Berk-Tek®
A NEXANS COMPANY

LANmark-10G2

LANmark™-10G2 is a next generation cable for 10 gigabit Ethernet. LANmark-10G2 is a true multi-media cable and is specifically designed to handle voice, video and data simultaneously. This convergence of technologies simplifies even the most dynamic network. The 10G2 is a breakthrough in cable technology, and its patented design minimizes alien crosstalk while maintaining a nominal .30" outside diameter (CMP).
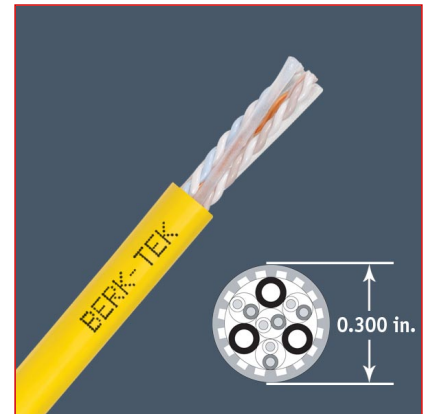
Description

Construction

Bare copper wire insulated with FEP. Two insulated conductors twisted together to form a pair and four such pairs cabled to form the basic unit made round with 3 monofilaments and with a striated flame-retardant PVC jacket.

Standards

- North American
  - ANSI/TIA/EIA-568-B.2-10 Augmented Category 6
  - UL 444 and C22.2 No. 214-02
- International
  - ISO/IEC 11801-2nd Edition
  - EU Directive 2002/95/EC (RoHS)

Flame Rating

- Plenum-NFPA 262, CMP
- ETL Listed

Applications

Berk-Tek's LANmark-10G2 UTP cable is intended for future and high speed data and multimedia applications including:

IEEE 802.3	10GBASE-T	10 Gb/s
IEEE 802.3	1000BASE-T	1 Gb/s
TIA/EIA-854	1000BASE-TX	1 Gb/s
ATM	155 Mb/s	155 Mb/s
IEEE 802.3	100BASE-TX	100 Mb/s
CDDI		100 Mb/s
IEEE 802.3	10BASE-T	10 Mb/s

Features

- New flexible, round, compact design
- Alien Crosstalk compliant
- Fully compliant to Augmented Category 6 requirements
- Documented balance characteristics (LCL/TCL, EL TCTL)
- Reduced attenuation (Insertion Loss)
- Highest performing UTP cable available

0.300 in.

Standards
National TIA/EIA-568-B.2-10

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Benefits

- Easier installation and cable management with round design
- Round design provides a true OD measurement
- Provides the bandwidth required for multimedia, broadband video, analog video and other future applications
- Balance characteristics improves overall cable performance and reduce transmission errors
- Characterized to 750 MHz, 250 MHz greater than the standard
- Improved insertion loss for stronger signal to noise ratio

Characteristics

Construction characteristics	
Type of cable	UTP
Dimensional characteristics	
Length per reel	1000.0 ft
Number of pairs	4
Usage characteristics	
Packaging	Reel
Field of application	Indoor
Category	Cat. 6a
Fire safety	Plenum Rated

Technical Data

Physical				Color Code		
Conductor	23 AWG bare copper			**Pair-1**	White	Blue
Conductor diameter–in. (mm)	0.023	(0.58)		**Pair-2**	White	Orange
Insulated conductor diameter–in. (mm)	0.044	(1.12)		**Pair-3**	White	Green
Cable diameter nom.–in. (mm)	0.300	(7.6)		**Pair-4**	White	Brown
Nominal cable weight–lb./kft. (kg/km)	43	(65)		**Temperature Rating**		
Max. installation tension–lb. (N)	25	(110)		**Installation**	0°C to +50°C	
Min. bend radius–in. (mm)	1.2	(30.5)		**Operation**	-20°C to +60°C	

Technical Data - Parametric Measurements

Mutual Capacitance	5.1 nF/100 m nom.
Capacitance P-G	330 nF/100 m nom.
DC resistance max.	9.38 Ohms/100 m max.
DC unbalance max.	3%
Skew	45 ns/100 m max.
Pair to ground unbalance	330 pF/100 m max.
Velocity of Propagation	67% nom.

Technical Data - Electrical

FREQ	RL		IL		NEXT		PSNEXT		ACR	
MHz	dB min.	typical	dB max.	typical	dB min.	typical	dB min.	typical	dB min.	typical
1	20.0	33.9	2.1	1.7	76.3	101.0	74.3	92.1	74.2	92.0
4	23.0	41.9	3.8	3.5	67.3	90.9	65.3	81.5	63.5	79.3
10	25.0	42.0	5.9	5.6	61.3	91.2	59.3	80.7	55.4	75.9
16	25.0	44.3	7.5	7.2	58.3	86.3	56.3	75.4	50.8	69.9
31.25	23.6	39.0	10.5	10.1	53.9	77.1	51.9	69.1	43.5	60.7
62.5	21.5	41.6	15.0	14.6	49.4	74.5	47.4	68.3	34.4	56.7
100	20.1	36.9	19.1	18.7	46.3	71.9	44.3	63.3	27.3	46.3
250	17.3	33.3	31.1	30.7	40.3	62.9	38.3	56.7	9.3	29.5
400	15.9	31.1	40.1	39.6	37.3	60.0	35.3	52.8	--	16.1
500	15.2	33.1	45.3	45.1	35.8	58.3	33.8	50.9	--	9.3
600	14.7	30.1	50.1	49.8	34.6	53.6	32.6	46.1	--	0.5
750	14.0	29.5	56.7	56.2	33.2	53.4	31.2	40.1	--	0.0

Technical Data - Electrical

FREQ	PSACR		ACRF		PSACRF		PS-ANEXT	PS-AACRF	LCL/TCL	EL TCTL
MHz	dB min.	typical	dB min.	typical	dB min.	typical	dB min.	dB min.	dB min.	dB min.
1	72.2	90.4	71.8	54.4	68.8	86.6	67.0	67.0	50.0	35.0
4	61.5	78.0	59.7	57.9	56.7	74.9	67.0	66.2	44.0	23.0
10	53.4	75.1	51.8	58.6	48.8	66.9	67.0	58.2	40.0	15.0
16	48.8	68.3	47.7	59.5	44.7	62.6	67.0	54.1	38.0	10.9
31.25	41.4	59.2	41.9	59.4	38.9	57.2	67.0	48.3	35.1	5.1
62.5	32.4	54.1	35.8	59.1	32.8	51.7	65.6	42.3	32.0	--
100	25.2	45.2	31.8	59.4	28.8	46.9	62.5	38.2	30.0	--
250	7.3	27.2	23.8	60.2	20.8	39.5	56.5	30.2	26.0	--
400	--	14.8	19.7	60.8	16.7	34.4	53.4	26.2	24.0	--
500	--	7.8	17.8	61.0	14.8	32.1	52.0	24.2	23.0	--
600	--	-1.2	16.2	61.6	13.2	30.8	50.8	22.6	22.2	--
750	--	--	14.3	62.4	11.3	26.9	49.3	20.7	21.2	--

Electrical characteristics above 500 MHz are for engineering information.

Product List

=Make to order, =Make to stock

	Part Number	Description	Colour
	10130484	Cat. 6a	Blue
	10137694	Cat. 6a	Green
	10137695	Cat. 6a	Black
	10138765	Cat. 6a	Red

= Make to order, = Make to stock

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Part Number	Description	Colour
10138182	Cat. 6a	Violet
10137183	Cat. 6a	Grey
10137384	Cat. 6a	White
10137385	Cat. 6a	Yellow
10138181	Cat. 6a	Pink
10138767	Cat. 6a	Orange
		☎ = Make to order, ⛁ = Make to stock

Selling delivery information

PLEASE NOTE: In the interest of product improvement, Berk-Tek, a Nexans company may make improvements or changes in the products, the programs or services described at any time without notice. Additionally, the information contained herein may include typographical errors or technical inaccuracies. Changes will be periodically made to address any such issues.