CALRAD

Network CAT 5 Products - keystone jacks

Tech Tips and Info

Unshielded (UTP) vs. Shielded (STP) Twisted Pair Cables

Shielded cables protect data against electromagnetic interference and radio-frequency interference (EMI/RFI). In "noisy" environments it is recommended that STP cables be used in order to keep data in its original form.

Choosing Solid & Stranded Patch Cables

1. Use UTP Solid Cables for runs between 2 wiring closets or from the wiring closet to a wall plate. They should not be flexed, bent, or twisted repeatedly.
2. Use Stranded Patch Cables to connect workstations to the wall plate with patch panels and other equipment such as hubs. They are excellent for applications that require repeated flexing.
3. Since attenuation is higher in stranded cables than in solid conductor cables, the stranded cable runs should be minimized to reduce the chance of introducing more attenuation into the system.

Fiber Optic Cables

Fiber Styles: Fiber optic cable is offered in two basic styles: Single-Mode and Multi-Mode. Single-Mode fiber is generally used in long distance, high-capacity voice applications like telephone transmission. Single-Mode fiber is also used in new long distance gigabit networking applications. Multi-Mode fiber is the computer industry standard for data applications, including most local area networks or LANs.

Fiber Advantages: Fiber offers some superb advantages to copper cable. It has the ability to move massive amounts of data at very high speeds without electro-magnetic or radio frequency interference. It is compact, highly secure and maintains excellent data integrity even over great distances.

FDDI (Fiber Optic Distributed Data Interface): FDDI is the standard that establishes minimum performance characteristics for cable fiber sizes and its recommended redundant ring topology.

Fiber optic cable typically comes in pairs, with one fiber for data transmission, and the other of receiving. Zipcord, or duplex cabling is common within fiber networks, and consists of two fiber strands molded together.

Construction: The heart of the fiber optic cable is the glass fiber itself. this glass strand, called the Core, is surrounded by additional glass or Cladding, shown in the illustration. The light pulses of data travel down the cable within the core, while the cladding reflects errant light waves back into the core.

Fiber is described in specific diameter terms using micron measurement, such as 62.5/125. This particular cable would have a core diameter of 62.5 microns, and an overall diameter, combining core and cladding, of 125 microns.

Fiber cables can also have a Tight Buffer or a Loose Buffer. A tight buffer is a plastic coating directly on the glass itself that is break resistant. Most indoor fiber cable is tight buffered. Loose buffer construction permits expansion and contraction of the cable without damage to the optical fiber, and is ideal for outdoor applications.

Strength Members are used to increase the durability of a fiber cable. Primarily for indoor installations, they allow the cable to support itself during installations and while hanging.

The Outer Jacket typically consists of either Plenum or PVC. PVC is commonly used for outdoor or external cabling, while Plenum is required for cabling through airways and walls.

Outdoor cable can have additional features, such as corrugated steel armor for protection against rodents and below-ground hazards.

What cable to use and what features it should have will depend on your individual needs an the particular installation environment. What ever you require, you can be sure that CALRAD will deliver!

Fiber Optic Cable Cross Section

- Core
- Cladding
- Buffer
- Strength Members
- Outer Jacket

NEW Item
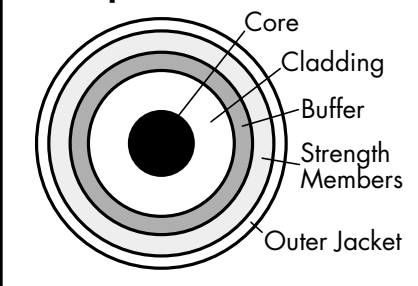
CAT 5e

72-305 8 POSITION FEMALE TO FEMALE KEYSTONE FEED-THRU JACK

CAT5e RJ45 female to female feed-thru. Color: black.

6-POSITION UL KEYSTONE MODULAR JACK

IDC type meets level 3 & 4 requirements. 30 microns gold palted contacts and ABS material UL94/A-O. Suitable for 22-26 AWG wire. Will work as a 4 position jack.

72-100-BK	black
72-100-IV	ivory
72-100-WH	white

8-POSITION UL KEYSTONE MODULAR JACK

IDC type meets level 3 & 4 requirements. 30 microns gold palted contacts and ABS material UL94/A-O. Suitable for 22-26 AWG wire.

72-101-BK	black
72-101-IV	ivory
72-101-WH	white

UL 350MHz, RJ45 ENHANCED 90° KEYSTONE JACKS

Gold plated 50 microns.

72-102-BK-E90	black
72-102-BU-E90	blue
72-102-GN-E90	green
72-102-IV-E90	ivory
72-102-OR-E90	orange
72-102-RD-E90	red
72-102-WH-E90	white
72-102-YL-E90	yellow

CAT 5e

UL 350MHz, RJ45 ENHANCED KEYSTONE JACKS
Gold plated 50 microns.

72-102-BK-E	black
72-102-BU-E	blue
72-102-GN-E	green
72-102-IV-E	ivory
72-102-OR-E	orange
72-102-RD-E	red
72-102-WH-E	white
72-102-YL-E	yellow
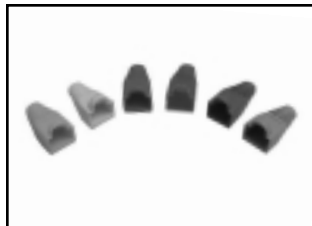
RJ45 SNAGLESS RUBBER BOOTS
Available in black, blue, ivory, orange, red, white or yellow. Used with round cable.

72-104-BK	black
72-104-BU	blue
72-104-IV	ivory
72-104-OR	orange
72-104-RD	red
72-104-WH	white
72-104-YL	yellow

FIELD INSTALLABLE 2-PIECE SNAP-ON RJ45 SNAGLESS BOOTS

72-105-BK	black
72-105-BU	blue
72-105-IV	ivory
72-105-OR	orange
72-105-RD	red
72-105-WH	white
72-105-YL	yellow

CAT 5e

SINGLE ENHANCED SURFACE MOUNT JACK
Up to 350MHz PCB surface mount jack with 110 IDC, allows for quick and easy installation. UL certified to meet EIA/TIA 568A or B, TSB 40A specifications. 1 RJ45 jack. Includes mounting hardware.
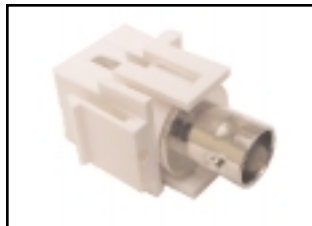
72-107-WH .... white

CAT 5e

DUPLEX ENHANCED SURFACE MOUNT JACK
Up to 350MHz PCB surface mount jack with 110 IDC, allows for quick and easy installation. UL certified to meet EIA/TIA 568A or B, TSB 40A specifications. 2 RJ45 jacks. Includes mounting hardware.
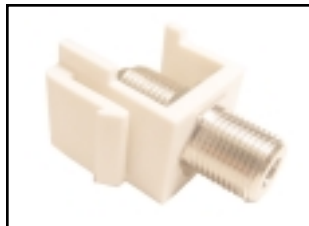
72-108-WH .... white

BNC KEYSTONE JACK
3/8" "D" bulkhead BNC jack mounted in a keystone insert.

72-210-IV	ivory
72-210-WH	white

'F' CONNECTOR KEYSTONE INSERT
1/2" bulkhead F-81 BNC jack mounted in a keystone insert.

72-211-IV	ivory
72-211-WH	white

KEYSTONE BLANK CONNECTOR INSERT
Blank insert with 3/8" hole. For use with Calrad connectors and Keystone cavity wall plates. Hex nut cutout on rear of insert.

72-212-IV	ivory
72-212-WH	white

KEYSTONE BLANK INSERT
Blank insert for use with Calrad Keystone cavity wall plates.

72-213-IV	ivory
72-213-WH	white

MULTIMEDIA LARGE CAVITY KEYSTONE INSERTS

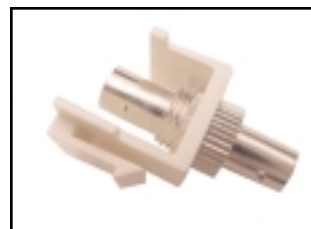|	
72-215-WH	white
72-215-BK	black

For use with Calrad 72-232 series wall plates. Punched .5" 'D' hole for use with .5" O.D. feedthrough connectors. Calrad 30-410-1/2, 75-552, 75-696, & 75-521.

MULTIMEDIA LARGE CAVITY KEYSTONE INSERTS

72-218-WH	white
72-218-BK	black

For use with Calrad 72-232 series wall plates.

FIBER-OPTIC SIMPLEX CONNECTOR, ST-ST KEYSTONE JACK

72-216-WH	white
72-216-BK	black

Links ST to ST cable together. Fits all standard Keystone cavities. Works with Calrad wall plates and patch panels 72-226, 72-229, 72-230, & 72-233.

CALRAD

Network CAT 5 Products — keystone audio/video and data keystone accessories

'F' CONNECTOR BEZEL INSERTS
72-217-BK............................... black
72-217-WH............................ white
Blank insert with 3/8" hole. For use with F-81 connectors. Hex nut cutout on front of insert.

NEW Item

RGB+VIDEO RCA KEYSTONE INSERTS
RCA female to female jacks with colored inserts of **RED, GREEN, BLUE,** or **YELLOW**. Nickel plated. Specify colors when ordering.
72-300-IV................................. ivory
72-300-WH............................. white

NEW Item

RGB+VIDEO BNC KEYSTONE INSERTS
BNC female to female jacks with colored washers of **RED, GREEN, BLUE,** or **YELLOW**. Nickel plated. Specify colors when ordering.
72-302-IV................................. ivory
72-302-WH............................. white

NEW Item

SVHS VIDEO KEYSTONE INSERTS
SVHS female to female jack, 4 pin.
72-304-IV................................. ivory
72-304-WH............................ white
72-304G-IV .... ivory w/ gold connector
72-304G-WH .. white w/ gold connector

NEW Item

CAT 5e

CAT-5e INLINE COUPLER
Connect 2 CAT-5, CAT-5e cables together. Bandwidth up to 500Mbs. Meets FCC part 68. Contacts are plated with 50 microns of gold over 100 microns of nickel on phosphor. Size: 1.02"W x .98"H x 1.88"D..
72-109 .... white

NEW Item

KEYSTONE WALL JACKS WITH INSERTS
White color duplex style Keystone wall jacks with blank inserts and wall plate. Includes mounting hardware.
**72-229-1** .... 1 port
72-229-2 .... 2 port
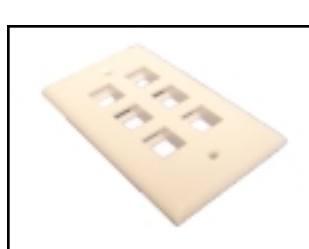
KEYSTONE PLASTIC WALL PLATES
Includes mounting hardware.
72-230-1 .... 1 port, white
72-230-2 .... 2 ports, white
72-230-3 .... 3 ports, white
72-230-4 .... 4 ports, white
72-230-6 .... 6 ports, white
72-230-1-IV .... 1 port, ivory
72-230-2-IV .... 2 ports, ivory
72-230-3-IV .... 3 ports, ivory
72-230-4-IV .... 4 ports, ivory
72-230-6-IV .... 6 ports, ivory

LARGE CAVITY MULTIMEDIA ANGLED KEYSTONE PLASTIC WALL PLATES
White in color. Includes ID labels and mounting hardware.
72-232-1 .... 1 port
72-232-2 .... 2 ports
72-232-4 .... 4 ports
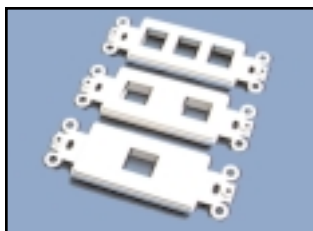
DECORA STYLE CAT-5 KEYSTONE WALL PLATE INSERTS
Includes mounting screws.
72-233-1 .... 1 port, white
72-233-1-IV .... 1 port, ivory
72-233-2 .... 2 ports, white
72-233-2-IV .... 2 ports, ivory
72-233-3 .... 3 ports, white
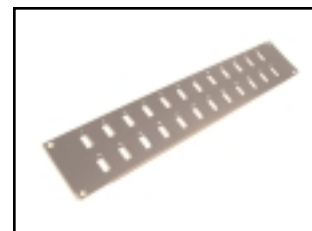**72-233-3-IV** .... 3 ports, ivory

NEW Item

CAT 5e

PLASTIC CAT-5, CAT-5e BACK BOX
For use with Calrad 72-229-1, 72-229-2 duplex style Keystone wall plates. Includes mounting hardware.
72-236-WH .... white
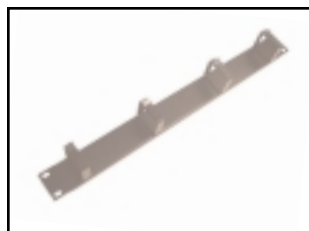
WIRE MANAGEMENT PANEL
4 stand offs for routing cables. 1-3/4" x 1-3/4" stand off openings for cable passage. The panel measures 19"W x 1-3/4"H x 1-3/4"D. Durable black finish.
72-225.. black

KEYSTONE BLANK PATCH PANELS
Numbered prepunched panels with durable black finish.
72-226-12 .... 12 ports
    19"W x 1-3/4"H x 3/8"D
72-226-16 .... 16 ports
    19"W x 1-3/4"H x 3/8"D
72-226-24 .... 24 ports
    19"W x 3-1/2"H x 3/8"D
72-226-48 .... 48 ports
    19"W x 5-1/4"H x 3/8"D

RJ45 MODULAR PLUG
Crimp style connector for use with twisted pair data cables. Gold plated 50 microns of gold.
72-497R-25 .... pack of 25
72-497R-100 .... pack of 100

72-240 MULTI-PURPOSE MODULAR CRIMP TOOL
RJ45 crimping tool cuts, strips and crimps quickly and easily. For RJ45 ethernet and RJ11 plugs. Provides repeatability and reliability of crimp. High impact plastic construction. Compact size, easy to handle.

72-241 7.3" MODULAR CRIMP TOOL
Cuts, strips,and crimps two types of plugs 6P & 8P in one. For crimping: 8P8C/RJ45, 6P6C/RJ12, 6P4C/RJ11 and 6P2C plugs. Steel body with easy grip plastic handles.

72-242 7.6" PRO MODULAR CRIMP TOOL
For crimping 6P-RJ11 / RJ12 & 8P-RJ45, suitable for both stranded and solid wire. Provides precision crimping, cutting and stripping wire in one operation. Ratchet style mechanism.

72-234 ADJUSTABLE IMPACT PUNCH DOWN TOOL
Provides consistant action for seating wire into terminal blocks. Adjustable impact pressure control. The back of the handle is a storage compartment for 1 spare blade. For use with Calrad 72-245, 72-246, 72-247 blades.

72-244 IMPACT PUNCH DOWN TOOL
Provides consistant action for seating wire into terminal blocks. For use with Calrad 72-245, 72-246, 72-247 blades.

PUNCH DOWN BLADES FOR 72-234 AND 72-244 PUNCH DOWN TOOLS
72-245 .... 66 punch down blade
72-246 .... 110/88 punch down blade
72-247 .. 66, 110/88 punch down blade

NEW Item

72-239 PLASTIC PUNCH TOOL
Inexpensive disposable punch down tool with cable stripping blade for outer PVC jacket. Suitable for small jobs. Works with 5-6mm O.D. UTP/STP cable. Terminates conductors on 110 blocks.

72-248 LAN & VOICE CABLE TESTER
Tests for RJ45 modular connection with 258A, 568A & B, 356A wiring and 10 baseT & BNC coaxial. Includes 2 adapters for USOC RJ12 and RJ11 test usage. Performs test of cable continuity, miss wiring and polarization by the color of the L.E.D. indicators. Detachable remote unit for installed cabling. Powered using a 9V battery. Includes black ballistic nylon carrying case.

350MHz CAT-5E, RJ45 SNAGLESS CABLES
UL high performance, stranded hi-flex conductors for superior flexibility. Color cable and boot. Gold plated plugs with 50 microns of plating. Lengths available in 3', 5', 7', 10', 14', 25'. **Specify length when ordering.**
72-110-length-BK UTP/UL, black
72-110-length-BU.. UTP/UL, blue
72-110-length-GY. UTP/UL, gray
72-110-length-RD ... UTP/UL, red
72-110-length-YL UTP/UL, yellow

NEW Item

72-150-Length FIBER OPTIC FC-FC SIMPLEX JUMPER CABLES
Low insertion loss optical patch cord. Fiber diameter 8.3/125um single mode. 3mm cable O.D., Length in meters. Available in 1m, 2m, 3m, 4m, 5m, 6m. **Specify length when ordering.**

NEW Item

72-152-Length FIBER OPTIC FC-FC DUPLEX JUMPER CABLES
Low insertion loss optical patch cord. Fiber diameter 8.3/125um single mode. 3mm cable O.D., Length in meters. Available in 1m, 2m, 3m, 4m, 5m, 6m. **Specify length when ordering.**

Network CAT 5 Products – fiber-optic, firmware, USB crossover & mini din 6-pin cables & couplers

NEW Item

72-154-Length FIBER OPTIC ST-ST SIMPLEX JUMPER CABLES
Cable 62.5um/125um, PVC single fiber cord. OFNR riser rated. Terminated to precision machined brass ST connectors. Length in meters. Available in 1m, 2m, 3m, 4m, 5m, 6m. **Specify length when ordering.**

NEW Item

72-156-Length FIBER OPTIC ST-ST DUPLEX JUMPER CABLES
FDDI rated multi-mode patch jumper cables. Perfect for LAN and digital video applications. Terminated to precision machined brass ST connectors. 2 fiber duplex zip cord - OFNR riser rated. Length in meters. Available in 1m, 2m, 3m, 4m, 5m, 6m. **Specify length when ordering.**

NEW Item

72-157-Length FIBER OPTIC ST-SC SIMPLEX JUMPER CABLE
FDDI rated multi-mode patch jumper cable. Perfect for LAN and digital video applications. Terminated to precision machined brass ST connector and SC premium connector. Cable 62.5um/125um, PVC single fiber cord.OFNR riser rated. Length in meters. Available in 1m, 2m, 3m, 4m, 5m, 6m. **Specify length when ordering.**

NEW Item

72-159-Length FIBER OPTIC S DUPLEX JUMPER CABLE
FDDI rated multi-mode patch jumper cable. Perfect for LAN and digital video applications. Terminated to precision machined brass ST connector and SC premium connector. 2 fiber duplex zip cord - orange PVC jacket. 62.5um/125um fiber - OFNR riser rated. Length in meters. Available in 1m, 2m, 3m, 4m, 5m, 6m. **Specify length when ordering.**

NEW Item

72-161-Length FIBER OPTIC SC-SC SIMPLEX JUMPER CABLE
Length in meters. Available in 1m, 2m, 3m, 4m, 5m, 6m. **Specify length when ordering.**

NEW Item

72-163-Length FIBER OPTIC ST-SC DUPLEX JUMPER CABLE
FDDI rated multi-mode patch jumper cable. Perfect for LAN and digital video applications. SC premium connectors. 2 fiber duplex zip cord - orange PVC jacket. 62.5um/125um fiber - OFNR riser rated. Length in meters. Available in 1m, 2m, 3m, 4m, 5m, 6m. **Specify length when ordering.**

NEW Item

72-180 FIBER OPTIC SIMPLEX COUPLER ST-ST
Links ST to ST cables together. Panel mount connecotr, mounts in .375" hole.

NEW Item

72-181 FIBER OPTIC DUPLEX COUPLER ST-ST
Links ST to ST cables together. Designed to mount in 19" rack panels or used free standing.

NEW Item

FIREWIRE CABLES
This type of IEEE 1394 cable carries up to over 400MBps of bandwidth.

72-120-6	4-pin/4-pin, 6 ft.
72-120-10	4-pin/4-pin, 10 ft.
72-120-15	4-pin/4-pin, 15 ft.
72-121-6	6-pin/4-pin, 6 ft.
72-121-10	6-pin/4-pin, 10 ft.
72-121-12	6-pin/4-pin, 12 ft.
72-121-15	6-pin/4-pin, 15 ft.
72-122-6	6-pin/6-pin, 6 ft.
72-122-10	6-pin/6-pin, 10 ft.
72-122-12	6-pin/6-pin, 12 ft.
72-122-15	6-pin/6-pin, 15 ft.

NEW Item

Type A end
Front View

VER 2.0 USB TYPE A CABLES

72-125-6	6 ft.
72-125-10	10 ft.
72-125-15	15 ft.

Universal Serial Bus 2.0 (USB 2.0) brings a new standard of speed to the USB market. These new highspeed USB cables give more versatility to computers and peripherals than ever before. USB 2.0 increases signal transmission from standard USB 1.1 topping out at 12Mb/s up to 480Mb/s for USB 2.0. The cables are completely backward compatible with standard USB ports, so there isn't any need to worry that you will not be able to use USB 2.0 cables on the standard USB products you already own.

NEW Item

Type A end
Front View
Type B end
Front View

VER 2.0 USB TYPE A/B CABLES

72-126-6	6 ft.
72-126-10	10 ft.
72-126-15	15 ft.

Universal Serial Bus 2.0 (USB 2.0) brings a new standard of speed to the USB market. These new highspeed USB cables give more versatility to computers and peripherals than ever before. USB 2.0 increases signal transmission from standard USB 1.1 topping out at 12Mb/s up to 480Mb/s for USB 2.0. The cables are completely backward compatible with standard USB ports, so there isn't any need to worry that you will not be able to use USB 2.0 cables on the standard USB products you already own.

NEW Item

72-249 10' CROSSOVER CABLE
Connect 2 PC's without a hub. Rubber strain reliefs with RJ45 connectors. Includes female to female coupler for connecting standard CAT-5 cables for any desired length.

High Speed → USB Ver 2.0 480Mb/sec

High Speed → USB Ver 2.0 480Mb/sec

NEW *Item*

72-190-6, -10
SHIELDED MINI-DIN
EXTENSION CABLE
6-pin mini din male to female extension cable, wired pin to pin. Available in 6 ft. and 10 ft.

NEW *Item*

DB-9 MOUSE/MONITOR
MALE TO MALE CABLES
72-195-6.................................... 6 ft.
72-195-10 .... 10 ft.
DB-9 MOUSE/MONITOR
MALE TO FEMALE CABLES
72-196-6.................................... 6 ft.
72-196-10............................... 10 ft.
9 wire 26-28 awg conductors with foil shielding. Pin to pin wiring. Rugged molded construction with long grip-textured slotted thumb screws.

NEW *Item*

CAT 5e

72-250 (solid)
72-250-S (stranded)
CAT-5e CABLE 350Mhz
1000' roll solid twisted pair unshielded UL/CSA, 24 AWG 4 pair, PVC jacket. UL/CSA for fast ethernet 10/100/350 Base-T. Colors may vary.

NEW *Item*

72-251 (solid)
72-251-S (stranded)
CAT-5 CABLE
1000' roll solid twisted pair unshielded UL/CSA, 24 AWG 4 pair. 100MBps. UL/CSA for fast ethernet 10/100 Base-T. PVC jacket. Colors may vary.

Calrad Electronics produces custom cables. Fax your drawings & specs to our 24 hour fax line.
323-465-3504