

## LANmark-1000 Category 6 Riser

LANmark-1000 is an ANSI/TIA/EIA Category 6 verified cable that is ideal for gigabit network applications. It introduces new electrical performance parameters which are needed for gigabit Ethernet network systems. These electrical characteristics include: PS-NEXT, PS-ACR, PS-ELFEXT, ELFEXT, RL and LCL/TCL/EL TCTL (balance). LANmark-1000 was the first cable in the industry which set requirements for cable balance. Balance is the performance parameter which affects cable missions. Cable balance is a property that helps protect the network from the damaging effects of outside noise sources such as alien crosstalk.

### Description

#### Construction

23 AWG bare copper wire insulated with polyethylene. Two insulated conductors twisted together to form a pair and four such pairs cabled to form the basic unit, jacketed with flame-retardant PVC.

#### Standards

North American: ANSI/TIA/EIA-568-B.2-1 Category 6

#### Flame Rating

Non-plenum - Riser Rated, UL 1666, CMR,CMG, IEC 332-1

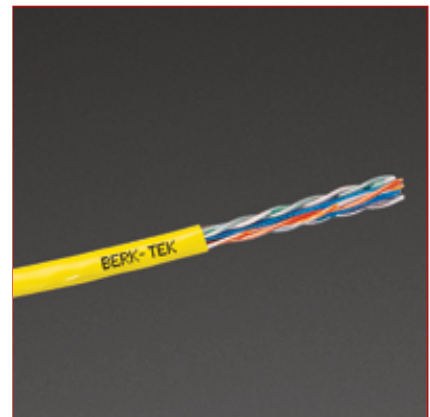
#### Applications

Berk-Tek's LANmark-1000 UTP cable is intended for high speed data applications including:

- IEEE 802.3 1000BASE-T, 100BASE-TX,
- 10BASE-T
- 155 Mb/s ATM
- ANSI X3.263 100 Mb/s
- 1000BASE-TX (ANSI/TIA/EIA-854-2001)
- 4/16 Mb/s Token Ring

#### Features

- Full duplex operation over four cable pairs
- Full power sum performance
- Increased usable bandwidth up to 250 MHz
- Documented balance characteristics (LCL, LCTL)
- Small, round, easy to install construction
- ETL verified to ANSI/TIA/EIA-568-B.2-1 Category 6 standard gigabit



#### Standards

**National** TIA/EIA-568-B.2

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### Benefits

- Capable of handling next generation network applications which will utilize full duplex operation and/or simultaneous bidirectional transmission
- Power sum characterization gives highest performance using existing applications
- Provides additional bandwidth required for future applications
- Addition of balance requirements improves overall cable performance and reduces cable emissions which results in reduced transmission errors
- State-of-the-art testing allows high frequency characterization of the cable to 500 MHz

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### Contact

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## LANmark-1000 Category 6 Riser

### Characteristics

#### Dimensional characteristics

Length per reel 1000.0 ft

Number of pairs 4

#### Usage characteristics

Category Cat. 6

Fire safety Riser Rated

### Color Code

<b>Pair-1</b>	White/Blue	Blue
<b>Pair-2</b>	White/Orange	Orange
<b>Pair-3</b>	White/Green	Green
<b>Pair-4</b>	White/Brown	Brown

### Parametric Measurements

	HORIZONTAL
<b>Mutual Capacitance</b>	4.4 nF/100 m nom.
<b>DC resistance</b>	9.38 Ohms/100 m max.
<b>Skew</b>	25 ns/100 m max.
<b>Pair to ground Unbalance</b>	330 pF/100 m max.
<b>Velocity of Propagation</b>	72% nom. Plenum
<b>Input Impedance</b>	100 ± 13% 0.772-100 MHz 100 ± [13+15log (F/100)] 100-500 MHz

### Temperature Rating

<b>Installation</b>	0°C to +50°C
<b>Operation</b>	-10°C to +75°C

### Technical Data - Physical

	CMR	
<b>Conductor diameter-in. (mm)</b>	0.022	(0.56)
<b>Cable diameter-in. (mm)</b>	0.224	(5.7)
<b>Nominal cable weight-lb./kft. (kg/km)</b>	27	(40)
<b>Max. installation tension-lb. (N)</b>	25	(110)
<b>Min. bend radius-in. (mm)</b>	1	(25.4)

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### Technical Data - Electrical

FREQ	SRL		RL		INSERTION LOSS		PS-NEXT		NEXT		ACR	
	(dB)		(dB)		(dB/100m)		(dB)		(dB)		(dB@100m)	
MHz	min.	typical	min.	typical	max.	typical	min.	typical	min.	typical	min.	typical
1	26.0	40.0	20.0	33.7	2.0	1.7	73.3	81	75.3	84	73.3	82
4	26.0	42.0	23.6	35.4	3.8	3.5	64.3	72	66.3	75	62.5	71
10	26.0	40.0	26.0	30.1	5.9	5.7	58.3	66	60.3	69	54.4	63
16	26.0	41.0	26.0	31.9	7.5	7.3	55.3	63	57.3	66	49.8	59
20	26.0	43.0	26.0	33.3	8.4	8.2	53.8	62	55.8	65	47.4	57
31.25	25.0	41.6	25.0	31.6	10.6	10.3	50.9	59	52.9	62	42.3	52
62.5	23.5	40.5	23.5	31.9	15.3	14.9	46.4	54	48.4	57	33.1	42
100	22.5	37.1	22.5	31.1	19.7	19.1	43.3	51	45.3	54	25.6	35
155	21.6	33.8	21.6	28.8	25.0	24.3	40.4	48	42.4	51	17.4	27
200	21.0	33.0	21.0	28.0	28.8	28.0	38.8	47	40.8	50	11.7	22
250	20.5	27.3	20.5	27.2	32.6	31.7	37.3	45	39.3	48	6.7	16
350	19.8	28.3	19.8	26.2	39.5	38.4	35.2	43	37.2	46	-	-
500	19.0	25.2	19.0	23.2	48.6	47.2	32.8	41	34.8	44	-	-
550	18.8	24.1	18.8	22.9	51.4	49.9	32.2	40	34.2	43	-	-
FREQ	PS-ACR		ELFEXT		PS-ELFEXT		LCL/TCL		EL TCTL			
	(dB@100m)		(dB)		(dB)		(dB)		(dB)			
MHz	min.	typical	min.	typical	min.	typical	min.	typical	min.	typical		
1	71.3	79	68.8	83	65.8	80	50.0	55	35.0	40		
4	60.5	68	56.7	71	53.7	68	43.0	48	22.0	27		
10	52.4	60	48.8	63	45.8	60	40.0	45	15.0	20		
16	47.7	56	44.7	59	41.7	56	37.0	42	10.9	15		
20	45.4	54	42.7	57	39.7	54	36.0	41	9.0	13		
31.25	40.3	49	38.9	53	35.9	50	35.1	40	5.1	11		
62.5	31.1	39	32.8	47	29.8	44	32.0	37	-	-		
100	23.6	32	28.8	43	25.8	40	30.0	35	-	-		
155	15.5	24	24.9	39	21.9	36	28.0	33	-	-		
200	10.0	19	22.7	37	19.7	34	27.0	31	-	-		
250	4.7	13	20.8	35	17.8	32	26.0	30	-	-		
350	-	-	17.9	32	14.9	29	-	-	-	-		
500	-	-	14.8	29	11.8	26	-	-	-	-		
550	-	-	13.9	28	10.9	25	-	-	-	-		

IMPORTANT: Berk-Tek performance guarantees are based on swept-frequency testing and apply to all frequencies for the entire specified frequency range and are not limited to the tables of data shown which are presented to demonstrate our guarantees at "representative" frequencies. Values above 500 MHz are for engineering information. limited combustible version also available. Other jacket colors available.

### Product List

Berk-Tek P/N	Description	Type of cable	Colour	Packaging	Field of application
10032451	LANmark-1000 Riser	UTP	Grey	Reel	Indoor

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Berk-Tek P/N	Description	Type of cable	Colour	Packaging	Field of application
10032452	LANmark-1000 Riser	UTP	Grey	Box	Indoor
10065431	LANmark-1000 Riser	UTP	Grey	Reel in a box	Indoor
10032458	LANmark-1000 Riser	UTP	White	Reel	Indoor
10032459	LANmark-1000 Riser	UTP	White	Box	Indoor
10065430	LANmark-1000 Riser	UTP	White	Reel in a box	Indoor
10032476	LANmark-1000 Riser	UTP	Red	Reel	Indoor
10032477	LANmark-1000 Riser	UTP	Red	Box	Indoor
10042063	LANmark-1000 Riser	UTP	Pink	Box	Indoor
10033994	LANmark-1000 Riser	UTP	Black	Reel	Indoor
10033815	LANmark-1000 Riser	UTP	Black	Box	Indoor
10066095	LANmark-1000 Riser	UTP	Black	Reel in a box	Indoor
10035206	LANmark-1000 Riser	UTP	Cream	Box	Indoor
10032454	LANmark-1000 Riser	UTP	Blue	Reel	Indoor
10032455	LANmark-1000 Riser	UTP	Blue	Box	Indoor
10065429	LANmark-1000 Riser	UTP	Blue	Reel in a box	Indoor
10032460	LANmark-1000 Riser	UTP	Yellow	Reel	Indoor
10032461	LANmark-1000 Riser	UTP	Yellow	Box	Indoor
10065432	LANmark-1000 Riser	UTP	Yellow	Reel in a box	Indoor
10032478	LANmark-1000 Riser	UTP	Green	Reel	Indoor
10032479	LANmark-1000 Riser	UTP	Green	Box	Indoor
10065433	LANmark-1000 Riser	UTP	Green	Reel in a box	Indoor
10032501	LANmark-1000 Riser	UTP	Violet	Box	Indoor
10095375	LANmark-1000 Riser	UTP	Violet	Reel in a box	Indoor
10070406	LANmark-1000 Riser	UTP	Orange	Reel	Indoor
10042077	LANmark-1000 Riser	UTP	Orange	Box	Indoor
10066094	LANmark-1000 Riser	UTP	Orange	Reel in a box	Indoor