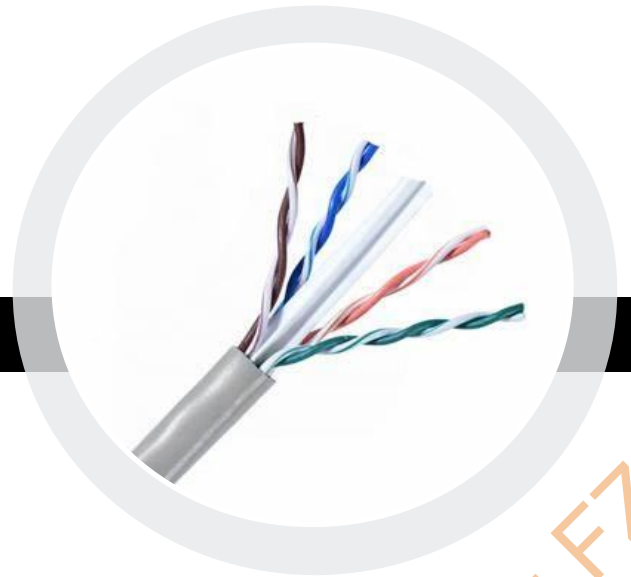


CAT6A U/UTP



PVC CABLE

DESCRIPTION

METACOM Category 6A 4-pair U/UTP copper cable forms the foundation of 10 Gigabit Ethernet networks. The cable exceeds Category 6A performance ensuring reliability in delivering 10G network speed, low BER and high data throughput. The cable covers the category 6A requirements for twisted pair cables of 100 Ω and is characterized up to 500 MHz suitable for transmitting data over local area networks (LANs). The cable's 8 conductors (4-Pairs) are of solid bare copper with high density polyethylene (HDPE) insulation and a PVC jacket.

STANDARDS

ANSI/TIA-568-C.2 IEC 61156-5
EN 50288-6-1
EN 50173
ISO/IEC 11801
EN 50575

APPLICATIONS

10BASE-T (IEEE 802.3)
4/16 Mbps TOKEN RING (IEEE 802.5)
100BASE-VG-AnyLAN
100 Mbps TP-PMD (ANSI X3T9.5)
100BASE-T (IEEE 802.3)
55/155 Mbps ATM
1000BASE-T (Gigabit Ethernet)
1.2 Gbps ATM 10G BASE-T

TECHNICAL DATA

| | | |
|-----------------------|---------------------|--------------------------|
| Conductor Material | | 99.99% Solid Bare Copper |
| Conductor Number | | 8C(4 pairs) |
| Cable AWG | | 23 |
| Separator | | PE Cross |
| Rip Cord | | NO |
| Insulation | Material | PE |
| | Nom. Thickness(mm) | 0.22 |
| | Diameter (± 0.30mm) | 1.01 |
| Jacket | Material | PVC |
| | Nom. Thickness(mm) | 0.65 |
| | Diameter (± 0.30mm) | 7.30 |
| Construction(±0.01mm) | | 1/0.56 |

ELECTRICAL PERFORMANCE

| | | |
|---|-----------------------|---------------------------|
| Max. Conductor DC Resistance (Ω /KM) | | 93 |
| Min. Insulation Resistance | | 5000 |
| Dielectric Strength | | DC-1KV/1 Min |
| 1.0-250MHZ Characteristic Impedance | | 100 Ω ±15 Ω |
| 1.0-250MHZ Delay Skew | | ≤45 |
| Pair to Ground Capacitance Unbalance(PF/100m) | | ≤330 |
| Resistance Unbalance between pairs(%) | | ≤4 |
| Before Aging | Tensile Strength(Mpa) | ≥13.5 |
| | Elongation(%) | ≥100 |
| After Aging | Tensile Strength(Mpa) | ≥75% |
| | Elongation(%) | ≥50 |
| Velocity of Propagation NVP | | 69% |

TIA-568-C.2

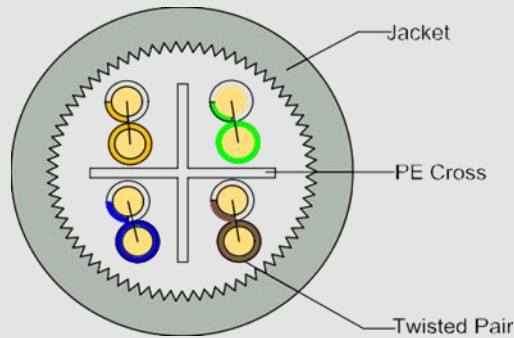
| Freq. | ATTN | RL | NEXT | ELFEXT | PS NEXT | PS ELFEXT |
|-------|-----------|------|------|-----------|-----------|-----------|
| (MHz) | (dB/100m) | (dB) | (dB) | (dB/100m) | (dB/100m) | (dB/100m) |
| 4 | 3.8 | 23.0 | 66.3 | 56.0 | 63.3 | 53.0 |
| 8 | 5.3 | 24.5 | 61.8 | 49.9 | 58.8 | 46.0 |
| 10 | 5.9 | 25.0 | 60.3 | 48.0 | 57.3 | 45.0 |
| 16 | 7.5 | 25.0 | 57.2 | 43.9 | 54.2 | 40.9 |
| 20 | 8.4 | 25.0 | 55.8 | 42.0 | 52.8 | 39.0 |
| 25 | 9.4 | 24.3 | 54.3 | 40.0 | 51.3 | 37.0 |
| 31.25 | 10.5 | 23.6 | 52.9 | 38.1 | 49.9 | 35.1 |
| 62.5 | 15.0 | 21.5 | 48.4 | 32.1 | 45.4 | 29.1 |
| 100 | 19.1 | 20.1 | 45.3 | 28.0 | 42.3 | 25.0 |
| 200 | 27.6 | 18.0 | 40.8 | 22.0 | 37.8 | 19.0 |
| 250 | 31.1 | 17.3 | 39.3 | 20.0 | 36.3 | 17.0 |
| 300 | 34.1 | 17.3 | 38.1 | 18.5 | 35.1 | 15.5 |
| 500 | 45.3 | 17.3 | 34.8 | 14.0 | 31.8 | 11.0 |

TIA Cat 6A Perm. Link

| Wire Map | Res. | Length | Prop. Delay | Delay Skew | Freq. | Insertion Loss | NEXT | RL | ACR-N | ACR-F | PS NEXT | PS ACR-N | PS ACR-F |
|-----------|----------|--------|-------------|------------|-------|----------------|------|------|-------|-------|---------|----------|----------|
| | Ω | Max. | nS | nS | MHz | dB | dB | dB | dB | dB | dB | dB | dB |
| 12345678 | i | 90 m | 498 | 44 | 1 | 3 | 65.0 | 19.1 | 62.0 | 64.2 | 62.0 | 59.0 | 61.2 |
| 12345678 | | | | | 4 | 3.5 | 64.1 | 21.0 | 60.5 | 52.1 | 61.8 | 58.3 | 49.1 |
| | | | | | 8 | 5 | 59.4 | 21.0 | 54.4 | 46.1 | 57.0 | 52.1 | 43.1 |
| 12345678S | | | | | 10 | 5.5 | 57.8 | 21.0 | 52.3 | 44.2 | 55.5 | 50.0 | 41.2 |
| 12345678S | | | | | 16 | 7 | 54.6 | 20.0 | 47.6 | 40.1 | 52.2 | 45.2 | 37.1 |
| | | | | | 20 | 7.8 | 53.1 | 19.5 | 45.2 | 38.2 | 50.7 | 42.8 | 35.2 |
| | | | | | 25 | 8.8 | 51.5 | 19.0 | 42.8 | 36.2 | 49.1 | 40.4 | 33.2 |
| | | | | | 31.25 | 9.8 | 50.0 | 18.5 | 40.2 | 34.3 | 47.5 | 37.7 | 31.3 |
| | | | | | 62.5 | 14 | 45.1 | 16.0 | 31.1 | 28.3 | 42.7 | 28.6 | 25.3 |
| | | | | | 100 | 18 | 41.8 | 14.0 | 23.9 | 24.2 | 39.3 | 21.3 | 21.2 |
| | | | | | 200 | 26.1 | 36.9 | 11.0 | 10.8 | 18.2 | 34.3 | 8.2 | 15.2 |
| | | | | | 250 | 29.5 | 35.3 | 10.0 | 5.8 | 16.2 | 32.7 | 3.2 | 13.2 |
| | | | | | 350 | 35.6 | 31.8 | 8.6 | -3.8 | 13.3 | 29.1 | -6.5 | 10.3 |
| | | | | | 500 | 43.8 | 26.7 | 8.0 | -17.1 | 10.2 | 23.8 | -20 | 7.2 |

Supplied by Digital Signal Innovation & Trading FZE

TECHNICAL DRAWING



ORDERING INFORMATION

| | |
|----------------------|---|
| MCS-C6A-UTP4-PVC-GY | Category 6A Unshielded Twisted 4 Pair (UTP) 23 AWG cable PVC Grey - 305m box |
| MCS-C6A-UTP4-LSZH-VL | Category 6A Unshielded Twisted 4 Pair (UTP) 23 AWG cable LSZH Violet - 305m box |

