

Introduction to Copper Products

Copper Cable Assemblies



A copper cable assembly is only as good as its parts and at Clearfield®, we only use the best parts available.

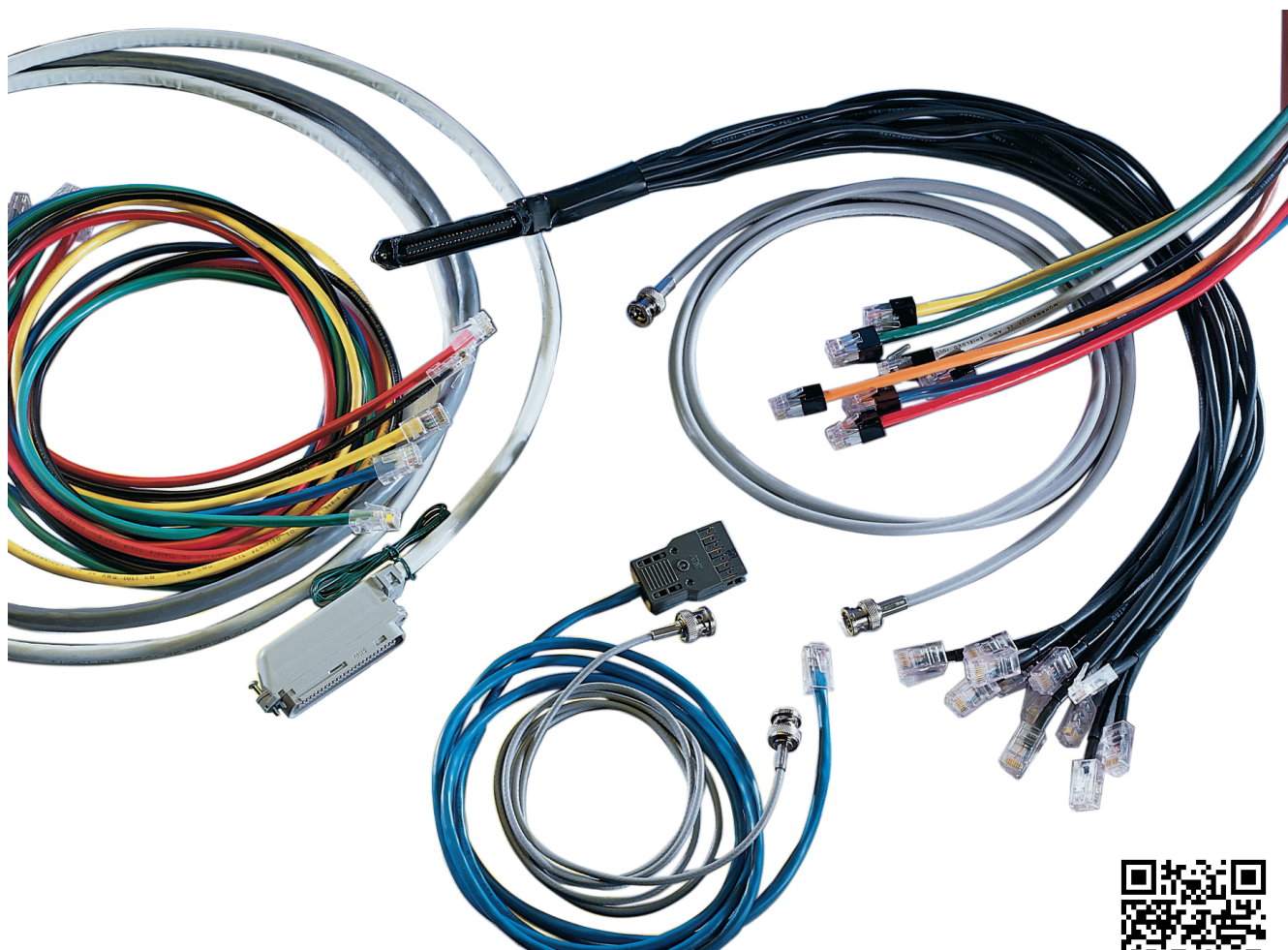
Whether it's a custom cabling solution that integrates with technologies for the world's most demanding semiconductor manufacturer or the data center for one of the Internet's top search engine companies, Clearfield takes your copper cabling requirements seriously. Combining 40+ years of experience, we can design and manufacture DS1, Telco, CAT5e and CAT6 patch cords and cable assemblies for just about any application.

We've earned a reputation for product quality and customer service by producing value-priced, high-quality product delivered to your schedule. From concept, to production floor, to your doorstep, our in-house engineering and design staff will work with you to tailor-engineer a solution that matches both your performance and cost requirements. Clearfield's connectivity expertise, combined with a personalized approach, gives our customers the highest level of service and quality.

Copper Termination Manufacturing Capabilities

All manufacturing is carried out under controlled conditions based on documented workmanship standards, product specifications, work instructions and QA inspection criteria. At Clearfield, we use the latest manufacturing processes combined with hands-on expertise and craftsmanship for each assembly we build.

Soldering, crimping and IDC termination can be performed on all types of cables, wire harnesses and electromechanical assemblies for a variety of high technology industries, such as telecommunication, computer, medical, military, automotive and industrial electronics. Electromechanical assembly capabilities include electronic sub-assemblies and complete product assemblies and test, using available in-house or customer-supplied fixtures and test equipment. We invite short run projects, as well as, high volume production runs.



Copper Products

Copper

DS1 Copper Cables



Application

Copper DS1 assemblies connect a variety of equipment.

Description

DS1 assemblies are typically constructed using 28 or 32 pair cable and 64 position connectors.

Features and Benefits

Integrity

- Meets or exceeds EIA/TIA standards for data transmission
- Meets UL, CSA, and NEC standards
- RoHS and WEEE compliant
- 100% visually and mechanically inspected
- 100% electrically tested

Protection

- Custom lengths MP 10/15/15 to minimize cable pile up
- Optional PVC and Plenum jackets available

Access

- 90°, 120°, and 180° male and female interfaces available

Investment

- CAT 5e available through special order
- Stock and custom serialization and labeling
- Stock and custom lengths available
- Custom pin outs available



Copper

DS1 Copper Cables



Configured Part Numbers

D 1 R - - XXXM or XXXF

1
 2
 3
 4
 5
 6
 7

1 Select Cable Type

- 1 = 28 pr, 24 ga, shielded, solid
- 3 = 32 pr, 24 ga, shielded, solid
- 4 = 28 pr, 22 ga, shielded, solid
- 5 = 28 pr, 26 ga, shielded, solid
- 6 = 32 pr, 26 ga, shielded, solid
- 7 = 32 pr, 22 ga, shielded, solid
- 9 = 32 pr, 26 ga, shielded, solid, cat5, VDSL

2 Select Wiring Configuration

- 6 = Straight through
- X = Custom

3 Select Connector # 1

- A = 64 pos, male, 24-26 ga, 180 deg
- B = 64 pos, female, 24-26 ga, 180 deg
- C = 64 pos, male, 24-26 ga, 180 deg, bail lock
- E = 64 pos, male, 24-26 ga, 90/270 deg
- F = 64 pos, female, 24-26 ga, 90/270 deg
- G = 64 pos, male, 24-26 ga, 90/270 deg, bail lock
- I = 64 pos, male, 22 ga, 90/270 deg
- J = 64 pos, male, 22 ga, 180 deg
- K = 64 pos, female, 22 ga, 90/270 deg
- L = 64 pos, female, 22 ga, 180 deg

4 Select Cable Exit Connector # 1

- 1 = Pins 1 – 33
- 2 = Pins 32 – 64
- Z = Exit not required (180 degree connector)

5 Select Connector # 2

- A = 64 pos, male, 24-26 ga, 180 deg
- B = 64 pos, female, 24-26 ga, 180 deg
- C = 64 pos, male, 24-26 ga, 180 deg, bail lock
- E = 64 pos, male, 24-26 ga, 90/270 deg
- F = 64 pos, female, 24-26 ga, 90/270 deg
- G = 64 pos, male, 24-26 ga, 90/270 deg, bail lock
- I = 64 pos, male, 22 ga, 90/270 deg
- J = 64 pos, male, 22 ga, 180 deg
- K = 64 pos, female, 22 ga, 90/270 deg
- L = 64 pos, female, 22 ga, 180 deg
- Z = Pigtail/Blunt

6 Select Cable Exit Connector # 2

- 1 = Pins 1 – 33
- 2 = Pins 32 – 64
- Z = Exit not required (180 degree connector)

7 Select 24" Drain Wire

- 1 = Connector 1 drain wire
- 2 = Connector 2 drain wire
- 3 = Drain wire both connectors
- 0 = No drain wires

XXXM or XXXF

- XXXM = Length in meters
- XXXF = Length in feet

Copper

Telco Copper Cables



Application

Copper telco assemblies connect a variety of equipment interfaces in carrier networks, private networks and customer premise environments. They are used to transmit analog or digital data for a variety of communication applications. Our high-quality cables ensure the integrity of your data path.

Description

Clearfield® 25/32-pair cables, terminated to 50/64-position RJ connectors, are manufactured to EIA/TIA standards. Our 25-pair Category 5e assemblies meet standards for data transmission up to 100 mbps.

25 pair 50 pin assemblies plug into many types of gear. Please specify when ordering what gear, if known, the connectorized ends will be plugging into to ensure the proper screws are included with the assembly.

Clearfield maintains a copper connectivity library for various manufacturing of active equipment and can provide assembly information specific to your connectivity needs.



Features and Benefits

Integrity

- Meets or exceeds EIA/TIA standards for data transmission
- Meets UL, CSA, and NEC standards
- RoHS and WEEE compliant
- 100% visually and mechanically inspected
- 100% electrically tested

Protection

- Custom lengths MP 10/15/15 to minimize cable pile up
- Optional PVC and Plenum jackets available

Access

- 90°, 120°, and 180° male and female interfaces available
- Octopus/Hydra assemblies available

Investment

- MP 10/15/15
- Stock and custom serialization and labeling
- Custom pin outs available

Configured Part Numbers

1 2 3 4 5 6 7 8 9 A - XXXXM or XXXXF

1 Select Cable Type

- 1 = Cat 5, 25 pr, 24 ga, PVC
- 2 = Cat 3, 25 pr, 24 ga, PVC, BC
- 3 = Cat 1, 25 pr, 24 ga, PVC, TC
- 5 = Cat 3, 25 pr, 24 ga, plenum, shielded
- 6 = Cat 3, 25 pr, 24 ga, plenum
- 7 = Cat 1, 25pr, 24 ga, PVC, shielded
- 8 = Cat 5, 25 pr, 24 ga, PVC, shielded
- 9 = Cat 5e, 25 pr, 24 ga, PVC
- A = Cat 5e, 25 pr, 24 ga, plenum
- B = Cat 5e, 25 pr, 24 ga, plenum, shielded
- D = Cat 5, 25 pr, 24 ga, PVC, blue

2 Select Wiring Configuration

- 4 = 10 / 100 Base T
- 6 = Straight through
- 9 = Custom

3 7 Select Connectors *

- A = Cat 5, male, 180 deg
- B = Cat 5, male, 90 deg
- C = Cat 3, female, 180 deg
- D = Cat 5, female, 90 deg
- E = Cat 5, male, 110 deg
- F = Cat 3, male, 90 / 270 deg
- G = Cat 3, male, 180 degree
- H = Cat 3, female, 90 / 270
- I = Cat 3, male, 90 deg, shielded
- J = Cat 3, female, 90 deg, shielded
- K = Cat 5, Champ Sys 5, male, 90 / 270 deg
- Z = Blunt

4 8 Select Cable Exits **

- 1 = 1 - 26 exit
- 2 = 25 - 50 exit
- Z = Not required

6 A Select Screw Length ****

- 1 = Standard screw
- 2 = 1.00" screw
- 3 = 1.25" screw
- 4 = 1.50" screw
- 5 = 0.75" screw
- 6 = 0.425" screw
- 7 = 1.75" screw
- 8 = 0.875" screw
- B = Bail locks
- Z = Not required

5 9 Select Drain Wire ***

- 1 = Yes – need drain wire
- 0 = No – do not need drain wire
- Z = N / A

XXXXM or XXXF

- XXXXM = Length in meters
- XXXXF = Length in feet

* Cat 3 and Cat 5 connector notes:

Cat 5 female connectors only come in 90 degree. The cable exit for must be 25-50.

Cat 5 male connectors come in 90, 110 and 180 degree. The cable exit for the 90 degree must be 1-26. The 110 degree must be specified, 1-26 or 25-50.

Cat 3 male and female connectors mainly come in 90 and 180 degrees. Standard cable exit for male 90 degree is 1-26. For a male 270 degree cable the exit needs to be 25-50. Standard cable exit for female 90 degree is 25-50. For a female 270 degree cable the exit needs to be 1-26.

** Use option Z for 180 degree connectors. For additional cable exit details see above.

*** Drain are only required for shielded connectors. For non-shielded connectors use option Z

**** 25 pr / 50 pin assemblies plug into many types of gear. Please specify when order what gear, if known, the connectorized ends will be plugging into to ensure the proper screws are included with the assembly.

Copper

CAT5e and CAT6 Patch Cords



Application

Category 5e and 6 copper patch cords connect a variety of equipment interfaces in both carrier and private networks, as well as customer premise environments.

Description

These patch cords provide physical mated connections between components in 10BASE-T, 100BASE-T and 155 Mbps ATM networks. Clearfield® offers Category 5e and 6 copper patch cords with UTP cable and 8-conductor connectors manufactured to EIA/TIA standards.

Features and Benefits

Integrity

- Meets or exceeds EIA/TIA 568 B.2 MP 10/15/15
- RoHS and WEEE compliant
- ETL verified
- UL Listed
- 100% tested for continuity and performance

Protection

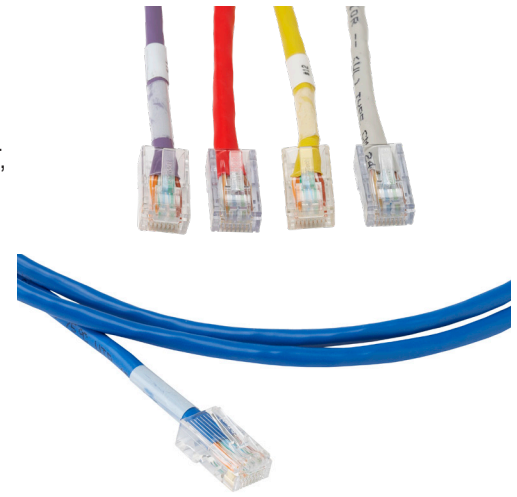
- Strain relief boots

Access

- Latch guards with easy thumb depression
- Nine stocked colors with custom configurations available

Investment

- Stock and custom serialization and labeling
- Stock and custom lengths available



Copper

CAT5e and CAT6 Patch Cords



Configured Part Numbers

CAT5e Patch Cords

C T 5 - - N T - XXXM or XXXF *

1 **2** **3** **4**

1 Select Cable Color

- 0 = Black (PVC)
- 1 = White (PVC)
- 2 = Purple (PVC)
- 4 = Red (PVC)
- 5 = Green (PVC)
- 6 = Blue (PVC)
- 7 = Gray (PVC)
- 8 = Orange (PVC)
- 9 = Yellow (PVC)
- A = Light gray (plenum)
- B = Dark gray (plenum)
- C = Black (plenum)
- D = White (plenum)
- E = Red (plenum)
- F = Yellow (plenum)
- G = Green (plenum)
- H = Blue (plenum)

2 3 Select Boot Colors

- 0 = Black
- 1 = White
- 2 = Purple
- 3 = Pink
- 4 = Red
- 5 = Green
- 6 = Blue
- 7 = Gray
- 8 = Orange
- 9 = Yellow
- N = No boot

4 Select Wiring Configuration

- 1 = 568A
- 3 = Crossover

XXXM or XXXF

XXXM = Length in meters
XXXF = Length in feet

* Standard patchcords use stranded, non-shielded cable.

CAT6 Patch Cords

C T 6 - - N T - XXXM or XXXF *

1 **2** **3** **4**

1 Select Cable Color

- 0 = Black (PVC)
- 1 = White (PVC)
- 2 = Purple (PVC)
- 4 = Red (PVC)
- 5 = Green (PVC)
- 6 = Blue (PVC)
- 7 = Gray (PVC)
- 8 = Orange (PVC)
- 9 = Yellow (PVC)
- A = Black (plenum)
- B = White (plenum)
- E = Red (plenum)
- F = Green (plenum)
- G = Blue (plenum)
- H = Light gray (plenum)
- K = Yellow (plenum)

2 3 Select Boot Colors

- 0 = Black
- 1 = White
- 2 = Purple
- 3 = Pink
- 4 = Red
- 5 = Green
- 6 = Blue
- 7 = Gray
- 8 = Orange
- 9 = Yellow
- N = No boot

4 Select Wiring Configuration

- 1 = 568A
- 3 = 568A crossover
- B = 568A – certified cat 6
- D = 568A crossover – certified cat 6

XXXM or XXXF

XXXM = Length in meters
XXXF = Length in feet

* Standard patchcords use stranded, non-shielded cable.