

Color Code Chart

High Pair Count Cables

When cables contain more than one pair group, different color binder tapes are used to differentiate the 25 pair groups.

Primary Insulation (FEP) Color Coding

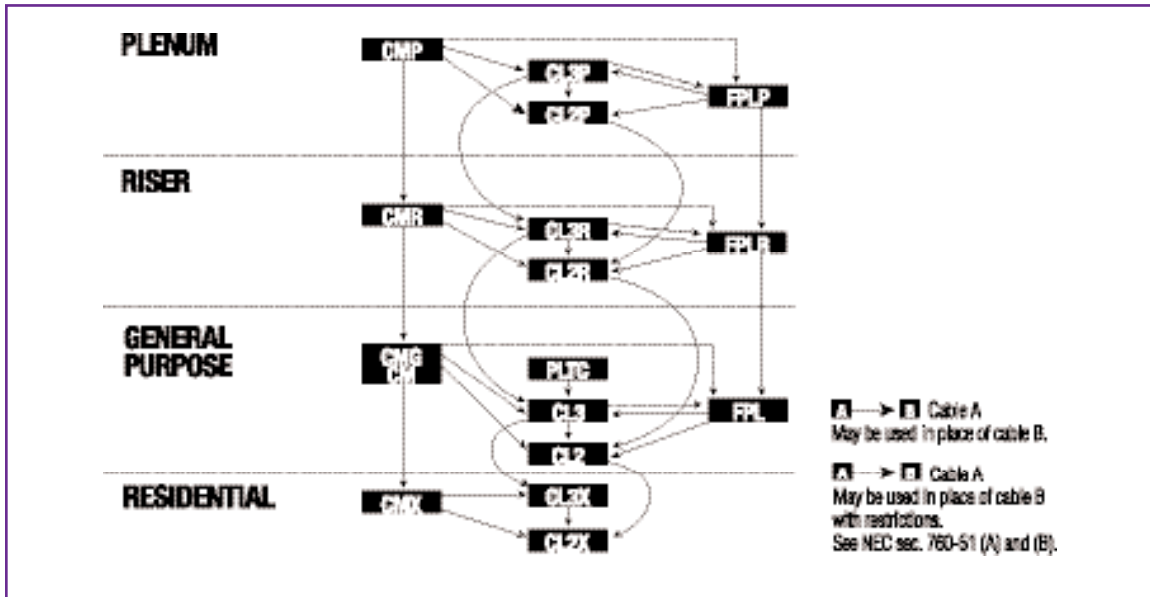
HCM uses a co-extruded FEP color stripe to mark FEP insulated conductors. This process provides several benefits:

- Marking durability is insured for the life of the cable
- Electrical characteristics of the marking stripe match the FEP insulation
- Avoids highly toxic ink systems that are required to bond to FEP

Pair #	Copper Conductor Color Combinations
1	White/Blue - Blue/White
2	White/Orange - Orange/White
3	White/Green - Green/White
4	White/Brown - Brown/White
5	White/Gray - Gray/White
6	Red/Blue - Blue/Red
7	Red/Orange - Orange/Red
8	Red/Green - Green/Red
9	Red/Brown - Brown/Red
10	Red/Gray - Gray/Red
11	Black/Blue - Blue/Black
12	Black/Orange - Orange/Black
13	Black/Green - Green/Black
14	Black/Brown - Brown/Black
15	Black/Gray - Gray/Black
16	Yellow/Blue - Blue/Yellow
17	Yellow/Orange - Orange/Yellow
18	Yellow/Green - Green/Yellow
19	Yellow/Brown - Brown/Yellow
20	Yellow/Gray - Gray/Yellow
21	Violet/Blue - Blue/Violet
22	Violet/Orange - Orange/Violet
23	Violet/Green - Green/Violet
24	Violet/Brown - Brown/Violet
25	Violet/Gray - Gray/Violet

Fiber #	Fiber Buffer Color
1	Blue
2	Orange
3	Green
4	Brown
5	Gray
6	White
7	Red
8	Black
9	Yellow
10	Violet
11	Pink
12	Aqua

National Electric Code Cable Substitution Hierarchy



NEC and CSA Fire Resistance Levels

Fire Resistance Level	Test Requirement	NEC 725	NEC 760	NEC 800
(Highest) Plenum Cables	UL-910 (Steiner Tunnel) CSA-FT6 (Steiner Tunnel)	CL3P CL2P	FPLP	CMP
Riser Cables Multiple Floors	UL-1666 (Vertical Shaft) CSA-FT4, CMG (Vertical Tray)	CL3R CL2R	FPLR	CMR
General Purpose Cables	UL-1581 (Vertical Tray) CSA-FT4, CMG (Vertical Tray)	CL3 CL2	FPL	CM
(Lowest) Residential Cables Restricted Use	UL-1581 VW-1 CSA-FT1	CL3X CL2X		CMX

Notes

- 1 Cables with a higher fire resistance level may be substituted for those with a lower fire resistance level, except that FT6 must also be marked FT4 for FT4 applications.
- 2 Cables rated CM may be used in runs penetrating one floor. (NEC 800-53)

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Applications

Copper

Applications Support Matrix

	Category 1	Category 2	Category 3	Category 5e	Category 6	Category 6A ¹
Voice	■	■	■	■	■	■
T1 Fractional	■	■	■	■	■	■
IBM Type 3 - 1 Mbps		■	■	■	■	■
4/16 Mbps Token Ring			■	■	■	■
10BASE-T Ethernet			■	■	■	■
100BASE-T4 Fast Ethernet			■	■	■	■
25.6 Mbps ATM			■	■	■	■
100 VG - Any LAN			■	■	■	■
All other applications developed for operation over Category 3 or class C cabling			■	■	■	■
100 Mbps TP-PMD				■	■	■
155 Mbps ATM				■	■	■
270 Mbps digital video				■	■	■
Broadband video				■	■	■
100BASE-TX Fast Ethernet				■	■	■
1000BASE-T Gigabit Ethernet				■	■	■
All other applications developed for operation over Category 5e or class D cabling				■	■	■
1000 Mbps ATM (CBIG)					■	■
TIA/EIA-854 Gigabit Ethernet over Category 6 cabling					■	■
10GBASE-T					■ ²	■
All other applications developed for operation over Category 6 or class E cabling					■	■

Guaranteed Category 5e support of IEEE 1000BASE-T (Gigabit Ethernet) application:

Hitachi Cable Manchester, Inc.'s Category 5e cables exceed all of the requirements specified by IEEE 8023.ab for support of Gigabit Ethernet (1000BASE-T) operation over twisted-pair cabling. Furthermore, HCM guarantees that all of our Category 5e and higher rated cables will support the 1000BASE-T application.

To demonstrate our compliance, HCM's products have been extensively tested for 1000BASE-T throughput at the University of New Hampshire's Interoperability Lab and found to fully support the IEEE 1000BASE-T Gigabit Ethernet application.

¹ Cat 6A standard was in draft form at time of printing.

² Cat 6 UTP will accommodate 10GBASE-T to 37m. Cat 6 ScTP will accommodate 10GBASE-T to 100m.

Fiber

Applications Support Matrix

Supportable distances and channel attenuation for optical fiber applications by fiber type*

	Wave Length (nm)	Maximum Supportable Distance (m)			Maximum Channel Attenuation (dB)			
		62.5/125 µm	50/125 µm	Single-mode	62.5/125 µm	50/125 µm	Single-mode	
10BASE-FL (Ethernet)	850	2000	2000	NST ¹	12.5	7.8	NST	
Token Ring 4/16	850	2000	2000	NST	13.0	8.3	NST	
Demand Priority (100VG - Any LAN)	1300	2000	2000	NST	7.0	2.3	NST	
	850	500	500	–	7.5	2.8	–	
10/100BASE-SX	850	300	300	NST	4.0	4.0	NST	
100BASE-FX (Fast Ethernet)	1300	2000	2000	NST	11.0	6.3	NST	
FDDI (Low Cost)	1300	500	500	–	7.0	2.3	–	
FDDI (Original)	1300	2000	2000	40,000	11.0	6.3	10.0-32.0	
ATM	52	1300	3000	3000	15,000	10.0	5.3	7.0-12.0
	155 (LED)	1300	2000	2000	15,000	10.0	5.3	7.0-12.0
	155 (laser)	850	1000	1000	–	7.2	7.2	–
	622 (LED)	1300	500	500	15,000	6.0	1.3	7.0-12.0
	622 (laser)	850	300	300	–	4.0	4.0	–
Fibre Channel	266 (LED)	1300	1500	1500	10,000	6.0	5.5	6.0-14.0
	266 (laser)	850	700	2000	–	12.0	12.0	–
	1062 (LED)	850	300	500	–	4.0	4.0	–
	1062 (laser)	1300	–	–	10,000	–	–	6.0-14.0
1000BASE-SX (Gigabit Ethernet)	850	220	550	–	3.2	3.9	–	
1000BASE-LX (Gigabit Ethernet)	1300	550	550	5,000	4.0	3.5	4.7	
10GBASE-S (10G Ethernet)	850	26	82 ²	NST	2.5	2.3	NST	
10GBASE-L (10G Ethernet)	1310	NST	NST	8,000	NST	NST	6.2	
10GBASE-E (10G Ethernet)	1550	NST	NST	30,000	NST	NST	11.4	
10GBASE-LX4 (10G Ethernet)	1300	300	300	10,000	2.1	2.1	NST	

* Refer to '568-B.1, '568-B.1-3 and applicable applications standards for further details.

¹ NST= Non-standard specified, although media conversion equipment may be available.

² 300m distance support using laser-optimized 50/125µm.

Standards Reference

All of HCM's cables are fully compliant to the requirements of applicable national and international structured cabling standards.

TIA/EIA-568-B.1 “Commercial Building Telecommunications Cabling Standard - Part 1: General Requirements (2001)” This document specifies copper and fiber optic cabling requirements and test methods that will support a multi-product, multi-vendor environment.

TIA/EIA-568-B.1-1 “Commercial Building Telecommunications Cabling Standard - Part 1: General Requirements - Addendum 1 - Minimum 4-Pair UTP and 4-Pair ScTP Patch Cable Bend Radius (2001)” This addendum specifies minimum bend radius requirements for 4-pair unshielded twisted-pair (UTP) and 4-pair screened twisted-pair (ScTP) patch cable.

TIA/EIA-568-B.2 “Commercial Building Telecommunications Cabling Standard - Part 2: Balanced Twisted Pair Cabling Components (2001)” This document specifies the performance of copper cables, patch cords, and connectors, in addition to the transmission, system models, and the measurement procedures needed for verification of balanced twisted pair cabling performance.

TIA/EIA-568-B.2-1 “Commercial Building Telecommunications Cabling Standard - Part 2: Balanced Twisted Pair Components - Addendum 1 - Transmission Performance Specifications for 4-Pair 100 Ohm Category 6 Cabling (2002)” This document specifies requirements for category 6 cabling, cables, and connecting hardware.

TIA/EIA-568-B.2-10 “Commercial Building Telecommunications Cabling Standard - Part 2: Balanced Twisted Pair Cabling Components – Addendum 10 – Transmission Performance Specifications for 4-Pair 100 Ohm Augmented Category 6 Cabling (2007)” This document specifies the requirements for Category 6A cabling, cables, and connecting hardware.

TIA/EIA-568-B.3 “Optical Fiber Cabling Components Standard (2000)” This document specifies the performance of the cables, patch cords, and connectors used in fiber optic cabling systems.

TIA/EIA-568-B.3-1 “Optical Fiber Cabling Components Standard - Addendum 1 - Additional Transmission Performance Specifications for 50/125 µm Optical Fiber Cables (2002)” This addendum specifies additional component and transmission requirements for 50/125 µm optical fiber cables capable of supporting 10 Gb/s serial transmission up to 300 m (984 ft) using 850 nm nominal wavelength lasers.

TIA/EIA-569-B “Commercial Building Standard for Telecommunications Pathways and Spaces (2003)” This document describes recognized cabling locations both within and between buildings. Included are the pathways in which telecommunications media are placed and the rooms and areas associated with the building used to terminate media and install telecommunications equipment.

TIA/EIA-570-A “Residential Telecommunications Cabling Standard (2001)” The purpose of this document is to standardize requirements for residential telecommunications cabling. The requirements are intended to be implemented for new construction, additions, and remodeled single and multi-tenant residential buildings.

TIA/EIA-606-A “Administration Standard for Commercial Telecommunications Infrastructure (2003)” This standard provides guidelines and choices of classes of administration for maintaining telecommunications infrastructure.

TIA/EIA-607-A “Commercial Building Grounding (Earthing) and Bonding Requirements for Telecommunications (2001)” The purpose of this standard is to enable the planning, design, and installation of telecommunications grounding and bonding systems within a building with or without prior knowledge of the telecommunications systems that will subsequently be installed.

TIA/EIA-758-A “Customer-owned Outside Plant Telecommunications Infrastructure (2003)” This standard provides requirements used in the design of the cabling, pathways, and spaces used between buildings or points in a customer-owned campus environment.

TIA/EIA-862 “Building Automation Systems Cabling Standard for Commercial Buildings (2002)” This standard specifies a generic cabling system for building automation systems (BAS) used in commercial systems.

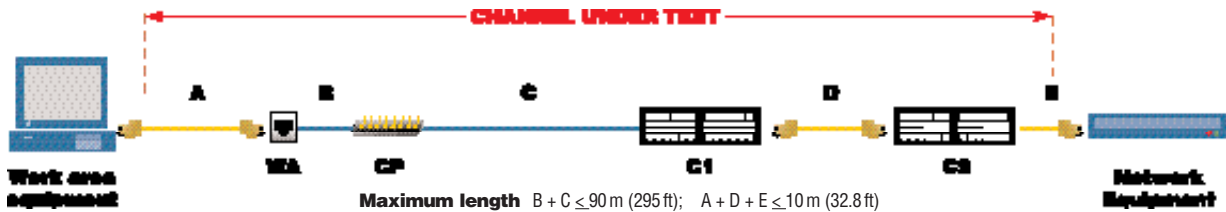
ISO/IEC 11801, 2nd edition “Generic Cabling for Customer Premises (2002)” This standard is the international counterpart to the TIA/EIA-568-B family of standards. It contains requirements for balanced twisted-pair and fiber optic components and cabling systems.

TSB - 155 “Guidelines for the Assessment and Mitigation of Installed Category 6 Cabling to Support 10GBASE-T” This document specifies the requirements for Category 6 UTP and ScTP (FTP) in regards to accommodating 10GBASE-T Ethernet.

Test Configurations

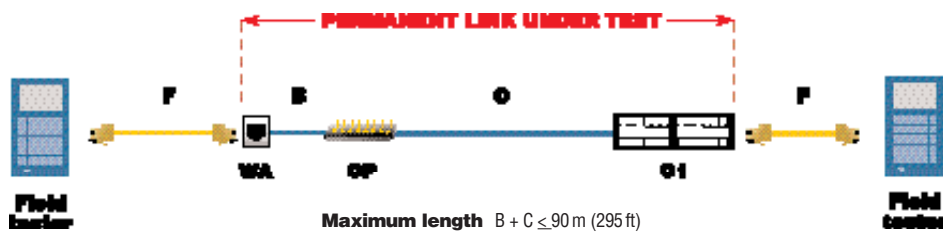
Channel Configuration

The channel test configuration is to be used by system designers and users of data communications systems to verify the performance of the overall channel. The channel includes up to 90 m (295 ft) of horizontal cable, a work area equipment cord, a telecommunications outlet/connector, an optional transition/consolidation connector, and two connections in the telecommunications room. The total length of equipment cords, patch cords or jumpers and work area cords shall not exceed 10 m (33 ft). Note that the connections to the equipment at each end of the channel are not included in the channel definition.



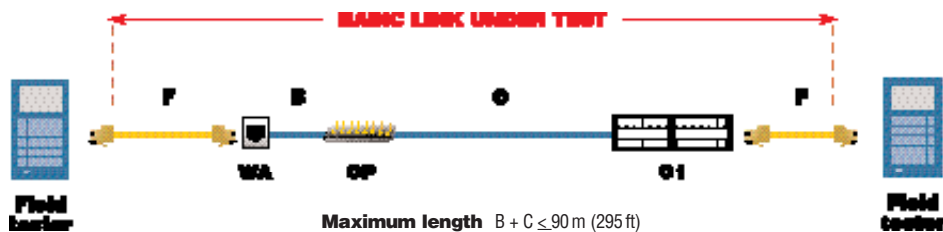
Permanent Link

The permanent link test configuration is to be used by installers and users of data telecommunications systems to verify the performance of permanently installed cabling. The permanent link consists of up to 90 m (295 ft) of horizontal cabling and one connection at each end and may also include an optional transition/consolidation point connection. Note that the permanent link excludes both the cable portion of the field test instrument cord and the connection to the field test instrument.



Basic Link

The basic link test configuration is a legacy configuration that was used by installers and users of data telecommunications systems to verify the performance of permanently installed cabling before the publication of TIA/EIA-568-B.1 in 2001. The basic link consisted of up to 90 m (295 ft) of horizontal cabling, one connection at each end, and up to 2 meters of test equipment cordage on either end. The basic link excluded the connections to the equipment at each end. Basic link testing is no longer recognized for new installations.



Cables and cords

- A** = Work area cord
- B** = Optional transition cabling
- C** = Horizontal cabling
- D** = Patch cord or jumper cable
- E** = Telecommunications room equipment cord
- F** = Test equipment cord

Connecting Hardware

- WA** = Telecommunications outlet/connector
- CP** = Optional transition/consolidation point connector
- C1, C2** = Horizontal cross-connect or interconnect

Glossary

Acronyms & Abbreviations

ACR: Attenuation-to-crosstalk ratio
ANSI: American National Standards Institute
ASTM: American Society for Testing and Materials
ATM: asynchronous transfer mode
AWG: American Wire Gauge
BICSI: Building Industry Consulting Services International
CATV: community antenna television
EIA: Electronic Industries Alliance
ELFEXT: equal level far-end crosstalk
EMC: electromagnetic compatibility
EMI: electromagnetic interference
FCC: Federal Communications Commission
FDDI: fiber distributed data interface
FEXT: far-end crosstalk
FOCIS: Fiber Optic Connector Intermateability Standard
IEC: International Electrotechnical Commission
IEEE: The Institute of Electrical and Electronics Engineers
ILD: Insertion loss deviation
LCL: Longitudinal conversion loss
LCTL: Longitudinal conversion transfer loss
ISDN: integrated services digital network
ISO: International Organization for Standardization
LAN: local area network
LED: light emitting diode
Mb/s: megabits per second
MUTOA: multi-user telecommunications outlet assembly
NEC®: National Electrical Code®
NEMA: National Electrical Manufacturers Association
NESC®: National Electrical Safety Code®
NEXT: near-end crosstalk
NFPA: National Fire Protection Association
NVP: nominal velocity of propagation
PSACR: power sum attenuation-to-crosstalk ratio
PSELFEXT: power sum equal level far-end crosstalk
PSFEXT: power sum far-end crosstalk
PSNEXT: power sum near-end crosstalk
ScTP: screened twisted-pair
STP: shielded twisted-pair
TIA: Telecommunications Industry Association
TSB: Telecommunications System Bulletin
UL: Underwriters Laboratories
UTP: unshielded twisted-pair

adapter (copper): A device that enables any or all of the following: (1) different sizes or types of plugs to mate with one another or to fit into a telecommunications outlet, (2) the rearrangement of leads, (3) large cables with numerous wires to fan out into smaller groups of wires, and (4) interconnection between cables.

adapter (fiber optic): optical fiber duplex: A mechanical device designed to align and join two duplex optical fiber connectors (plugs) to form an optical duplex connection.

administration: The method for labeling, identification, documentation and usage needed to implement moves, additions and changes of the telecommunications infrastructure.

attenuation: (see insertion loss)

attenuation-to-crosstalk ratio: A ratio, expressed in dB, determined by subtracting the insertion loss from the near-end crosstalk loss.

backbone cable: A cable that runs between telecommunications rooms, or floor distribution terminals, the entrance facilities, and the equipment rooms within or between buildings.

balance: Balance is the ratio of the differential signal output at either end of any pair to a common mode signal input, at either end of the same or a different pair, and vice versa, under specified termination conditions.

bonding: The permanent joining of metallic parts to form an electrically conductive path that will assure electrical continuity and the capacity to conduct safely any current likely to be imposed on it.

bundled cable: An assembly of two or more cables continuously bound together to form a single unit.

cable: An assembly of one or more insulated conductors or optical fibers, within an enveloping sheath.

cable run: A length of installed media, which may include other components along its path.

cable sheath: A covering over the optical fiber or conductor assembly that may include one or more metallic members, strength members, or jackets.

cablings: A combination of all cables, jumpers, cords, and connecting hardware.

campus: The buildings and grounds having legal contiguous interconnection.

centralized cabling: A cabling configuration from the work area to a centralized cross-connect using pull through cables, an interconnect, or splice in the telecommunications room.

channel: The end-to-end transmission path between two points at which application-specific equipment is connected.

connecting hardware: A device providing mechanical cable terminations.

Glossary

connector, small form factor: An optical fiber duplex connector with a size approximating that of an 8-position modular outlet/connector typically used for terminating 4-pair copper cable.

cord (telecommunications): A cable using stranded conductors for flexibility, as in distribution cords or line cords.

cross-connect: A facility enabling the termination of cable elements and their interconnection or cross-connection.

cross-connection: A connection scheme between cabling runs, subsystems, and equipment using patch cords or jumpers that attach to connecting hardware on each end.

decibels (dB): A logarithmic unit that is used to describe a wide range of differences in signal voltage or power levels.

delay skew: The difference in propagation delay between any two pairs within the same cable sheath.

demarcation point: A point where the operational control or ownership changes.

drain wire: A non-insulated conductor placed in electrical contact with a shield.

electromagnetic interference: Radiated or conducted electromagnetic energy that has an undesirable effect on electronic equipment or signal transmissions.

entrance facility (telecommunications): An entrance to a building for both public and private network service cables (including wireless) including the entrance point of the building and continuing to the entrance room or space.

entrance point (telecommunications): The point of emergence for telecommunications cabling through an exterior wall, a floor, or from a conduit.

entrance room or space (telecommunications): A space in which the joining of inter or intra building telecommunications backbone facilities takes place.

equal level far-end crosstalk: A measure of the unwanted signal coupling from a transmitter at the near-end into another pair measured at the far-end, and relative to the received signal level.

equipment cable, cord: A cable or cable assembly used to connect telecommunications equipment to horizontal or backbone cabling.

equipment room (telecommunications): An environmentally controlled centralized space for telecommunications equipment that usually houses a main or intermediate cross-connect.

far-end crosstalk loss: A measure of the unwanted signal coupling from a transmitter at the near end into another pair measured at the far end.

fiber optic: See optical fiber.

ground: A conducting connection, whether intentional or accidental, between an electrical circuit (e.g., telecommunications) or equipment and the earth, or to some conducting body that serves in place of earth.

high-order mode transient losses: Losses in power caused by the attenuation in the cladding of multimode optical fiber.

horizontal cabling: (1) The cabling between and including the telecommunications outlet/connector and the horizontal cross-connect. (2) The cabling between and including the building automation system outlet or the first mechanical termination of the horizontal connection point and the horizontal cross-connect.

horizontal cross-connect: A cross-connect of horizontal cabling to other cabling, e.g., horizontal, backbone, and equipment.

hybrid cable: An assembly of two or more cables, of the same or different types or categories, covered by one overall sheath.

hybrid optical fiber cable: An optical fiber cable containing two or more fiber types (e.g., multimode and singlemode).



Glossary

infrastructure

(telecommunications): A collection of those telecommunications components, excluding equipment, that together provide the basic support for the distribution of all information within a building or campus.

insertion loss: The signal loss resulting from the insertion of a component, or link, or channel, between a transmitter and receiver.

insertion loss

deviation: The difference between the actual insertion loss as measured on a permanent link or channel and the insertion loss as determined by adding the component losses.

interconnection:

A connection scheme that employs connecting hardware for the direct connection of a cable to another cable without a patch cord or jumper.

intermediate

cross-connect: A cross-connect between first level and second level backbone cabling.

intrabuilding telecommunications backbone:

A pathway or cable facility for interconnecting telecommunications service entrance rooms, equipment rooms, or telecommunications rooms within a building.

jumper: An assembly of twisted-pairs without connectors, used to join telecommunications circuits/links at the cross-connect.

keying: The mechanical feature of a connector system that guarantees correct orientation of a connection, or prevents the connection to a jack, or to an optical fiber adapter of the same type intended for another purpose.

link: A transmission path between two points, not including terminal equipment, work area cables, and equipment cables.

longitudinal

conversion loss: A ratio, expressed in dB, of measured differential voltage relative to the common mode voltage on a conductor pair applied at the same end.

longitudinal conversion transfer

loss: A ratio, expressed in dB, of measured differential voltage at one end of a conductor pair relative to the common mode voltage applied on any pair at the opposite end or on any other pair on the same end.

main cross-connect:

A cross-connect for first level backbone cables, entrance cables, and equipment cables.

main terminal space:

The location of the cross-connect point of incoming cables from the telecommunications external network and the premises cable system.

megabits per second

(Mbps): An application dependent specification describing the number of discrete bits of information (i.e. a "1" or a "0") transmitted per second.

megahertz (MHz):

Transmitted signal frequency described as the number of millions of sinusoidal signal cycles per second.

mode: A path of light in an optical fiber.

modular jack: A female telecommunications connector that may be keyed or unkeyed and may have 6 or 8 contact positions, but not all the positions need be equipped with jack contacts.

modular plug cord:

A length of cable with a modular plug on both ends.

multimode optical

fiber: An optical fiber that carries many paths of light.

multipair cable:

A cable having more than four pairs.

multi-user telecommunications outlet assembly:

A grouping in one location of several telecommunications outlet/connectors.

open office: A floor space division provided by furniture, moveable partitions, or other means instead of by building walls.

optical fiber: Any filament made of dielectric materials that guides light.

optical fiber cable:

An assembly consisting of one or more optical fibers.

optical fiber duplex

connection: A mated assembly of two duplex connectors and a duplex adapter.



Glossary

outlet/connector

(telecommunications): A connecting device in the work area on which horizontal cable or outlet cable terminates.

patch cord: A length of cable with a plug on one or both ends.

patch panel: A connecting hardware system that facilitates cable termination and cabling administration using patch cords.

pathway: A facility for the placement of telecommunications cable.

permanent link: A test configuration for a link excluding test cords and patch cords.

plenum: A compartment or chamber to which one or more air ducts are connected and that forms part of the air distribution system.

power sum attenuation-to-crosstalk ratio: A ratio, expressed in dB, determined by subtracting the insertion loss from the power sum near-end crosstalk loss.

power sum equal level far-end crosstalk: A computation of the unwanted signal coupling from multiple transmitters at the near-end into a pair measured at the far-end, and normalized to the received signal level.

power sum near-end crosstalk loss: A computation of the unwanted signal coupling from multiple transmitters at the near-end into a pair measured at the near-end.

propagation delay:

The time required for a signal to travel from one end of the transmission path to the other end.

return loss: A ratio expressed in dB of the power of the outgoing signal to the power of the reflected signal.

room

(telecommunications): An enclosed space for housing telecommunications equipment, cable terminations, and cross-connect cabling, that is the recognized location of the horizontal cross-connect.

screen: An element of a cable formed by a shield.

screened twisted-pair (ScTP): A balanced cable with an overall screen.

shield: A metallic layer placed around a conductor or group of conductors.

singlemode optical fiber: An optical fiber that carries only one path of light.

splice: A joining of conductors in a splice closure, meant to be permanent.

splice closure: A device used to protect a splice.

star topology: A topology in which telecommunications cables are distributed from a central point.

telecommunications: Any transmission, emission, and reception of signs, signals, writings, images, and sounds, that is information of any nature by cable, radio, optical, or other electromagnetic systems.

topology: The physical or logical arrangement of a telecommunications system.

transfer impedance: A measure of shielding performance determined by the ratio of the voltage on the conductors enclosed by a shield to the surface currents on the outside of the shield.

transition point: A location in the horizontal cabling where flat undercarpet cable connects to round cable.

work area (work station): A building space where the occupants interact with telecommunications terminal equipment.

work area cable (cord): A cable connecting the telecommunications outlet/connector to the terminal equipment

Units of Measure

°C	degrees Celsius
°F	degrees Fahrenheit
dB	decibel
ft	foot
GHz	gigahertz
in	inch
km	kilometer
lbf	pound force
m	meter
MHz	megahertz
mm	millimeter
N	newton
nm	nanometer
ns	nanosecond
V _{rms}	volts root mean square
µm	micron or micrometer

Conversion Table

English to Metric

	Multiply by:
from inches to centimeters	2.54
from feet to meters	0.3048
from yards to meters	0.9144
from ounces to grams	28.3495
from pounds to kilograms	0.453592
from Fahrenheit (F) to Celsius (C)	C=(F-32) x 0.555

Part Number

Fiber											
Part #	Page #	Part #	Page #	Part #	Page #	Part #	Page #	Part #	Page #	Part #	Page #
60001	52	60034	77	60110	102	60411	52	60443	50	60470	51
60002	50	60035	75	60111	102	60412	52	60444	50	60471	51, 57
60003	50	60036	73	60235	106	60413	52	60445	50	60472	51
60004	50	60037	52	60258	67	60414	52	60446	50	60473	51
60005	52	60038	52	60282	104	60415	52	60447	50,56	60474	51
60006	66	60039	54	60324	52	60416	52	60448	50	60475	51
60007	50	60040	54	60326	52, 58	60417	53	60449	50	60479	54, 60
60008	51	60042	53	60327	68	60418	53	60450	50	60480	54
60009	62	60044	55	60328	68	60419	53	60451	50	60481	54
60010	54	60063	50, 56	60329	68	60420	53	60452	51,57	60482	54
60011	54	60085	106	60330	53	60421	53	60453	51	60483	54
60012	54, 60	60086	106	60332	53, 59	60422	53	60454	51	60484	55, 61
60014	60	60087	104	60333	69	60423	53	60455	51	60485	55
60015	70	60088	104	60334	69	60424	53	60456	51	60486	55
60016	76	60089	108	60335	69	60425	52	60457	51,57	60487	55
60017	72	60090	108	60336	95	60426	52	60458	51	60488	55
60018	74	60097	111	60337	94	60427	52	60459	51	60489	54
60022	51	60098	111	60344	100	60428	52	60460	51	60490	55
60023	53	60101	112	60345	111	60429	52	60461	51	60491	55
60024	53, 59	60102	112	60346	111	60430	53	60462	50	60492	55
60026	61, 57	60103	95	60351	106	60431	53	60463	50,56	60493	52
60027	67	60104	94	60356	112	60432	53	60464	50	60494	53
60028	63	60105	96	60369	66	60433	53	60465	50	60495	52
60029	61	60106	100	60405	86	60434	53	60466	50	60496	53
60030	55	60107	100	60408	106	60435	53	60467	50	60497	50
60031	55, 61	60108	98	60409	52	60436	53	60468	51	60498	51
60033	71	60109	98	60410	52	60442	50, 56	60469	51	60499	50

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60500	51	60559	67	60622	71	60719	99	60950	108	61467	92
60501	50	60561	68	60627	70	60720	102	60951	108	61468	92
60502	51	60562	69	60628	71	60721	102	60954	112	61488	51
60503	54	60564	66	60628	71	60722	102	60960	109	61493	55
60504	55	60565	67	60633	70	60730	103	60961	109	61495	89
60508	52, 58	60567	66	60634	71	60731	103	60962	109	61510	50
60509	52, 58	60569	66	60638	70	60732	103	60965	109	61511	50
60510	53, 59	60570	67	60639	71	60733	103	60966	113	61512	52
60511	53, 59	60571	68	60658	74	60735	103	60967	113	61513	52
60514	52, 58	60572	69	60659	75	60917	107	60968	113	61514	53
60515	68	60581	64	60662	72	60918	107	60971	113	61515	54
60516	56	60582	63	60663	73	60919	107	61319	86	61520	91
60517	59	60585	64	60669	96	60922	107	61337	86	61521	91
60518	57	60586	65	60670	97	60926	111	61345	89	61522	88
60519	58	60588	62	60671	97	60927	111	61346	89	61523	88
60520	56	60589	63	60701	100	60928	111	61347	88	61524	88
60521	59	60591	64	60702	100	60931	111	61348	88	61525	89
60522	57	60592	65	60704	101	60932	110	61349	90	61526	89
60524	78	60594	62	60705	101	60933	110	61350	91	61540	85
60529	58	60595	62	60706	101	60934	110	61363	90	61541	85
60530	59	60596	63	60707	101	60937	110	61376	88	61542	84
60532	58	60598	65	60709	101	60938	105	61380	89	61543	84
60533	59	60600	62	60710	98	60939	105	61415	90	61544	87
60543	56	60601	63	60711	98	60940	105	61421	84	61545	86
60544	57	60603	64	60712	98	60943	105	61433	87		
60546	56	60604	65	60714	99	60944	110	61459	93		
60547	57	60613	64	60715	99	60945	110	61460	86		
60550	60	60614	65	60716	99	60946	110	61464	86		
60551	61	60621	70	60717	99	60949	110	61466	87		

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30025	14	38696	20
30073	42	38718	26
30074	42	38743	44
30086	44	38779	28
30093	24	38822	42
30100	19	38730	44
30110	38	38732	44
30111	26	38733	44
30120	41	38740	44
30124	38	38842	44
30125	49	38886	22
30129	32	38891	18
30132	16	38893	18
30134	28	38895	44
30145	46	39063	42
30153	38	38895	44
30154	32	39069	44
30172	24	39073	44
30180	46	39074	44
30183	14	39075	44
30203	26	39086	36
30212	14	39092	34
30218	8	39151	40
30222	8	39228	28
30233	30	39419	20

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60052	48
60056	48
60116	48
60136	48
60145	48
60150	48
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Jacket Color Abbreviations	
Black	BK
Blue	BL
Brown	BR
Gray	GA
Green	GR
Red	RD
White	WH
Yellow	YE

Put-Up	Code
Reelx-Boxes	2
Reels	3
Reel-In-A-Box	4

How to Build an HCM Part Number			
Section 1	Section 2	Section 3	Section 4
39419	8	BL	2
Base Part Number	Number of Conductors	Jacket Color	Reel Type

Part number 39419-8-BL2 is a Category 5e, plenum rated 4-pair cable with a blue jacket and packaged in a reelx-box.
 Note: Some cable constructions may require additional information when ordering.