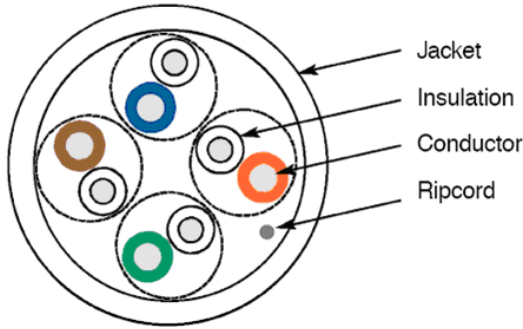
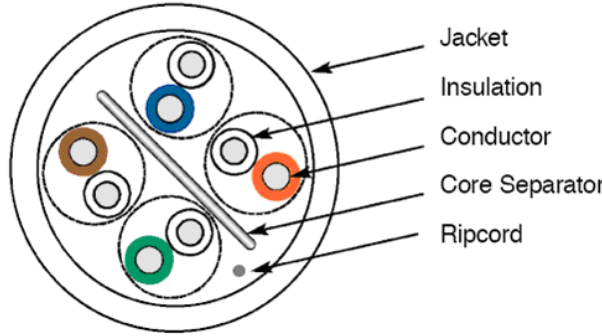


UTP : Unshielded Twisted Pair

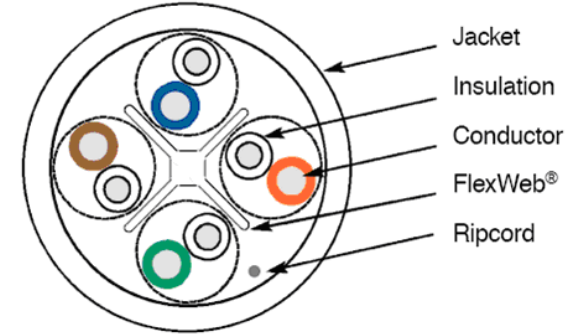
Category 5E+ Cable



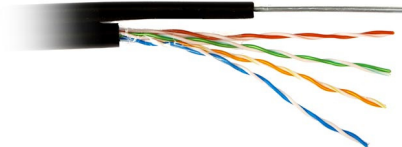
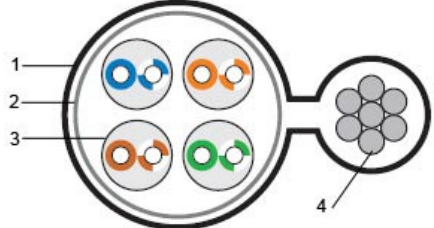
Category 6 Cable



Category 6e Cable



Conductor :	Diameter: 24AWG-23AWG, Material: BC, CCA , or CCS	AWS: American Wire Gauge				<p>BC : Barely Copper</p> <p>CCA : Copper Clad Aluminum is a conductor composed of an inner aluminum core and outer copper cladding. The properties of copper-clad aluminum wire include:</p> <ul style="list-style-type: none"> • Lighter than pure copper • Higher conductivity than pure aluminum • Higher strength than aluminum • Better solderability than aluminum, • More expensive than a pure aluminum wire; <p>CCS : Copper Clad Steel, mainly used in the wire industry that combines the high mechanical resistance of steel with the conductivity and resistance to corrosion of copper. Its main purpose is to be used as a drop wire of telephone cables, and inner conductor of coaxial cables, including thin hookup cables like RG174, and CATV cable.</p> <ul style="list-style-type: none"> • Good corrosion resistance of copper • High mechanical strength • High resistance against material fatigue, • Lower electrical resistance compared to steel wire
		AWG	Conductor Diameter mm	Ohms per km	Maximum frequency for 100% skin depth for solid conductor copper	
		22	0.64516	52.9392	42 kHz	
		23	0.57404	66.7808	53 kHz	CAT 6 Cable
		24	0.51054	84.1976	68 kHz	CAT 5E Cable
		25	0.45466	106.1736	85 kHz	
		26	0.40386	133.8568	107 kHz	
Insulation :	Acronym	Material		Acronym	Material	
	PE	Polyethylene		LSZH (=LS0H)	Low Smoke, Zero Halogen	
	FP	Foamed polyethylene		GSWB	Galvanised steel wire braid	
	FEP	Teflon / Fluorinated Ethylene Propylene		LSFZH (=LSF0H)	Low Smoke and Fume, Zero Halogen	
	FFEP	Foamed Teflon / Fluorinated Ethylene Propylene				
	AD/PE	Air dielectric / Polyethylene				

Jacket :	PVC/ FR PVC/ LSOH (with UL prints)	
Messenger (Kilavuz) :	4.78mm galvanized steel	  <p>1 – Jacket 2 – Protective skin 3 – Twisted pair 4 – Messenger</p>
Wire Type :	Solid, or stranded	
Rip cord:	cotton	
Certificates:	UL, ROHS, CSA, ISO	
Application:	100 Base-T4, 100 Base-TX, 100VG-AnyLAN, 1000 Base-T(Gigabit Ethernet), 155 Mbps ATM, 600 Mbps ATM	

Cable Name	Cable Type	Maximum Length	Data Rate
Category 3	UTP	100 m, including patch panel and patch cables	10 Mb/s Ethernet, 4 & 16 Mb/s Token Ring and VGAnyLan at 16 MHz
Category 5	UTP	90 m (100m) including patch panels and cables	100 Mb/s Fast Ethernet at 100 MHz, sometimes 1000 Mb/s gigabit Ethernet
Category 5e	UTP	90 m (100m) including patch panels and cables	1000Mb/s at 100MHz, has improved specifications for NEXT and PSELFEXT and Attenuation.
Category 6	UTP	100 m	1000Mb/s at 250MHz

Note : For typical serial data links, the de-facto standard gauge size is 24 AWG. Overall cable size and weight reduction can be achieved using 26 AWG or smaller conductors at the expense of increased fragility. Note, there are National Electrical Code restrictions that prevent conductors smaller than 24 AWG from being used in premises communication applications. Smaller conductors are recommended for restricted applications, such as equipment cables or where overall cable size must be limited; say for wide parallel data links used in short distances, up to 10 or 20 meters.

STP : Shielded Twisted Pair

