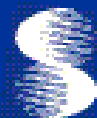




Caledonian

Data Cable



Addison



Caledonian, established in 1978, offers one of the most complete lines of fiber and copper cabling system solutions with over hundreds of different cabling system products. Our superior products provide leading edge within every cable series and for every application.

Among the national and international standards with which our cables could comply are: BS - British Standard; LPCB Fire Performance Standard, ISO Standard etc. Caledonian Cables offers a comprehensive stock of cables and cabling products through its nationwide network of resellers and distributors. Caledonian Cables has continually expanded its global presence in Europe and Asia.

Company Profile >>>

Caledonian & Addison, produces a wide range of cables for communication, power and electronics in its primary plants in UK, Italy and Spain. To stay in front, we continually keep expanding our manufacturing capabilities in more low cost region such as Romania, Taiwan, Malaysia etc. This low-cost manufacturing facilities enable us provide a flexible, scalable global system that delivers superior operational performance and optimal results for our customers.

Our extensive global network of manufacturing facilities gives us significant scale and the flexibility to fulfill our customer requirements. This global presence provides design and consultancy solutions that are combined with core cable manufacturing, logistic services, and vertically integrated with our E commerce technologies, to optimize customer operations by lowering costs and reducing time to market.

Caledonian & Addison has been respected for its high standards of quality, excellent service level, competitive pricing and a unique and innovative spirit. With our latest technologies, we are both inspired and well-positioned to meet the changing needs of our customers. We have the resources to diversify and to enhance our product lines and services. We understand the need for change and with our accurate planning, we are ready for the future and the promise of new marketing opportunities. Our tradition of growth through excellence is assured.

Our Design Centers work closely with customers to constantly improve its standard range of products and technologies and to develop customized, country and industry-specific solutions. Caledonian & Addison has established an extensive network of design, manufacturing, and logistics facilities in the world's major markets to serve the growing outsourcing needs of both multinational and regional customers.



Table of Contents

| | |
|--------------------------------------|-------|
| Enhanced Category 5 Cable | 4-5 |
| Category 6 Cables | 6-8 |
| Augmented Category 6 Cables | 9-12 |
| Category 7 Cables | 13-14 |
| Category 3 Multipair Cables | 15-16 |
| Category 5 Multipair Cables | 17-18 |
| Enhanced Category 5 Multipair Cables | 19-20 |



Enhanced Category 5 Cables

□ Applications:

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

□ Standards:

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

□ Product Construction Matrix:

| | U/UTP | F/UTP | SF/UTP |
|------------|--------------------------|------------------------------|--|
| Conductor | 24AWG Solid Plain Copper | 24AWG Solid Plain Copper | 24AWG Solid Plain Copper |
| Insulation | PE | PE | PE |
| Screen | Nil | Overall Aluminum Tape Screen | Overall Aluminum Tape Screen & Copper Wire Braid |
| Drain Wire | Nil | 1/0.5 mm | Nil |
| Jacket | PE/PVC/LSF/LSZH/LSFROH | PE/PVC/LSF/LSZH | PE/PVC/LSF/LSZH/LSFROH |

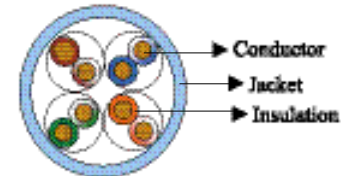
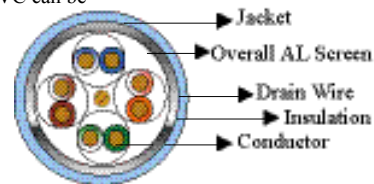
Remark: PE- Polyethylene; PVC- Polyvinyl Chloride; LSF- Low Smoke & Fume; LSZH- Low Smoke Zero Halogen; LSFROH-Low Smoke Flame Retardant Zero Halogen (to IEC60332-3C); PVC can be offered in CMX, CM, CMR and CMP grade

□ Working Frequency:


1-100MHz

□ Technical Parameters:

- ☆ Characteristic Impedance: $100 \pm 15\Omega$ (1-100MHz)
- ☆ 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: $9.38\Omega/100m$
- ☆ Maximum Resistance Unbalance: 5%
- ☆ Maximum Propagation Delay Skew: 30ns/100m
- ☆ Maximum Propagation Delay: 536ns/100m@100MHz
- ☆ Minimum Bending radius: 10 x Overall Diameter
- ☆ Voltage Rating: 80V rms
- ☆ Maximum Pulling Load: 80N
- ☆ Working Temperature: $-5^{\circ}C \sim +50^{\circ}C$
- ☆ Storage Temperature: $-20^{\circ}C \sim +60^{\circ}C$
- ☆ Flame Retardancy: UL 1581 (CM Jacket); UL 1666 (CMR Jacket); UL 910 (CMP Jacket); IEC 60332-1(FRPVC & LSZH Jacket); IEC 60332-1 and IEC 60332-3C (LSFROH Jacket)



□ Product Certification:

E222756 

□ Cable Parameters:

| Construction | Conductor Diameter (mm) | Diameter Over Insulation (mm) | Pairs | Screen | Overall Diameter (mm) | Jacket |
|--------------|-------------------------|-------------------------------|-------|--|-----------------------|-----------|
| U/UTP | 0.5/0.51 | 0.91 | 4 | Nil | 5.1 | PVC/LSZH |
| U/UTP | 0.5/0.51 | 0.91 | 4 | Nil | 5.5 | LSFROH |
| U/UTP | 0.5/0.51 | 0.91 | 4 | Nil | 5.3 | PE |
| F/UTP | 0.53 | 1.00 | 4 | Overall Aluminum Tape Screen | 6.3 | PVC/LSZH |
| F/UTP | 0.53 | 1.00 | 4 | Overall Aluminum Tape Screen | 6.5 | PE |
| SF/UTP | 0.53 | 1.00 | 4 | Overall Aluminum Tape Screen & Copper Wire Braid | 6.6 | PVC /LSZH |
| SF/UTP | 0.53 | 1.00 | 4 | Overall Aluminum Tape Screen & Copper Wire Braid | 7.0 | LSFROH |
| SF/UTP | 0.53 | 1.00 | 4 | Overall Aluminum Tape Screen & Copper Wire Braid | 6.8 | PE |

□ Product Highlights:

- ☆ Provide excellent bandwidth beyond 100 MHz.
- ☆ Meet the strict flame retardancy and environmental requirements in Europe and US.
- ☆ Different jacket materials available for choice.
- ☆ Guaranteed ACR Value > 0 dB @ 200 MHz.
- ☆ Special purpose cables can be offered according to customer request.
- ☆ Different jacket color options available for choice.

□ 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 | 68.3/74.0/65.3 | 2.0 | 20.2/26.0/20.2 | 66.3/72.0/63.3 | 64.8/69.0/63.8 | 65.0/71.0/62.3 | 63.3/69.0/60.3 | 61.8/66.0/60.8 |
| 4 | 59.3/65.0/56.3 | 4.1 | 23.0/29.0/23.0 | 55.2/60.9/52.2 | 52.7/57.0/51.7 | 56.3/62.0/53.3 | 52.2/57.9/49.2 | 49.7/54.0/48.7 |
| 8 | 54.8/61.0/51.8 | 5.8 | 24.5/30.5/24.5 | 49.0/55.2/46.0 | 46.7/51.0/45.7 | 51.8/58.0/48.8 | 46.0/52.2/43.0 | 43.7/48.0/42.7 |
| 10 | 53.3/59.0/50.3 | 6.5 | 25.0/31.0/25.0 | 46.8/52.5/43.8 | 44.8/49.0/43.8 | 50.3/56.0/47.3 | 43.8/49.5/40.8 | 41.8/46.0/40.8 |
| 16 | 50.3/56.0/47.3 | 8.2 | 25.0/31.0/25.0 | 42.1/47.8/39.1 | 40.7/45.0/39.7 | 47.4/53.0/44.3 | 39.1/44.8/36.1 | 37.7/42.0/36.7 |
| 20 | 48.8/55.0/45.8 | 9.3 | 25.0/31.0/25.0 | 39.5/45.7/36.5 | 38.7/43.0/37.7 | 45.8/52.0/42.8 | 36.5/42.7/33.5 | 35.7/40.0/34.7 |
| 25 | 47.3/53.0/44.3 | 10.4 | 24.3/30.3/24.3 | 36.9/42.6/33.9 | 36.8/41.0/35.8 | 44.3/50.0/41.3 | 33.9/39.6/30.9 | 33.8/38.0/32.8 |
| 31.25 | 45.9/52.0/42.9 | 11.7 | 23.6/29.6/23.6 | 34.2/40.3/31.2 | 34.9/39.0/33.9 | 42.9/49.0/39.9 | 31.2/37.3/28.2 | 31.9/36.0/30.9 |
| 62.5 | 41.4/47.0/38.4 | 17.0 | 21.5/27.5/21.5 | 24.4/30.0/21.4 | 28.8/33.0/27.8 | 38.4/44.0/35.4 | 21.4/27.0/18.4 | 25.8/30.0/24.8 |
| 100 | 38.3/44.0/35.3 | 22.0 | 20.1/26.1/20.1 | 16.3/22.0/13.3 | 24.8/29.0/23.8 | 35.3/41.0/32.3 | 13.3/19.0/10.3 | 21.8/26.0/20.8 |
| 155 | 35.5/41.0/32.5 | 28.1 | 18.8/24.8/18.8 | 7.4/12.9/4.4 | 20.9/25.0/19.9 | 32.5/38.0/29.5 | 4.4/9.9/-1.4 | 17.9/22.0/16.9 |
| 200 | 33.7/40.0/30.7 | 32.4 | 18.0/24.0/18.0 | 1.3/7.6/-1.7 | 19.7/24.0/18.7 | 30.0/37.0/27.7 | -1.7/4.6/-4.7 | 16.7/21.0/15.7 |
| 310 | 32.3/38.0/29.3 | 41.8 | 17.3/23.3/17.3 | N/A | 11.0/15.0/10.0 | 29.3/35.0/26.3 | N/A | 14.0/18.0/13.0 |
| 350 | 30.1/36.0/27.1 | 44.9 | 17.3/23.3/17.3 | N/A | 8.1/12.0/7.1 | 27.1/33.0/24.1 | N/A | 11.1/15.0/10.1 |

* Data for 100MHz above are for reference only



Cat5e U/UTP



Cat5e F/UTP



Cat5e SF/UTP



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 & Overall Copper Wire Braid |
| Drain Wire | Nil | 1/0.5 mm | 1/0.5 mm | Nil | Nil |
| Jacket | PE/PVC/LSF/LSZH/LSFROH | 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:

1-250MHz

Technical Parameters:

- ☆ Characteristic Impedance: $100 \pm 15\Omega$ (1-250MHz)
- ☆ 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 Ω /100m
- ☆ Maximum Resistance Unbalance: 3%
- ☆ Maximum Propagation Delay Skew: 30ns/100m (1-125MHz)
- ☆ Maximum Propagation Delay: 536ns/100m@100MHz
- ☆ Minimum Bending radius: 10 x Overall Diameter
- ☆ Maximum Pulling load: 80N
- ☆ Working Temperature: -20°C ~ +60°C
- ☆ Storage Temperature: -5°C ~ +50°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 | 6.0 | PVC/LSZH |
| U/UTP | 0.57/0.58 | 1.02 | 4 | Nil | 6.5 | LSFROH |
| U/UTP | 0.57/0.58 | 1.02 | 4 | Nil | 6.2 | 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 | 7.1 | 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 |

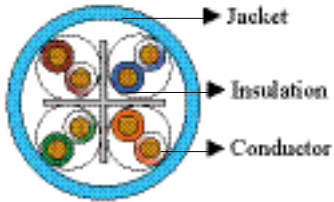
□ Product Highlights:

- ☆ Provide excellent bandwidth beyond 250 MHz.
- ☆ Support 10 Gigabit Ethernet application.
- ☆ Meet the strict flame retardancy and environmental requirements in Europe and US.
- ☆ Different jacket materials available for choice.
- ☆ Guaranteed ACR Value > 0dB @ 250MHz.
- ☆ Special purpose cables can be offered according to customer request.
- ☆ Different jacket color options available for choice.

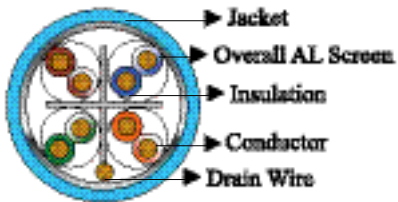
□ Transmission Properties:

| 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 | 77.3/87.0/74.3 | 2.0 | 20.0/21.5/20.0 | 75.2/85.0/72.2 | 68.8/80.0/67.8 | 75.3/85.0/72.3 | 73.2/83.0/70.2 | 65.8/70.0/64.8 |
| 4 | 68.3/77.0/65.3 | 3.8 | 23.0/24.7/23.0 | 64.4/73.0/61.4 | 56.8/66.0/55.8 | 66.3/74.0/63.3 | 62.5/71.0/59.5 | 53.8/63.0/52.8 |
| 8 | 63.8/72.0/60.8 | 5.3 | 24.5/25.5/24.5 | 58.4/67.0/55.4 | 50.7/61.0/49.7 | 61.8/70.0/58.8 | 56.5/65.0/53.5 | 47.7/58.0/46.7 |
| 10 | 62.3/70.0/59.3 | 6.0 | 25.0/28.0/25.0 | 56.3/64.0/53.3 | 48.8/57.0/47.8 | 60.3/68.0/57.3 | 54.3/62.0/51.3 | 45.8/54.0/44.8 |
| 16 | 59.2/66.0/56.2 | 7.6 | 25.0/28.0/25.0 | 51.6/59.0/48.6 | 44.7/52.0/43.7 | 57.2/64.0/54.2 | 49.6/57.0/46.6 | 41.7/49.0/40.7 |
| 20 | 57.8/65.0/54.8 | 8.5 | 25.0/28.0/25.0 | 49.3/57.0/46.3 | 42.8/50.0/41.8 | 55.8/63.0/52.8 | 47.3/55.0/44.3 | 39.8/47.0/38.8 |
| 25 | 56.3/63.0/53.3 | 9.5 | 24.3/27.0/24.3 | 46.8/54.0/43.8 | 40.8/47.0/39.8 | 54.3/61.0/51.3 | 44.8/52.0/41.8 | 37.8/44.0/36.8 |
| 31.25 | 54.9/61.0/51.9 | 10.7 | 23.6/26.5/23.6 | 44.1/51.0/41.1 | 38.9/45.0/37.9 | 52.9/59.0/49.9 | 42.1/49.0/39.1 | 35.9/42.0/34.9 |
| 62.5 | 50.4/57.0/47.4 | 15.4 | 21.5/24.6/21.5 | 34.9/42.0/31.9 | 32.9/38.0/31.9 | 48.4/55.0/45.4 | 32.9/40.0/29.9 | 29.9/35.0/28.9 |
| 100 | 47.3/53.0/44.3 | 19.8 | 20.1/23.7/20.1 | 27.4/33.0/24.4 | 28.8/34.0/27.8 | 45.3/51.0/42.3 | 25.4/31.0/22.4 | 25.8/31.0/24.8 |
| 200 | 42.8/48.0/39.8 | 29.0 | 18.0/22.2/18.0 | 13.6/21.0/10.6 | 22.8/27.0/21.8 | 40.8/46.0/37.8 | 11.6/19.0/8.6 | 19.8/24.0/18.8 |
| 250 | 41.3/46.0/38.3 | 32.8 | 17.3/21.6/17.3 | 8.3/14.0/5.3 | 20.8/24.0/19.8 | 39.3/44.0/36.3 | 6.3/12.0/3.3 | 17.8/21.0/16.8 |
| 300 | 37.1/45.0/37.1 | 36.4 | 16.8/20.7/16.8 | 0.5/11.0/0.5 | 18.3/23.0/18.3 | 35.1/43.0/35.1 | -1.5/9.0/-1.5 | 15.3/20.0/15.3 |
| 350 | 36.1/44.0/36.1 | 39.8 | 16.3/20.3/16.3 | -3.8/6.6/-3.8 | 16.9/21.0/16.9 | 34.1/42.0/34.1 | -5.8/4.6/-5.8 | 13.9/18.0/13.9 |
| 400 | 35.3/43.0/35.3 | 43.0 | 15.9/16.8/15.9 | -7.9/2.6/-7.9 | 15.8/20.0/15.8 | 33.3/41.0/33.3 | -9.9/0.6/-9.9 | 12.8/17.0/12.8 |
| 450 | 34.5/42.0/34.5 | 46.3 | 15.5/16.5/15.5 | -10.5/-1.1/-10.5 | 14.7/18.0/14.7 | 32.5/40.0/32.5 | -12.5/-3.1/-12.5 | 11.7/15.0/11.7 |
| 500 | 33.8/41.0/33.8 | 48.9 | 15.2/16.1/15.2 | -15.3/-6.2/-15.3 | 13.8/18.0/13.8 | 31.8/39.0/31.8 | -17.3/-8.2/-17.3 | 10.8/15.0/10.8 |
| 550 | 33.2/41.0/33.2 | 51.8 | 14.9/15.7/14.9 | -18.6/-12.0/-18.6 | 12.9/17.0/12.9 | 31.2/39.0/31.2 | -20.6/-14.0/-20.6 | 9.9/13.0/9.9 |
| 600 | 32.4/33.0/32.4 | 54.5 | 14.7/15.0/14.7 | -21.9/-21.0/-21.9 | 12.2/14.0/12.2 | 30.6/31.0/30.6 | -23.9/-23.0/-23.9 | 9.2/11.0/9.2 |

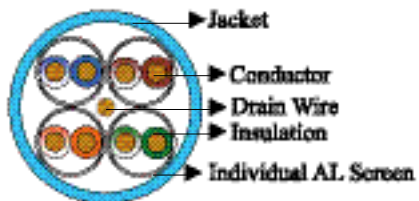
*Data for 250MHz above are for reference only



Cat6 U/UTP



Cat6 F/UTP



Cat6 U/FTP



Cat6 S/FTP



Cat6 SF/UTP





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 Ω /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°C ~+ 60°C
- ☆ Storage Temperature: -5°C ~ +50°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

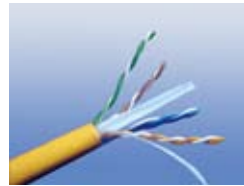
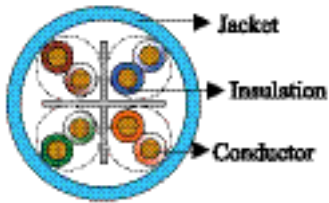


□ F/UTP & SF/UTP Cat 6A Transmission Properties:

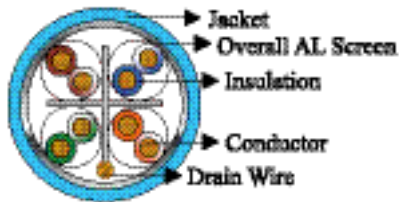
| FREQ (MHz) | NEXT (dB/100m) Minimum Value/ Typical Value/ Standard Value | IL (dB/100m) | RL (dB/100m) Minimum Value/ Typical Value/ Standard Value | ACR (dB/100m) Minimum Value/ Typical Value/ Standard Value | ELFEXT (dB/100m) Minimum Value/ Typical Value/ Standard Value | PSNEXT (dB/100m) Minimum 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 |



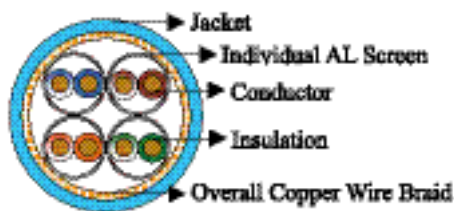
Cat6A U/UTP



Cat6A F/UTP



Cat6A U/FTP



Cat6A S/FTP



Cat6A SF/UTP



Category 7 Cables

□ Applications:

155MbpsATM, 622MbpsATM, 1000Base-T, 10GBase-T

□ Standards:

IEC61156-5 CAT7, EN 50288-4-1

□ Product Construction Matrix:

| | U/FTP | S/FTP |
|------------|---------------------------------|---|
| Conductor | 22/23AWG Solid Plain Copper | 22/23AWG Solid Plain Copper |
| Insulation | PE | PE |
| Screen | Individual Aluminum Tape Screen | Individual Aluminum Tape Screen & Overall Copper Wire Braid |
| Drain Wire | 7/0.2 mm | Nil |
| Jacket | PE/PVC/LSF/LSZH/LSFROH | 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:

1-600MHz

□ Technical Parameters:

- ☆ Characteristic Impedance: $100 \pm 15\Omega$ (1-250MHz); $100 \pm 22\Omega$ (100-500Mhz)
- ☆ Nominal Velocity of Propagation (NVP): 79%
- ☆ Maximum Mutual Capacitance: 5.6nF/100m
- ☆ Maximum DC Resistance: 5.9 Ω /100m (22AWG); 7.5 Ω /100m (23AWG)
- ☆ Maximum Resistance Unbalance: 5%
- ☆ Maximum Propagation Delay Skew: 30ns/100m (1-125MHz)
- ☆ Maximum Propagation Delay: 536 ns/100m@100MHz
- ☆ Minimum Bending radius: 10 x Overall Diameter
- ☆ Voltage Rating: 60V rms
- ☆ Maximum Pulling load: 80N
- ☆ Working Temperature: -20°C ~ +60°C
- ☆ Storage Temperature: -5°C ~ +50°C
- ☆ Flame Retardancy: UL 1581 (CM Jacket); UL 1666 (CMR Jacket); UL 910 (CMP Jacket); IEC 60332-1 (FRPVC & LSZH Jacket); IEC 60332-1 and IEC 60332-3C (LSFROH Jacket)

□ Product Categories:

| Construction | Conductor Diameter (mm) | Diameter Over Insulation (mm) | Pairs | Screen | Overall Diameter (mm) | Jacket |
|--------------|-------------------------|-------------------------------|-------|---|-----------------------|----------|
| S/FTP | 0.57/0.64 | 1.02 | 4 | Individual Aluminum Tape Screen & Overall Copper Wire Braid | 8.4/9.1 | PVC/LSZH |
| S/FTP | 0.57/0.64 | 1.02 | 4 | Individual Aluminum Tape Screen & Overall Copper Wire Braid | 8.4/9.1 | LSFROH |
| U/FTP | 0.57/0.64 | 1.02 | 4 | Individual Aluminum Tape Screen | 7.5/8.5 | PVC/LSZH |
| U/FTP | 0.57/0.64 | 1.02 | 4 | Individual Aluminum Tape Screen | 7.5/8.5 | LSFROH |

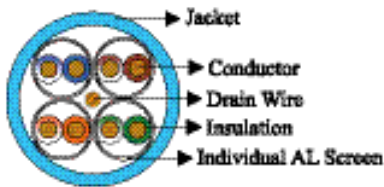


□ Product Highlights:

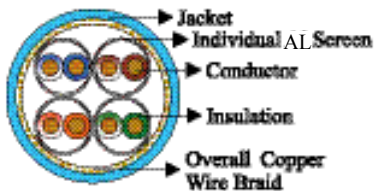
- ☆ Provide excellent bandwidth beyond 600 MHz.
- ☆ Support 10 Gigabit Ethernet application.
- ☆ Meet the strict flame retardancy and environmental requirements in Europe and US.
- ☆ Different jacket materials available for choice.

□ 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 | PP 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 | 90.0/100.0/80.0 | 2.0 | 20.0/23.0/20.0 | 88.0/98.0/78.0 | 85.0/90.0/80.0 | 87.0/97.0/77.0 | 85.0/95.0/75.0 | 82.0/87.0/77.0 |
| 4 | 90.0/100.0/80.0 | 3.6 | 23.0/26.0/23.0 | 86.4/96.0/76.4 | 85.0/90.0/80.0 | 87.0/97.0/77.0 | 83.4/93.0/73.4 | 82.0/87.0/77.0 |
| 10 | 90.0/100.0/80.0 | 5.7 | 25.0/28.0/25.0 | 84.3/94.0/74.3 | 79.0/90.0/74.0 | 87.0/97.0/77.0 | 81.3/91.0/71.3 | 76.0/87.0/71.0 |
| 16 | 90.0/100.0/80.0 | 7.2 | 25.0/28.0/25.0 | 83.3/92.0/72.8 | 74.9/90.0/69.9 | 87.0/97.0/77.0 | 80.3/89.0/69.8 | 71.9/87.0/66.9 |
| 20 | 90.0/100.0/80.0 | 8.1 | 25.0/28.0/25.0 | 82.5/91.0/71.9 | 73.0/90.0/68.0 | 87.0/97.0/77.0 | 79.5/88.0/68.9 | 70.0/87.0/65.0 |
| 31.25 | 90.0/100.0/80.0 | 10.1 | 23.6/26.0/23.6 | 80.0/90.0/69.9 | 69.1/90.0/64.1 | 87.0/97.0/77.0 | 77.0/87.0/66.9 | 66.1/87.0/61.1 |
| 62.5 | 90.0/100.0/75.5 | 14.5 | 21.5/24.0/21.5 | 76.0/85.0/61.0 | 63.1/85.0/58.1 | 80.0/97.0/72.5 | 73.0/82.0/58.0 | 60.1/82.0/55.1 |
| 100 | 90.0/100.0/72.4 | 18.5 | 20.1/23.0/20.1 | 72.5/75.0/53.9 | 59.0/80.0/54.0 | 87.0/97.0/69.4 | 69.5/72.0/50.9 | 56.0/77.0/51.0 |
| 200 | 90.0/100.0/67.9 | 26.8 | 18.0/23.0/18.0 | 65.0/70.0/41.1 | 53.0/75.0/78.0 | 87.0/97.0/64.9 | 62.0/67.0/38.1 | 50.0/72.0/45.0 |
| 250 | 95.0/90.0/66.5 | 30.2 | 17.3/23.0/17.3 | 50.0/58.0/36.3 | 51.0/70.0/46.0 | 92.0/87.0/63.5 | 47.0/55.0/33.3 | 48.0/67.0/43.0 |
| 300 | 95.0/90.0/65.3 | 33.3 | 17.3/23.0/17.3 | 59.0/55.0/32.0 | 49.5/66.0/44.5 | 92.0/87.0/63.3 | 56.0/52.0/29.0 | 46.5/63.0/41.5 |
| 600 | 80.0/90.0/60.8 | 48.9 | 17.3/20.0/17.3 | 32.0/50.0/11.9 | 43.4/60.0/38.4 | 77.0/87.0/57.8 | 29.0/47.0/8.9 | 40.4/57.0/35.4 |



Cat7 U/FTP



Cat7 S/FTP



Category 3 Multipair Cables

□ Applications:

10Base-T, 100Base-T4

□ Standards:

ISO/IEC11801, ANSI/TIA/EIA-568-B

□ Product Construction Matrix:


| | | U/UTP | F/UTP |
|------------|---------------------|--------------------|--------------------------|
| Conductor | Material | Solid Plain Copper | Solid Plain Copper |
| | Stranding(No./mm) | 1/0.5 | 1/0.5 |
| | Gauge | 24AWG | 24AWG |
| Insulation | Material | PE | PE |
| | Diameter | 0.86 mm | 0.86 mm |
| Screen | Material | Nil | Aluminum /Polyester Tape |
| Drain Wire | Material | Nil | 1/0.5 mm |
| Assembly | No of Pairs | 25/50/100 | 25/50/100 |
| Jacket | Material | PE/PVC/LSF/LSZH | PE/PVC/LSF/LSZH |

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:

1-16MHz

□ Product Certification:

E222756 

□ Technical Parameters:

- ☆ Characteristic Impedance: $100 \pm 15\Omega$
- ☆ Nominal Velocity of Propagation (NVP): 69%
- ☆ Maximum DC Resistance: $9.38\Omega/100m$
- ☆ Maximum Resistance Unbalance: 5%
- ☆ Maximum Propagation Delay Skew: 30 ns/100m
- ☆ Maximum Propagation Delay: 536 ns/100m@100 MHz
- ☆ Minimum Bending radius: 10 x Overall Diameter
- ☆ Voltage Rating: 60V rms
- ☆ Maximum Pulling load: 80N
- ☆ Working Temperature: $-20^{\circ}C \sim +60^{\circ}C$
- ☆ Storage Temperature: $-5^{\circ}C \sim +50^{\circ}C$
- ☆ Flame Retardancy: UL 1581 (CM Jacket); UL 1666 (CMR Jacket); UL 910 (CMP Jacket); IEC 60332-1 (FRPVC & LSZH Jacket); IEC 60332-1 and IEC 60332-3C (LSFROH Jacket)



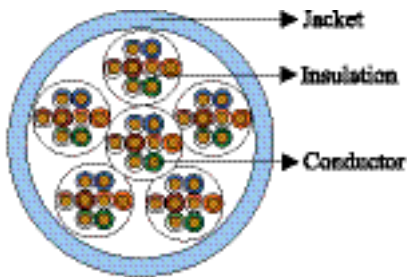
□ Product Categories:

| FREQ (MHz) | NEXT(dB/100m) | | | IL (dB/100m) | SRL(dB/100m) | | |
|------------|---------------|---------------|----------------|--------------|--------------|---------------|----------------|
| | Minmum Value | Typical Value | Standard Value | | Minmum Value | Typical Value | Standard Value |
| 1 | 43.0 | 48.0 | 41.0 | 2.6 | 13.0 | 16.0 | 12.0 |
| 4 | 34.0 | 38.0 | 32.0 | 5.6 | 13.0 | 16.0 | 12.0 |
| 8 | 29.0 | 33.0 | 26.0 | 8.5 | 13.0 | 16.0 | 12.0 |
| 10 | 28.0 | 33.0 | 26.0 | 9.8 | 13.0 | 16.0 | 12.0 |
| 16 | 25.0 | 30.0 | 23.0 | 13.1 | 11.0 | 14.0 | 10.0 |

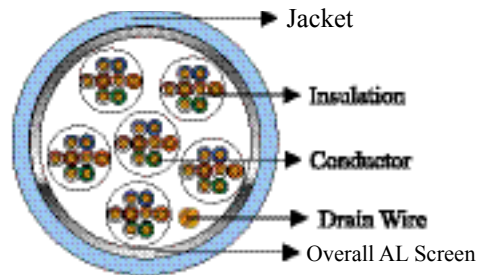


□ Product Highlights:

- ☆ Provide excellent bandwidth beyond 600 MHz.
- ☆ Support 10 Gigabit Ethernet application.
- ☆ Meet the strict flame retardancy and environmental requirements in Europe and US.
- ☆ Different jacket materials available for choice.



Cat3 U/UTP



Cat3 F/UTP





Category 5 Multipair Cables

□ Applications:

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

□ Standards:

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

□ Product Construction Matrix:


| | | U/UTP | F/UTP | SF/UTP |
|------------|---------------------|--------------------|------------------------------|--|
| Conductor | Material | Solid Plain Copper | Solid Plain Copper | Solid Plain Copper |
| | Stranding(No./mm) | 1/0.5 | 1/0.5 | 1/0.5 |
| | Gauge | 24AWG | 24AWG | 24AWG |
| Insulation | Material | PE | PE | PE |
| | Diameter | 0.86 mm | 0.86 mm | 0.86 mm |
| Screen | Material | Nil | Overall Aluminum Tape Screen | Overall Aluminum Tape Screen & Copper Wire Braid |
| Drain Wire | Material | Nil | 1/0.5 mm | 1/0.5 mm |
| Assembly | No of Pairs | 25/50/100 | 25/50/100 | 25/50/100 |
| Jacket | Material | PE/PVC/LSF/LSZH | PE/PVC/LSF/LSZH | PE/PVC/LSF/LSZH |

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:

1-100MHz

□ Product Certification:

E222756 

□ Technical Parameters:

- ☆ Characteristic Impedance: $100 \pm 15\Omega$
- ☆ Nominal Velocity of Propagation(NVP): 69%
- ☆ Maximum DC Resistance: $9.38\Omega/100m$
- ☆ Maximum Mutual Capacitance: $5.6 nF/100m$
- ☆ Maximum Capacitance Unbalance: $330 pF/100m$
- ☆ Maximum Resistance Unbalance: 5%
- ☆ Maximum Propagation Delay Skew: $30 ns/100m$
- ☆ Maximum Propagation Delay: $536 ns/100m@100 MHz$
- ☆ Minimum Bending radius: 10 x Overall Diameter
- ☆ Voltage Rating: 60V rms
- ☆ Maximum Pulling load: 80N
- ☆ Working Temperature: $-20^\circ C \sim +60^\circ C$
- ☆ Storage Temperature: $-5^\circ C \sim +50^\circ C$
- ☆ 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)



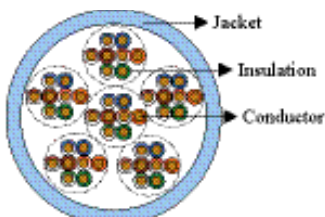


□ Product Highlights:

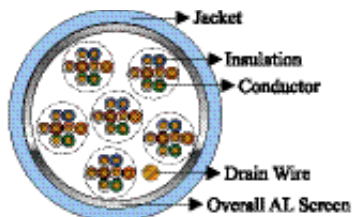
- ☆ Provide excellent bandwidth beyond 100 MHz.
- ☆ Designed for use in data and voice backbone application.
- ☆ Meet the strict flame retardancy and environmental requirements in Europe and US.
- ☆ Easily identifiable color code for ease of installation.

□ Transmission Properties:

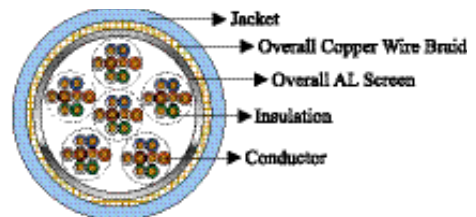
| FREQ (MHz) | NEXT(dB/100m) | IL (dB/100m) | SRL (dB/100m) |
|---------------|--|-----------------|--|
| | Minimum Value/Typical Value/Standard Value | | Minimum Value/Typical Value/Standard Value |
| 1 | 64.0/71.0/62.0 | 2.0 | 24.5/26.0/23.0 |
| 4 | 55.0/62.0/53.0 | 4.0 | 24.5/26.0/23.0 |
| 8 | 49.5/57.0/48.0 | 5.7 | 24.5/26.0/23.0 |
| 10 | 49.0/56.0/47.0 | 6.4 | 24.5/26.0/23.0 |
| 16 | 44.9/52.0/44.0 | 8.2 | 24.5/26.0/23.0 |
| 20 | 42.5/48.0/42.0 | 9.2 | 24.5/26.0/23.0 |
| 25 | 42.0/48.0/41.0 | 10.3 | 24.5/26.0/23.0 |
| 31.25 | 40.6/48.0/39.0 | 11.6 | 22.5/24.0/21.0 |
| 62.5 | 36.1/43.0/35.0 | 16.9 | 19.5/22.0/18.0 |
| 100 | 34.0/40.0/32.0 | 21.8 | 17.5/20.0/16.0 |



Cat5 U/UTP



Cat5 F/UTP



Cat5 SF/UTP



Enhanced Category 5 Multipair Cables

□ Applications:

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

□ Standards:

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

□ Product Construction Matrix:


| | | U/UTP | F/UTP | SF/UTP |
|------------|---------------------|--------------------|------------------------------|--|
| Conductor | Material | Solid Plain Copper | Solid Plain Copper | Solid Plain Copper |
| | Stranding(No./mm) | 1/0.5 | 1/0.5 | 1/0.5 |
| | Gauge | 24AWG | 24AWG | 24AWG |
| Insulation | Material | PE | PE | PE |
| | Diameter | 0.86 mm | 0.86 mm | 0.86 mm |
| Screen | Material | Nil | Overall Aluminum Tape Screen | Overall Aluminum Tape Screen & Copper Wire Braid |
| Drain Wire | Material | Nil | 1/0.5 mm | 1/0.5 mm |
| Assembly | No of Pairs | 25/50/100 | 25/50/100 | 25/50/100 |
| Jacket | Material | PE/PVC/LSF/LSZH | | |

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:

1-100MHz

□ Product Certification:

E222756 

□ Technical Parameters:

- ☆ Characteristic Impedance: $100 \pm 15\Omega$
- ☆ Nominal Velocity of Propagation(NVP): 69%
- ☆ Maximum DC Resistance: $9.38\Omega/100m$
- ☆ Maximum Mutual Capacitance: $5.6nF/100m$
- ☆ Maximum Capacitance Unbalance: $330pF/100m$
- ☆ Maximum Resistance Unbalance: 5%
- ☆ Maximum Propagation Delay Skew: $30 ns/100m$
- ☆ Maximum Propagation Delay: $536ns/100m@100MHz$
- ☆ Minimum Bending radius: 10 x Overall Diameter
- ☆ Voltage Rating: 60V rms
- ☆ Maximum Pulling load: 80N
- ☆ Working Temperature: $-20^{\circ}C \sim +60^{\circ}C$
- ☆ Storage Temperature: $-5^{\circ}C \sim +50^{\circ}C$
- ☆ Flame Retardancy: UL 1581 (CM Jacket); UL 1666 (CMR Jacket); UL 910 (CMPJacket); IEC 60332-1 (FRPVC & LSZH Jacket); IEC 60332-1 & IEC 60332-3C (LSFROH Jacket)



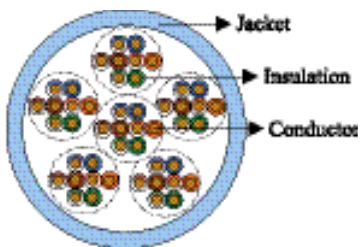


□ Product Highlights:

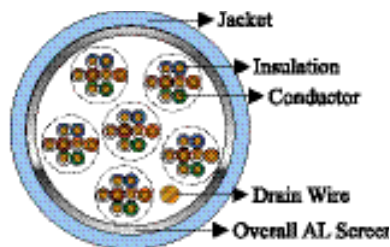
- ☆ Provide excellent bandwidth beyond 200 MHz.
- ☆ Designed for use in data and voice backbone application.
- ☆ Meet the strict flame retardancy and environmental requirements in Europe and US.
- ☆ Easily identifiable color code for ease of installation.
- ☆ Different jacket options available for choice.

□ Transmission Properties:

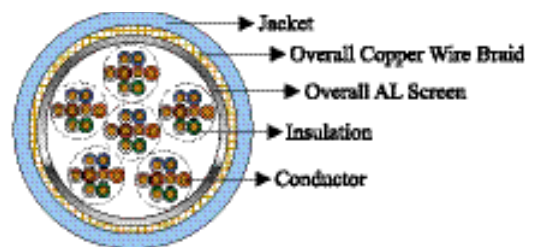
| FREQ (MHz) | NEXT (dB/100m) Minimum Value/ Typical Value/ Standard Value | IL (dB/100m) | RL (dB/100m) Minimum Value/ Typical Value/ Standard Value | ACR (dB/100m) Minimum Value/ Typical Value/ Standard Value | ELFEXT (dB/100m) Minimum Value/ Typical Value/ Standard Value | PSNEXT (dB/100m) Minimum Value/ Typical Value/ Standard Value | PSACR (dB/100m) Minimum Value/ Typical Value/ Standard Value | PSELFEXT (dB/100m) Minimum Value/ Typical Value/ Standard Value |
|------------|--|--------------|--|---|--|--|---|--|
| 1 | 68.3/74.0/65.3 | 2.0 | 20.2/26.0/20.2 | 66.3/72.0/63.3 | 64.8/69.0/63.8 | 65.3/71.0/62.3 | 63.3/69.0/60.3 | 61.8/66.0/60.8 |
| 4 | 59.3/65.0/56.3 | 4.1 | 23.0/29.0/23.0 | 55.2/60.9/52.2 | 52.7/57.0/51.7 | 56.3/62.0/53.3 | 52.2/57.9/49.2 | 49.7/54.0/48.7 |
| 8 | 54.8/61.0/51.8 | 5.8 | 24.5/30.5/24.5 | 49.0/55.2/46.0 | 46.7/51.0/45.7 | 51.8/58.0/48.8 | 46.0/52.2/43.0 | 43.7/48.0/42.7 |
| 10 | 53.3/59.0/50.3 | 6.5 | 25.0/31.0/25.0 | 46.8/52.5/43.8 | 44.8/49.0/43.8 | 50.3/56.0/47.3 | 43.8/49.5/40.8 | 41.8/46.0/40.8 |
| 16 | 50.3/56.0/47.3 | 8.2 | 25.0/31.0/25.0 | 42.1/47.8/39.1 | 40.7/45.0/39.7 | 47.4/53.0/44.3 | 39.1/44.8/36.1 | 37.7/42.0/36.7 |
| 20 | 48.8/55.0/45.8 | 9.3 | 25.0/31.0/25.0 | 39.5/45.7/36.5 | 38.7/43.0/37.7 | 45.8/52.0/42.8 | 36.5/42.7/33.5 | 35.7/40.0/34.7 |
| 25 | 47.3/53.0/44.3 | 10.4 | 24.3/30.3/24.3 | 36.9/42.6/33.9 | 36.8/41.0/35.8 | 44.3/50.0/41.3 | 33.9/39.6/30.9 | 33.8/38.0/32.8 |
| 31.25 | 45.9/52.0/42.9 | 11.4 | 23.6/29.6/23.6 | 34.2/40.3/31.2 | 34.9/39.0/33.9 | 42.9/49.0/39.9 | 31.2/37.3/28.2 | 31.9/36.0/30.9 |
| 62.5 | 41.4/47.0/38.4 | 17.0 | 21.5/27.5/21.5 | 24.4/30.0/21.4 | 28.8/33.0/27.8 | 38.4/44.0/35.4 | 21.4/27.0/18.4 | 25.8/30.0/24.8 |
| 100 | 38.3/44.0/35.3 | 22.0 | 20.1/26.1/20.1 | 16.3/22.0/13.3 | 24.8/29.0/23.8 | 35.3/41.0/32.3 | 13.3/19.0/10.3 | 21.8/26.0/20.8 |
| 155 | 35.5/41.0/32.5 | 28.1 | 18.8/24.8/18.8 | 7.4/12.9/4.4 | 20.9/25.0/19.9 | 32.5/38.0/29.5 | 4.4/9.9/1.4 | 17.9/22.0/16.9 |
| 200 | 33.7/40.0/30.7 | 32.4 | 18.0/24.0/18.0 | 1.3/7.6/-1.7 | 19.7/24.0/18.7 | 30.0/37.0/27.7 | -1.7/4.6/-4.7 | 16.7/21.0/15.7 |



Cat5e U/UTP



Cat5e F/UTP



Cat5e SF/UTP

