What To Ask When Selling Category Patch Cables

What kind of cable?

□ Stranded (Most popular)

The most common wire used for Patch cables where flexibility is important.

☐ Solid

Not generally used for Patch Cables shorter than 25 feet due to the inflexibility of solid cable although performance characteristics are better with solid wire.

How will it be wired?

☐ Straight-thru (Most popular)

The straight-thru or pin-to-pin wiring method is the most common way to terminate Patch Cables. (See wiring reference)

This method of wiring is used in device to device applications such as 10/100BASE-T Hub to Hub, or peer-to-peer connections.

What gauge wire?

Wire gauge determines the diameter of the conductor.

The larger the diameter, or gauge, the more capacity (amperage) the wire has for carrying current. For

telco/data applications, current carrying capacity (amperage) is not an important consideration. The

What is the data rate?

Proposed new STP standard with Category 7 extended frequency requirements Proposed new UTP standard with □ Category 6

extended frequency requirements
Data rates to 1 GBPS at 100MHz. □ Category 5E Enhanced Cat5E TIA/EIA standard. Data rates to 100MBPS at 100MHz.

□ Category 5 4 pair 100Ω 24 AWG UTP cable. □ Category 4 Data rates to 20MBPS: now

obsolete ☐ Category 3 Data rates to 16MBPS.

What kind of jacket?

slightly thicker than Plenum jacket

□ PVC For Patch Cords in non-plenum areas. Generally feels more flexible and is

Low-smoke, fire resistant outer jacket and □ Plenum conductor insulation material used in plenum areas such as in false ceilings or

air return handling areas. Not generally used for Patch Cables.

■ 22 AWG ■ 26 AWG

standard is 24 AWG.

☐ 24 AWG Most common ■ 28 AWG (Silver Satin)

Do you need shielded or unshielded?

☐ UTP Unshielded Twisted Pair cable is most common in North America and relatively inexpensive.UTP is 100Ω impedance.

□ ScTP Screened Twisted Pair cable provides EMI/RFI protection via an overall foil and/or braided shield. Popular in Europe and more expensive than UTP. ScTP is 100Ω impedance.

□ STP Shielded Twisted Pair has individually shielded. twisted pairs and an overall foil/braid shield.

Glossary of Terms

568B A cabling wiring standard also known as ATT 258A. Electrically, pairing between 568A

and 568B is identical so either can be used in place of the other. The difference is the orange and green pairs are switched

568A A cabling standard also known as EIA

A reduction in power or amplitude which is Attenuation expressed in decibels per unit length

Cable and connecting hardware and runs Backbone Cabling between wiring closets, equipment rooms,

and demarcation points.

HINT - Usually multiconductor large cable.

Decibel A unit of measurement expressing transmission gain or loss as derived from

a ratio of signal amplitudes or power. Horizontal Cabling between workstations, wall outlets,

and patching products Cabling Impedance

A measurement for AC resistance. UTP = 100 Ohm IBM STP = 150 Ohm

One meter equals 3.28 feet Meter

Modular Jack A female connector typically mounted in a fixed location and may have 2, 4, 6, 8, or

10 positions.

Modular Plug A male telecommunications connector

most commonly terminated onto cable and may have 2, 4, 6, 8, or 10 positions.

MMJ Digital Equipment Corporation exclusive. MMJ stands for Modified Modular Jack which Incorporates an offset design

preventing the accidental connection of telco cables into data wall plates or jacks. Data "bleed over" from an adjacent pair.

Crosstalk An undesirable component measured at the end from which the disturbing signal is

transmitted

Near-end

MBPS

USOC

Noise or interference caused by Return Loss impedance discontinuities along the

transmission line at various frequencies expressed in dB.

Token Ring Originally designed for IBM using 150

Ohm shielded twisted pair cable. The higher cost and lower performance of this type of cabling have made it increasingly less popular than Category 5 UTP.

A communication line between two Trunk

Switching Systems.

Million Bits Per Second (MBPS). A term related to a measurement of the amount of data transferred in bits over a medium.

Stands for Universal Service Ordering

Code. Its origins are in the telephone wiring world and it has been adapted in recent

years for data applications.

LITP Unshielded Twisted Pair (UTP) cabling products incorporate twisted pair cabling for high speed data transmission over

unbalanced lines.

If the customer experiences problems with cables

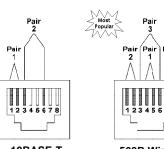
■ No Signal

- The most common reason for signal loss in a modular cable is crimp problems. Either the crimp pins did not penetrate the wire jacket properly, or the crimp operation was not properly performed. Problems of this nature usually are discovered in final test, but occasionally the problem exhibits itself in the field. Re-crimping with a quality crimp tool usually resolves this type of failure.
- Another possible reason for failure of this type is a break in the cable somewhere. Complete replacement is the simplest solution.

□ Intermittent Signal

- These failures are most common since intermittent failure may not have been duplicated during final test. If the location of the intermittent connection is isolated to the modular plug area, re-crimping may resolve the problem.
- Call for technical support Gruber 800 658-5883 (Email support@gruber.com)

Modular Wiring Reference

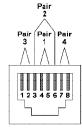


10BASE-T (802.3)

This 2 Pair wiring method is also imbedded in the 568B wiring method.

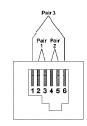
568B Wiring

Also known as ATT 258A wiring. This termination method is used with Category cable products.



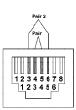
568A Wiring

Also known as EIA wiring. This termination method is also used with Category cable products.



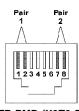
MMJ Wiring

A Digital Equipment Corp.exclusive. MMJ stands for Modified Modular Jack



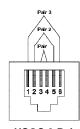
Token Ring (802.5)

An IBM standard. Can be either a 6 or 8 position jack.



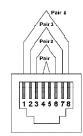
TP-PMD (X3T9.5)

This ANSI wiring method uses the outer two pairs of an 8 position jack



USOC 3 Pair

USOC wiring is available in 1, 2, 3, or 4 pair configurations.



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Modular Plug Wiring Reference

















