

APPLICATION NOTE

Technical Network Article Custom Copper & Fiber Optic Data Network Cable Assemblies

How do I Get a Custom Copper or Fiber Optic Data Network Cable Assembly?

- Q. How do I get the custom network cable assembly I need?
- A. Call the company that has designed over 4,000 custom cables, Electro Standards Laboratories.

Over 4,000 Custom Cable Designs In-House

Electro Standards Laboratories (ESL), Cranston, RI, has over 4,000 custom cable designs in-house. ESL provides hard-to-find cables, any cable length, and many configurations of copper and fiber optic cables. ESL manufactures MTP®/MPO fiber fan-out cables. Most likely, ESL has a design for the cable you need. If not, your cable design can be added to our massive data base.

Experienced Staff to Assist

ESL's friendly sales staff will talk to you about your requirements, whether it is fiber optic or copper cable. With over 30 years of experience, ESL's trained and experienced assemblers will carefully build the cable to your exact specifications. Your custom cable will be fully tested.

T-1 Copper Cable Information

ESL manufactures a wide variety of T-1 cables. T-1 cables allow you to connect your DSU/CSU to DDS lines. T-1 cables are available in both straight-through pinning or in cross-pinning and are terminated with either keyed or non-keyed RJ45 connectors on one or both ends. ESL will make the right cables, in custom lengths, for your high-speed T-1 connections.

RS-232 Copper Cable Information

The RS-232 Interface, which utilizes DB25 connectors, allows the transfer of data between a multitude of devices. RS-232 cables are made in a number of standard configurations or can be configured to meet your special applications. ESL has hundreds of RS-232 custom design cables on file. PVC cable jacketing is good for distances up to 50 feet. Extended distances can be achieved by using Low Capacitance jacketing. RS-232 cables are also available in fire resistant Plenum jacketing.

Manufacturer Compatible Cables

ESL sells manufacturer compatible cables. If you need it, ESL can make it. Call ESL with your manufacturer cable part number and ESL will custom-design the compatible cable.

Start Your Copper Custom Cable Design Process

Call ESL's sales team at 401-943-1164, or complete ESL's On-Line Custom Data Cable Form, or email: eslab@ ElectroStandards.com. You will be asked whether you need shielded, unshielded, PVC, or plenum cable material. Also, what cable length is required and if you need any adapters? You will be asked the type of cable required: paired, braid, locap, round, ribbon, or modular. If you don't know, that's OK. The ESL sales staff will assist with determining the best type for your application. What gender do you need for connector "A" and "B." ESL offers all connector types including: Telco, modular, coaxial, 50-Pin HSSI, 36-pin Centronics, IEEE-488, V.35, and SCSI 68. The ESL sales staff will discuss Connector "A" and "B" drain wires with you. You may also require male or female screw locks.



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Design Your Telco Test Kit Cables

ESL manufactures a complete line of telephone/telecom patch cables that are compatible with all standard telephone systems, data and voice test equipment, and patch/interconnect devices. ESL has combined everything into one convenient Test Kit. All of the cables are of the highest quality and manufactured in the U.S.A. Every cable in the kit is available in standard or custom lengths. If you need a custom cable for the kit, ESL will design and build it!

Start Your Fiber Optic Custom Cable Design Process

Fiber optic cables allow for near-unlimited bandwidth at extremely high speeds over long distances. Fiber cables are available in a number of different configurations. Single mode cables are capable of propagating a single wavelength of light in the fiber core. Multi-mode cables can propagate several wavelengths in the core simultaneously. Single-mode cables can carry data over longer distances without the garbling of data that can occur in multi-mode cables.

For fiber optic cables, you will be asked about the mode required, either multi-mode or single mode. ESL's terminated fiber cables feature ceramic connectors for low signal loss. The fire rating is also important, PVC riser or Plenum. Is your requirement measured in feet or meters? The ESL sales staff will discuss the fiber cable core size that is best for your application: $50/125\mu$ m, $62.5/125\mu$ m, $9/125\mu$ m, or another. You will also be asked the cable type that you require: duplex, simplex, breakout, distribution, or another. You will need to identify the gender you require for connector "A" and connector "B." ESL offers all types of connectors including: ST, SC, FC, FDDI, MTRJ, MTP®, MTP® 1 x 12 Ribbon, MTP® 2 x 12 Ribbon, MTP® 3 x 12 Ribbon, LC and others.

Complex Fiber Optic Cable Requirements

Complex cable requirements are no problem for ESL. This includes ultra high density fiber optic ribbon and trunk cables as well as custom octopus cables connecting data communication equipment with routers and bridges.

Fiber Optic MTP®/MPO Fan Out Cable Assemblies are a specialty of ESL. These cables feature 12 Fiber "Plug and Play." This system offers a MTP®/MPO connector for quick connection of 12 fibers. This assembly features 12 times the density of SC connectors. This high-quality assembly will be factory terminated and tested. Fiber optic MTP®/MPO fan out cable assemblies save duct space and installation time. Push/pull mating allows for quick installation. This system is offered in single-mode and multi-mode fiber. ESL's sales staff will walk you through your requirements.

ESL offers a Rack Mount Fiber Patch enclosure that accepts up to three cassettes and/or adapter plates. The enclosure consists of a 1.75" H x 19.0" W x 12" D tray with a hinged cover, mounting brackets, small and large cable glands, cable management spiders, OFN cable saddles and front panel latches. This is excellent for use with 12-fiber MPO fiber optic cables and breakout cassettes. ESL provides a cassette that allows two 12-fiber MPO inputs to breakout to 24 LC outputs and a cassette that allows one 12-fiber MPO input to breakout to 12 SC outputs. ESL can provide everything to complete your fiber optic installation.

ESL supplies a High Density Fiber MTP® Commercial Conversion Kit for M28876 Military Fiber System. This system has the form, fit, and function compatible with M28876 Military Fiber Systems. The footprint fits existing panel cutouts for M28876. The amazing feature about this system is that it can be used without major documentation changes. This system designed by ESL offers 10X cost savings over M28876 systems. A major advantage of the ESL High Density Fiber MTP® Commercial Conversion Kit is its reduced weight. This system is ideal for Prototype Test Systems that do not experience extreme environments. ESL is able to ensure fast delivery because this system uses commercial components. This system offers flexible field installation with simple color coded tabs. This is a rugged system with crush proof trunk cables. This system is already used in critical industrial applications. You can be sure that ESL, the company who designed and developed this fiber optic cable system, can design your custom cable!

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Custom Cable Forms On-Line

ESL offers Custom Cable Forms On-Line. These forms will enable you to get a head start. You can just click on the ESL Website, www.ElectroStandards.com and click on our Custom Products icon. Select the Data Cable form for copper cable requirements or the Fiber Optic Cable form for your fiber needs. Complete the form to the best of your ability and submit. It's that easy! The ESL sales staff will contact you with questions and a quote will be provided promptly.

Conclusion

ESL provides high-quality custom data cables. ESL has the technical expertise to assist in determining the exact cable guaranteed to meet your specifications. ESL has been growing its business for over 30 years, attesting to its high quality products and competitive pricing structure. ESL continuously invests in training its employees and providing the right tools to get the job done, correctly and efficiently.

For further information on Electro Standards' custom data network cables, call 401-943-1164, eslab@ElectroStandards.com, or www.ElectroStandards.com.

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