51.3	44.8	100±15	25.0
																	16	7.6	54.3	46.7	40.7	100±15	25.0
																	20	8.5	52.8	44.3	38.7	100±15	25.0
																	25	9.5	51.4	41.8	36.8	100±15	24.3
																	31.25	10.7	49.9	39.2	34.9	100±15	23.6
																	62.5	15.4	45.4	30.0	28.8	100±15	21.5
																	100	19.8	42.3	22.5	24.8	100±15	20.1
														155	25.2	39.5	14.3	20.9	100±22	18.8			
														200	29.0	37.8	8.8	18.7	100±22	18.0			
														250	32.8	36.3	3.5	16.8	100±32	17.3			

Plenum • FEP Teflon® Insulation • Blue Flamarrest® Jacket																							
 <p>Rip Cord</p>	7989P	NEC:	4	A-1000	A-304.8	41.0	18.6	.009	.23	.365	9.27	9.0	3.0	49.2							(Same as 7989R above.)		
		CMP		1640	500.0	61.0	27.7	x	x														
		CEC:																					
		CMR FT6																					

ACR = Attenuation Crosstalk Ratio • DCR = DC Resistance • ELFEXT = Equal Level Far-end Crosstalk • NEXT = Near-end Crosstalk • PSUM = Power Sum • RL = Return Loss • UTP = Unshielded Twisted Pair(s)

Maximum Recommended Transmission Distance (without Using an Interface)

Resolution	VGA — 640 x 480			SVGA — 800 x 600			XGA — 1024 x 768			SXGA — 1280 x 1024			UXGA — 1600 x 1200			RGB	HDTV
Image Refresh Rate	60 Hz	75 Hz	85 Hz	60 Hz	75 Hz	85 Hz	60 Hz	75 Hz	85 Hz	60 Hz	75 Hz	85 Hz	60 Hz	75 Hz	85 Hz	—	60 Hz
Horizontal Scan Rate	31.5 KHz	39 KHz	45 KHz	38 KHz	50 KHz	54 KHz	48 KHz	60 KHz	68 KHz	64 KHz	80 KHz	91 KHz	75 KHz	94 KHz	107 KHz	—	—
Bandwidth Frequency	27.6 MHz	34.5 MHz	39.2 MHz	43.2 MHz	54 MHz	61.2 MHz	70.7 MHz	88.5 MHz	100 MHz	118 MHz	147.4 MHz	167 MHz	172.8 MHz	216 MHz	244.8 MHz	5 MHz	74.25 MHz
7987 dB/100 Ft. Loss @ Freq.	3.1	3.5	3.7	4.0	4.5	4.8	5.2	5.9	6.3	6.8	7.8	8.3	8.4	9.6	10.2	1.3	5.3
7988 dB/100 Ft. Loss @ Freq.	2.9	3.3	3.5	3.7	4.2	4.5	4.8	5.4	5.8	6.3	7.1	7.5	7.7	8.5	9.1	1.2	4.9
7989 dB/100 Ft. Loss @ Freq.	2.8	3.2	3.4	3.6	4.0	4.3	4.6	5.3	5.6	6.1	6.8	7.3	7.5	8.4	8.9	1.1	4.8
Part Number	Maximum Recommended Transmission Distance (Ft.) at -1 dB (3rd Harmonic)																
7987 Series	32	29	27	25	22	21	19	17	16	15	13	12	12	10	10	77	19
7988 Series	34	31	29	27	24	22	21	18	17	16	14	13	13	12	11	83	20
7989 Series	36	31	29	28	25	23	22	19	18	16	15	14	13	12	11	91	21
Part Number	Maximum Recommended Transmission Distance (Ft.) at -3 dB (3rd Harmonic)																
7987 Series	96	86	80	75	67	62	58	51	48	44	39	36	36	31	29	231	56
7988 Series	103	92	86	81	72	67	63	55	52	48	43	40	39	35	33	250	61
7989 Series	107	94	88	84	74	69	65	57	54	49	44	41	40	36	34	273	63
Part Number	Maximum Recommended Transmission Distance (Ft.) at -6 dB (3rd Harmonic)																
7987 Series	191	171	160	151	134	125	116	102	96	88	77	73	71	63	59	462	113
7988 Series	205	183	172	162	144	135	126	111	104	96	85	80	78	70	66	500	122
7989 Series	214	188	177	168	149	139	130	114	107	98	88	82	80	72	67	545	126

Teflon is a DuPont trademark.