



Augmented Category 6 Cables

□ Applications:

10Base-T4, 100Base-TX, 100Base-VG-ANYLAN, 155MbpsATM, 622 Mbps ATM, 1000Base-T, 10GBase-T

□ Standards:

ISO / IEC 11801, EN50173, TIA / EIA 568-B

□ Product Construction Matrix:

	U/UTP	F/UTP	U/FTP	SF/UTP	S/FTP
Conductor	23AWG Solid Plain Copper	23AWG Solid Plain Copper	23AWG Solid Plain Copper	23AWG Solid Plain Copper	23AWG Solid Plain Copper
Insulation	PE	PE	PE	PE	PE
Screen	Nil	Overall Aluminum Tape Screen	Individual Aluminum Tape Screen	Overall Aluminum Tape Screen & Copper Wire Braid	Individual Aluminum Tape Screen & Copper Wire Braid
Drain Wire	Nil	1/0.5 mm	1/0.5 mm	Nil	Nil
Jacket	PE/PVC/LSF/LSZH/LFSFROH	PE/PVC/LSF/LSZH	PE/PVC/LSF/LSZH/LSFROH		

Remark: PE- Polyethylene; PVC- Polyvinyl Chloride; LSF- Low Smoke & Fume; LSZH- Low Smoke Zero Halogen; LSFROH-Low Smoke Flame Retardant Zero Halogen (to IEC60332-3C); PVC can be classified as CMX, CM, CMR and CMP


□ Working Frequency:

1-500MHz

□ Technical Parameters:

- ☆ Characteristic Impedance: $100 \pm 15\Omega$ (1-250MHz); $100 \pm 22\Omega$ (100-500Mhz)
- ☆ Nominal Velocity of Propagation (NVP): CMX, CM, CMR, LSZH 69%; CMP 72%
- ☆ Maximum Mutual Capacitance: 5.6nF/100m
- ☆ Maximum Capacitance Unbalance: 330pF/100m
- ☆ Maximum DC Resistance: $7.5\Omega/100m$
- ☆ Maximum Resistance Unbalance: 3%
- ☆ Maximum Propagation Delay Skew: 30ns/100m (1-125MHz)
- ☆ Maximum Propagation Delay: 536 ns/100m @ 100MHz
- ☆ Minimum Bending radius: 10 x Overall Diameter
- ☆ Maximum Pulling load: 80N
- ☆ Working Temperature: $-20^{\circ}\text{C} \sim +60^{\circ}\text{C}$
- ☆ Storage Temperature: $-5^{\circ}\text{C} \sim +50^{\circ}\text{C}$
- ☆ Flame Retardancy:
 - UL 1581 (CM Jacket); UL 1666 (CMR Jacket);
 - UL 910 (CMP Jacket); IEC 60332-1 (FRPVC & LSZH Jacket);
 - IEC 60332-1 & IEC 60332-3C (LSFROH Jacket)

□ Product Certification:

E222756 



□ Product Categories:

Construction	Conductor Diameter (mm)	Diameter Over Insulation (mm)	Pairs	Screen	Overall Diameter (mm)	Jacket
U/UTP	0.57/0.58	1.02	4	Nil	8.5	PVC/LSZH
U/UTP	0.57/0.58	1.02	4	Nil	8.9	LSFROH
U/UTP	0.57/0.58	1.02	4	Nil	8.7	PE
F/UTP	0.57/0.58	1.02	4	Overall Aluminum Tape Screen	6.3	PVC/LSZH
F/UTP	0.57/0.58	1.02	4	Overall Aluminum Tape Screen	6.5	PE
U/FTP	0.57/0.58	1.02	4	Individual Aluminum Tape Screen	7.5	PVC/LSZH
SF/UTP	0.57/0.58	1.02	4	Overall Aluminum Tape Screen & Copper Wire Braid	6.6	PVC/LSZH
SF/UTP	0.57/0.58	1.02	4	Overall Aluminum Tape Screen & Copper Wire Braid	7.2	LSFROH
S/FTP	0.57/0.58	1.02	4	Individual Aluminum Tape Screen & Overall Copper Wire Braid	8.0	PVC/LSZH
S/FTP	0.57/0.58	1.02	4	Individual Aluminum Tape Screen & Overall Copper Wire Braid	8.4	LSFROH

□ Product Highlights:

- ☆ Provide excellent NEXT and attenuation performance beyond 500 MHz.
- ☆ Support 10 Gigabit Ethernet application.
- ☆ Meet the strict flame retardancy and environmental requirements in Europe and US.
- ☆ Different jacket materials available for choice.
- ☆ Special purpose cables can be offered according to customer request.
- ☆ Different jacket color options available for choice.

□ UTP Cat 6A Transmission Properties:

FREQ (MHz)	NEXT (dB/100m) Minimum Value/ Typical Value/ Standard Value	IL (dB/100m)	RL (dB/100m) Minimum Value/ Typical Value/ Standard Value	ACR (dB/100m) Minimum Value/ Typical Value/ Standard Value	ELFEXT (dB/100m) Minimum Value/ Typical Value/ Standard Value	PSNEXT (dB/100m) Minimum Value/ Typical Value/ Standard Value	PSACR (dB/100m) Minimum Value/ Typical Value/ Standard Value	PSELFEXT (dB/100m) Minimum Value/ Typical Value/ Standard Value
1	74.3/95.0/74.3	2.0	20.0/28.0/20.0	72.2/94.0/72.2	67.8/92.0/67.8	72.3/92.0/72.3	70.2/90.0/70.2	64.8/85.0/64.8
4	65.3/88.0/65.3	3.7	23.0/30.0/23.0	61.4/88.0/61.4	55.8/80.0/55.8	63.3/83.0/63.3	59.5/80.0/59.5	52.8/73.0/52.8
8	60.8/85.0/60.8	5.3	24.5/33.0/24.5	55.4/83.0/55.4	49.7/75.0/49.7	58.8/80.0/58.8	53.5/76.0/53.5	46.7/70.0/46.7
10	59.3/83.0/59.3	5.9	25.0/36.0/25.0	53.3/78.0/53.3	47.8/72.0/47.8	57.3/77.0/57.3	51.3/72.0/51.3	44.8/65.0/44.8
16	56.2/80.0/56.2	7.6	25.0/36.0/25.0	48.6/74.0/48.6	43.7/68.0/43.7	54.2/74.0/54.2	46.6/68.0/46.6	40.7/61.0/40.7
20	54.8/78.0/54.8	8.3	25.0/36.0/25.0	46.3/71.0/46.3	41.8/65.0/41.8	52.8/73.0/52.8	44.3/66.0/44.3	38.8/59.0/38.8
25	53.3/77.0/53.3	9.5	24.3/35.0/24.3	43.8/69.0/43.8	39.8/63.0/39.8	51.3/71.0/51.3	41.8/63.0/41.8	36.8/57.0/36.8
31.25	51.9/76.0/51.9	10.4	23.6/34.0/23.6	41.1/67.0/41.1	37.9/62.0/37.9	49.9/70.0/49.9	39.1/60.0/39.1	34.9/55.0/34.9
62.5	47.4/70.0/47.4	14.9	21.5/33.5/21.5	31.9/57.0/31.9	31.9/56.0/31.9	45.4/65.0/45.4	29.9/51.0/29.9	28.9/49.0/28.9
100	44.3/68.0/44.3	19.0	20.1/33.0/20.1	24.4/50.0/24.4	27.8/52.0/27.8	42.3/62.0/42.3	22.4/44.0/22.4	24.8/45.0/24.8
200	39.8/65.0/39.8	27.4	18.0/31.0/18.0	10.6/38.0/10.6	21.8/46.0/21.8	37.8/58.0/37.8	8.6/32.0/8.6	18.8/39.0/18.8
250	38.3/62.0/38.3	31.0	17.3/30.5/17.3	5.3/33.0/5.3	19.8/44.0/19.8	36.3/56.0/36.3	3.3/27.0/3.3	16.8/37.0/16.8
300	37.1/61.0/37.1	34.2	16.8/29.0/16.8	0.5/29.0/0.5	18.3/42.0/18.3	35.1/55.0/35.1	-1.5/24.0/-1.5	15.3/35.0/15.3
350	36.1/60.0/36.1	37.1	16.3/28.0/16.3	-3.8/26.0/-3.8	16.9/41.0/16.9	34.1/54.0/34.1	-5.8/20.0/-5.8	13.9/34.0/13.9
400	35.3/59.0/35.3	40.0	15.9/27.0/15.9	-7.9/21.0/-7.9	15.8/40.0/15.8	33.3/53.0/33.3	-9.9/15.0/-9.9	12.8/33.0/12.8
450	34.5/58.0/34.5	46.3	15.5/26.5/15.5	-10.5/18.0/-10.5	14.7/40.5/14.7	32.5/52.0/32.5	-12.5/11.0/-12.5	11.7/32.5/11.7
500	33.8/57.0/33.8	45.3	15.2/26.0/15.2	-15.3/15.0/-15.3	13.8/39.0/13.8	31.8/51.0/31.8	-17.3/9.0/-17.3	10.8/32.0/10.8
625	32.4/53.0/32.4	51.1	14.5/25.0/14.5	-23.1/31.0/-23.1	11.8/36.0/11.8	30.4/50.0/30.4	-25.1/5.0/-25.1	8.8/29.0/8.8

* Data for 250MHz above are for reference only

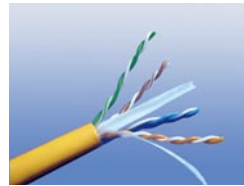
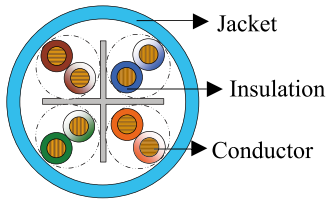


□ F/UTP & SF/UTP Cat 6A Transmission Properties:

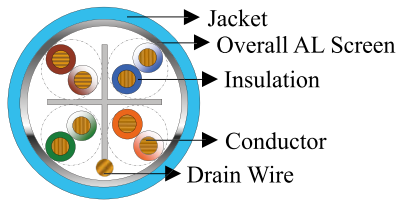
FREQ (MHz)	NEXT (dB/100m) Minimum Value/ Typical Value/ Standard Value	IL (dB/100m)	RL (dB/100m) Minimum Value/ Typical Value/ Standard Value	ACR (dB/100m) Minimum Value/ Typical Value/ Standard Value	ELFEXT (dB/100m) Minimum Value/ Typical Value/ Standard Value	PSNEXT (dB/100m) Minimum Value/ Typical Value/ Standard Value	PSACR (dB/100m) Minimum Value/ Typical Value/ Standard Value	PSELFEXT (dB/100m) Minimum Value/ Typical Value/ Standard Value
1	74.3/86.0/74.3	2.0	20.0/33.0/20.0	72.2/84.0/72.2	67.8/91.0/67.8	72.3/81.0/72.3	70.2/80.5/70.2	64.8/84.0/64.8
4	65.3/77.0/65.3	3.7	23.0/35.5/23.0	61.4/73.0/61.4	55.8/79.0/55.8	63.3/72.0/63.3	59.5/70.0/59.5	52.8/72.0/52.8
8	60.8/75.0/60.8	5.3	24.5/36.0/24.5	55.4/70.0/55.4	49.7/74.0/49.7	58.8/69.0/58.8	53.5/66.0/53.5	46.7/69.0/46.7
10	59.3/71.0/59.3	5.9	25.0/38.0/25.0	53.3/66.0/53.3	47.8/71.0/47.8	57.3/65.0/57.3	51.3/62.0/51.3	44.8/64.0/44.8
16	56.2/68.0/56.2	7.6	25.0/35.2/25.0	48.6/61.0/48.6	43.7/67.0/43.7	54.2/62.0/54.2	46.6/58.0/46.6	40.7/60.0/40.7
20	54.8/67.0/54.8	8.3	25.0/35.0/25.0	46.3/59.0/46.3	41.8/65.0/41.8	52.8/61.0/52.8	44.3/55.0/44.3	38.8/59.0/38.8
25	53.3/65.0/53.3	9.5	24.3/34.0/24.3	43.8/57.0/43.8	39.8/63.0/39.8	51.3/60.0/51.3	41.8/53.0/41.8	36.8/57.0/36.8
31.25	51.9/64.0/51.9	10.4	23.6/33.1/23.6	41.1/54.0/41.1	37.9/61.0/37.9	49.9/54.0/49.9	39.1/50.0/39.1	34.9/54.0/34.9
62.5	47.4/59.0/47.4	14.9	21.5/32.2/21.5	31.9/44.0/31.9	31.9/55.0/31.9	45.4/58.0/45.4	29.9/41.0/29.9	28.9/48.0/28.9
100	44.3/56.0/44.3	19.0	20.1/31.6/20.1	24.4/38.0/24.4	27.8/51.0/27.8	42.3/50.0/42.3	22.4/34.0/22.4	24.8/44.0/24.8
200	39.8/52.0/39.8	27.4	18.0/29.8/18.0	10.6/25.0/10.6	21.8/45.0/21.8	37.8/45.0/37.8	8.6/20.5/8.6	18.8/38.0/18.8
250	38.3/50.0/38.3	31.0	17.3/28.7/17.3	5.3/19.0/5.3	19.8/43.0/19.8	36.3/44.0/36.3	3.3/15.0/3.3	16.8/36.0/16.8
300	37.1/49.0/37.1	34.2	16.8/28.0/16.8	0.5/14.0/0.5	18.3/38.0/18.3	35.1/43.0/35.1	-1.5/10.0/-1.5	15.3/31.0/15.3
350	36.1/48.0/36.1	37.1	16.3/27.5/16.3	-3.8/9.0/-3.8	16.9/37.0/16.9	34.1/41.0/34.1	-5.8/7.0/-5.8	13.9/30.0/13.9
400	35.3/47.0/35.3	40.0	15.9/27.0/15.9	-7.9/7.0/-7.9	15.8/36.0/15.8	33.3/40.0/33.3	-9.9/3.0/-9.9	12.8/29.0/12.8
450	34.5/47.0/34.5	46.3	15.5/26.5/15.5	-10.5/6.0/-10.5	14.7/35.0/14.7	32.5/39.0/32.5	-12.5/2.0/-12.5	11.7/27.5/11.7
500	33.8/47.0/33.8	45.3	15.2/26.0/15.2	-15.3/5.0/-15.3	13.8/34.0/13.8	31.8/38.0/31.8	-17.3/0.0/-17.3	10.8/27.0/10.8
625	32.4/45.0/32.4	51.1	14.5/25.0/14.5	-23.1/1.0/-23.1	11.8/33.0/11.8	30.4/37.0/30.4	-25.1/-3.9/-25.1	8.8/26.0/8.8

□ U/FTP & S/FTP Cat 6A Transmission Properties:

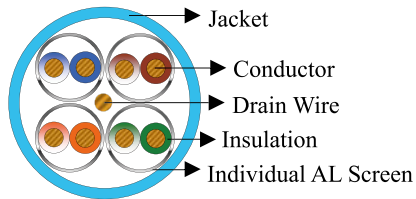
FREQ (MHz)	NEXT (dB/100m) Minimum Value/ Typical Value/ Standard Value	IL (dB/100m)	RL (dB/100m) Minimum Value/ Typical Value/ Standard Value	ACR (dB/100m) Minimum Value/ Typical Value/ Standard Value	ELFEXT (dB/100m) Minimum Value/ Typical Value/ Standard Value	PSNEXT (dB/100m) Minimum Value/ Typical Value/ Standard Value	PSACR (dB/100m) Minimum Value/ Typical Value/ Standard Value	PSELFEXT (dB/100m) Minimum Value/ Typical Value/ Standard Value
1	87.0/90.0/74.3	2.0	20.0/28.0/20.0	85.0/88.0/72.2	73.8/75.0/67.8	85.0/88.0/72.3	83.0/86.0/70.2	70.8/72.0/64.8
4	80.0/90.0/65.3	3.7	23.0/30.0/23.0	76.0/86.0/61.4	61.8/75.0/55.8	78.0/88.0/63.3	74.0/84.0/59.5	58.0/72.0/52.8
8	80.0/90.0/60.8	5.3	24.5/33.0/24.5	74.7/84.0/55.4	55.7/75.0/49.7	78.0/88.0/58.8	72.7/82.0/53.5	52.7/72.0/46.7
10	80.0/90.0/59.3	5.9	25.0/36.0/25.0	74.0/84.0/53.3	53.8/74.0/47.8	78.0/88.0/57.3	72.0/82.0/51.3	50.8/71.0/44.8
16	80.0/90.0/56.2	7.6	25.0/36.0/25.0	72.4/82.0/48.6	49.7/70.0/43.7	78.0/88.0/54.2	70.4/80.0/46.6	46.7/67.0/40.7
20	80.0/90.0/54.8	8.3	25.0/36.0/25.0	71.5/81.0/46.3	47.8/68.0/41.8	78.0/88.0/52.8	69.5/79.0/44.3	44.8/65.0/38.8
25	80.0/90.0/53.3	9.5	24.3/35.0/24.3	70.5/80.0/43.8	45.8/68.0/39.8	78.0/88.0/51.3	68.5/78.0/41.8	42.8/65.0/36.8
31.25	80.0/90.0/51.9	10.4	23.6/34.0/23.6	69.3/79.0/41.1	43.9/64.0/37.9	78.0/88.0/49.9	67.3/77.0/39.1	40.9/61.0/34.9
62.5	75.3/90.0/47.4	14.9	21.5/33.5/21.5	59.9/74.0/31.9	37.9/58.0/31.9	69.1/83.0/45.4	57.9/72.0/29.9	34.9/55.0/28.9
100	71.1/85.0/44.3	19.0	20.1/33.0/20.1	51.3/65.0/24.4	33.8/54.0/27.8	69.1/83.0/42.3	49.3/63.0/22.4	30.8/51.0/24.8
200	71.1/85.0/39.8	27.4	18.0/31.0/18.0	42.1/56.0/10.6	27.8/51.0/21.8	69.1/83.0/37.8	40.1/54.0/8.6	24.8/48.0/18.8
250	71.1/85.0/38.3	31.0	17.3/30.5/17.3	38.2/52.0/5.3	25.8/48.0/19.8	61.7/78.0/36.3	36.2/50.0/3.3	22.8/45.0/16.8
300	63.7/80.0/37.1	34.2	16.8/29.0/16.8	27.3/43.0/0.5	24.3/45.0/18.3	61.7/78.0/35.1	25.3/41.0/-1.5	21.2/42.0/15.3
350	63.7/80.0/36.1	37.1	16.3/28.0/16.3	23.9/40.0/-3.8	23.9/45.0/16.9	61.7/78.0/34.1	21.9/38.0/-5.8	19.9/42.0/13.9
400	63.7/80.0/35.3	40.0	15.9/27.0/15.9	20.7/37.0/-7.9	21.8/45.0/15.8	61.7/78.0/33.3	18.7/35.0/-9.9	19.7/42.0/12.8
450	63.7/80.0/34.5	46.3	15.5/26.5/15.5	17.4/33.0/-10.5	20.5/42.0/14.7	61.7/78.0/32.5	15.4/31.0/-12.5	17.5/39.0/11.7
500	63.7/80.0/33.8	45.3	15.2/26.0/15.2	14.8/31.0/-15.3	19.8/42.0/13.8	61.7/78.0/31.8	12.8/29.0/-17.3	16.8/39.0/10.8
625	60.0/70.0/32.4	51.1	14.5/25.0/14.5	5.5/15.5/-23.1	18.8/42.0/11.8	58.0/68.0/30.4	9.9/26.0/-25.1	16.0/39.0/8.8



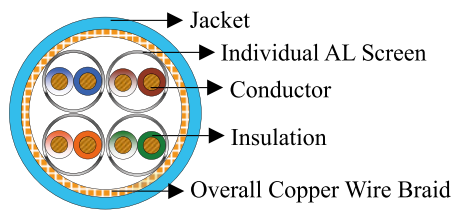
Cat6A U/UTP



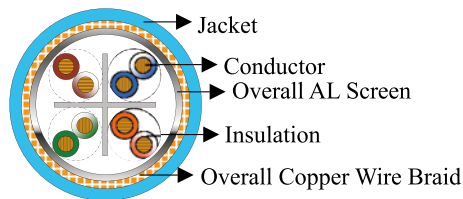
Cat6A F/UTP



Cat6A U/FTP



Cat6A S/FTP



Cat6A SF/UTP