

Category 6E 4Pair Category 6 UTP Cable



Category 6E cable is the most advanced UTP cable today. It supports the highest UTP application and brings UTP performance to a new level. It introduces full duplex operation over four channel pairs with full power sum performance. Guaranteed for 6 dB of margin (headroom) over base requirements of current TIA/EIA proposed Category 6E NEXT standards, this cable maximizes bandwidth for today's leading edge applications and those of the future. Category 6E cable demonstrates superior capability for ATM, Gigabit ETHERNET™, Broadband Video and Wideband™ ETHERNET applications as well.

Standards

- ANSI/TIA/EIA-568 B.2-1 Category 6
- ISO/IEC 11801-1995, EN 50173
- Non Plenum – UL 1581, UL 1666, CM, CMR, IEC 332-1, CSA, ETL
- Plenum – UL 444, UL 910, CSA, ETL

Applications

Category 6 UTP cable is intended for future high performance data applications including:

- ATM 155 Mbps
- Ethernet 10BASE-T, 100BASE-TX, 100BASE-VG, 100BASE-T4 (IEEE802.3), 1000 Mbps 1000BASE-T Gigabit ETHERNET™ (IEEE 802.3)
- 16Mbps Token Ring™ (IEEE 802.5)

Construction

- Conductor: 23AWG (0.58mm) Solid Annealed Bare Copper
- Insulation: Polyethylene (Non-Plenum) or FEP (Plenum)
- Filler: Cross-Web type separator
- Jacket: Flame Retardant PVC (FR-PVC) or Polymer Alloy

Features & Benefits

- Attenuation, PS-NEXT, PS-ELFEXT and RL are specified and tested to 550MHz – Enhanced bandwidth cable ensures Zero Bit Error rates and increases network efficiency and uptime
- 60% increase in RL and 300% improvement in PS-NEXT over proposed TIA/EIA Category 6 requirements - Performance assurance for multiple high-bandwidth applications (e.g. Fast ETHERNET, ATM, Gigabit ETHERNET and Broadband Video)
- Flexible cross-web separator – Greater assurance of exceptional full duplex operation and simultaneous bi-directional transmission
- Positive identification striping on 100% of conductor length – Easily identifiable conductor mates
- TIA/EIA Category 6 compliant – Universally accepted design and approvals for global commercial network installation
- Warranted with leading connectivity manufacturers – Offers flexibility in selection of connectivity solutions and trouble-free cabling installation and maintenance

❖ Parametric Measurement

Impedance:	100 ± 15 Ω 0.772 – 100 MHz 100 ± 22 Ω 100 – 350MHz 100 ± 32 Ω 350 – 550MHz
Max. Conductor Resistance:	9.38 Ω / 100 Meters @ 20 °C 28.6 Ω / 1,000 FT @ 20 °C
Max. Resistance Unbalance:	5%
Max. Capacitance Unbalance:	330 pF / 100 Meters

Max. Propagation Delay :	5.7 ns / Meter @ 10MHz
Max. Delay Skew:	20 ns / 100 Meters @ 10MHz
Nom. Velocity of Propagation:	70% for CMR 72% for CMP
Mutual Capacitance:	5.6 nF / 100 Meters
Temperature Rating:	0 to 60 °C (Installation) -20 °C to 60 °C (Operating)

Category 6E

4Pair Category 6 UTP Cable

❖ Physical Data

	CMR	CMP
Conductor Nom. O.D.	.022"	.022"
Nom. Cable Diameter	.236"	.220"
Nominal Weight	27 lbs	25 lbs
Min. Bend Radius	1.3"	1.3"
Max. Tension	27 lbs	27 lbs

❖ Electrical Data

Frequency (MHz)	Attenuation (dB/100m) Max.	RL (dB) Min.	NEXT (dB) Min.	PS-NEXT (dB) Min.	ELFEXT (dB) Min.	PS-ELFEXT (dB) Min.	ACR (dB) Min.	PS-ACR (dB) Min.
.772	1.8	-	79.0	77.0	-	-	76.9	74.9
1	2.0	20.0	77.3	75.3	70.8	67.8	75.0	73.0
4	3.8	23.6	68.3	66.3	58.7	55.7	64.0	62.0
8	5.3	25.4	63.8	61.8	52.7	49.7	57.7	55.7
10	5.9	26.0	62.3	60.3	50.8	47.8	55.6	53.6
16	7.4	26.0	59.3	57.3	46.7	43.7	50.7	48.7
20	8.3	26.0	57.8	55.8	44.7	41.7	48.2	46.2
25	9.3	25.5	56.3	54.3	42.8	39.8	45.6	43.6
31.25	10.4	25.0	54.9	52.9	40.9	37.9	42.8	40.8
62.5	14.9	23.5	50.4	48.4	34.8	31.8	32.9	30.9
100	19.0	22.5	47.3	45.3	30.8	27.8	24.9	22.9
155	23.9	21.6	45.8	43.5	27.0	23.6	21.0	21.5
200	27.4	21.0	42.8	40.8	24.7	21.7	18.4	16.4
250	30.8	20.5	41.3	39.3	22.8	19.8	13.5	11.5
300	34.0	20.1	40.2	38.2	21.2	18.2	9.6	5.0
350	37.0	19.8	39.2	37.2	19.9	16.9	5.2	3.2
400	39.7	19.5	38.3	36.3	18.7	15.7	1.5	-
450	42.1	19.2	37.5	35.5	17.7	14.7	-	-
500	44.9	19.0	36.8	34.8	16.8	13.8	-	-
550	47.3	18.8	36.2	34.2	15.9	12.9	-	-

❖ Color Code

Pair 1	White / Blue	Blue
Pair 2	White / Orange	Orange
Pair 3	White / Green	Green
Pair 4	White / Brown	Brown

❖ Packaging Option

1000 FT	Pull-Out Box
1000 FT	Reel
1000 FT	Reel in a Box

❖ UTP Enhanced Category 6 Part Number

Part Number	Rating**	Jacket	Jacket Color*	Length
24906	CMR	FR-PVC	BLUE	1000 FT (305m)
24910	CMR	FR-PVC	GRAY	1000 FT (305m)
24902	CMR	FR-PVC	WHITE	1000 FT (305m)
20206	CMP	FR-PVC	BLUE	1000 FT (305m)
20210	CMP	FR-PVC	GRAY	1000 FT (305m)
20202	CMP	FR-PVC	WHITE	1000 FT (305m)

* Other jacket colors available.

** Also available in LSZH (Low Smoke Zero Halogen) type