



E₂O™

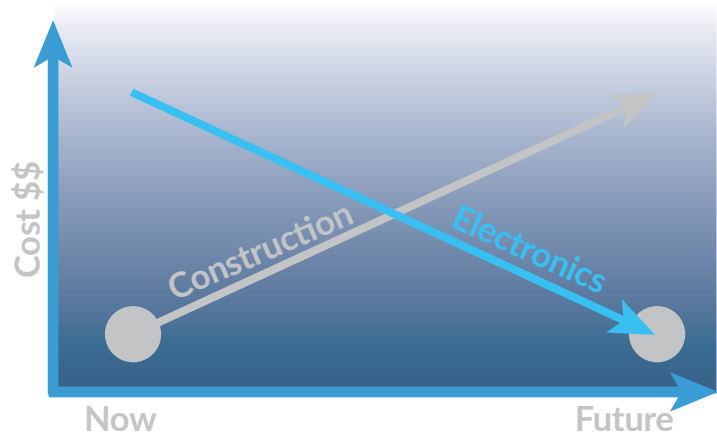
(Electrical to Optical) Cable Solutions Guide

The confidence of being prepared

For today's cable multisystem operator (MSO) there are few absolutes. Two things you can count on, however, are: the cost to upgrade your outside plant will be higher tomorrow than it is today; and, when it's time to upgrade, speed and efficiency mean dollars saved and service revenue.

"...as more MSOs seek to augment their residential services with others aimed at small and medium-sized businesses, they're finding these desirable new customers beyond the reach of their existing HFC plant. Therefore, many cable MSOs have begun to investigate fiber-based technology to enable MEF-compatible services to match those of their telco competitors."

"Fiber's a matter of business for cable MSOs," –
Lightwave, Jan. 2012

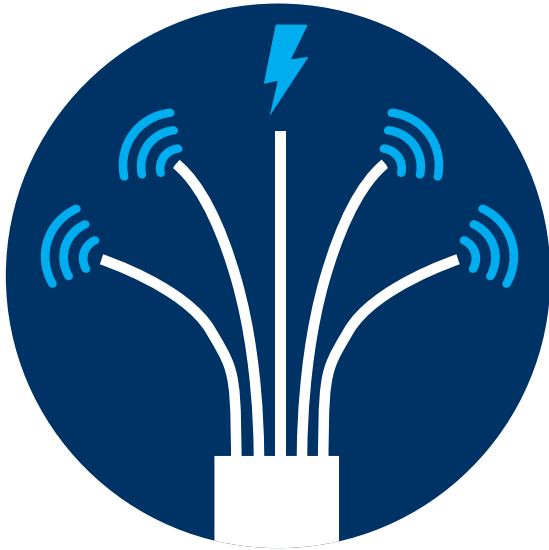


Maintaining an open migration path without jeopardizing your quality of service; being able to bring new services on line with minimum cost, downtime and impact—issues like these are what keep cable operators awake at night.

At CommScope, we support many of the largest tier-1 cable MSOs in the world. When it comes to ensuring their outside plant has the built-in flexibility and high performance they need, they trust our E₂O solution—and sleep just fine.

E₂O solutions—build for the future

CommScope's Electrical to Optical (E₂O) product line is a highly customizable solution that combines coaxial cable, optical fiber and/or microducts all inside a single ruggedized sheath. The flexible design enables you to build in the capacity and space you need to handle future upgrades with little to no associated installation costs.



With E₂O, you can:

- Create a complete FTTx solution with all coax and fiber components pre-installed, and bring individual conductors on line as your channel and bandwidth needs grow.
- Optimize node splits by utilizing E₂O to allow for future fiber extensions at minimized cost.
- Or build the capacity you need for the immediate future, reserving micro-ducts for additional fiber that can be blown in at any time, at a fraction of the cost of replacing your outside plant.

In other words: with E₂O, your next outside plant upgrade could be your last for a very long time.

Bring new services online in a fraction of the time

E₂O enables you to create an open migration path that can support the FTTx architectures emerging residential and commercial applications demand.

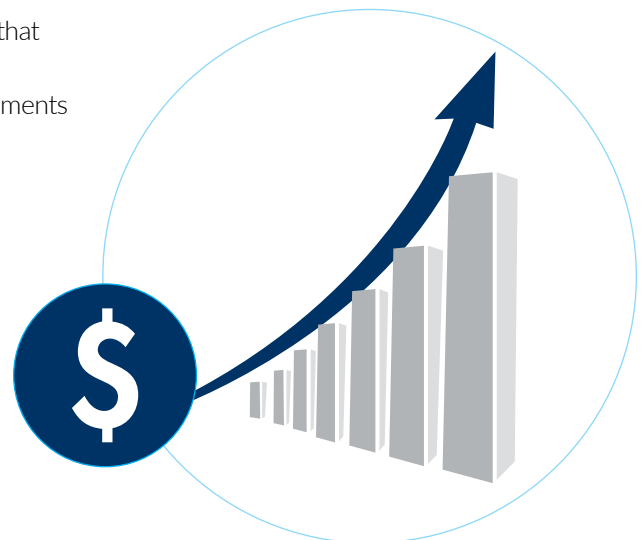


- EPON (ethernet passive optical network)
- RFoG (radio frequency over glass)
- EQAM (ethernet quadrature amplitude modulation)
- Metro and carrier ethernet

Best of all, E₂O gives you the ability to bring new services on line almost immediately and with little or no associated installation costs. So you generate additional revenue sooner with minimal down time and expense.

Leverage today's dollars against tomorrow's needs

At some point, upgrading your outside plant is a given. Whether that point is now or in several years, you want to be ready when your customers are. With E₂O, you can build in future capacity requirements now, instead of waiting until everything is more expensive.



What does your migration path look like?

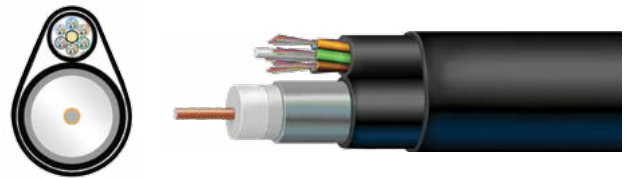
Coaxial with a reserved micro-duct

Blow in fiber when you're ready and at a fraction of the cost of adding a separate fiber network.



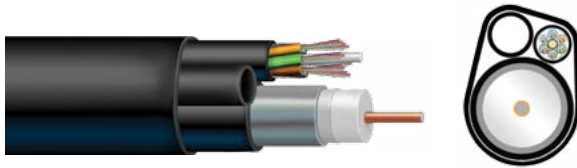
Coaxial with micro-fiber cable

With fiber already in place, simply splice it to the node when you're ready to bring it on line.



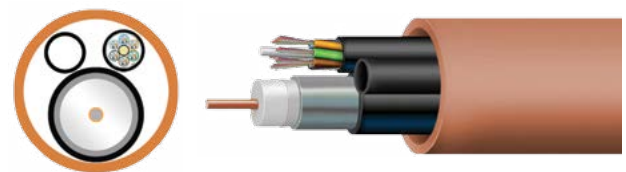
Coaxial, micro-fiber and reserved micro-duct

Provides additional fiber capacity that can be filled with blown-in fiber when needed.



Conduit with coax, micro-fiber and reserved micro-duct

Preinstalled in HDPE conduit for added physical protection



These are just a few of the many different configurations available with the E₂O family of solutions from CommScope. E₂O gives you the ability to include and combine:

- P3®, QR®, and MC2® distribution coaxial cable
- Distribution and drop fiber-optic cables
- Micro-duct for future micro-fiber blow-in
- Standard conduit
- Can be contained by single jacket or in larger conduit (CIC)

The connectivity professionals at CommScope will work with you to customize a solution that fits your needs and budget.

E₂O applications

Whether your network is coaxial only migrating to fiber or HFC and you're moving fiber closer to your subscribers, you'll save time and money by deploying E₂O from CommScope. For your coaxial network, E₂O virtually eliminates the cost of laying fiber on top of your existing coaxial cable and gives you the ability to grow on demand. For HFC networks, E₂O makes it easy to branch from any node to deliver new services to residential or commercial customers.

Custom-cut coaxial means no more wasted cable

E₂O also enables you to match the exact length of coaxial cable with the length of fiber you need. CommScope is the only manufacturer capable of producing your 75ohm cable to customized lengths to match your fiber. Upgrade to E₂O and buy only as much as you need—no more, no less—and get greater flexibility in designing your network as well.*

*Minimum order requirements or reel surcharges may apply for short custom lengths

Commercial customers

The design flexibility of E₂O enables you to quickly satisfy the varying demands of today's commercial customers and increase your revenue flow sooner than later.

- Branch off from your HFC plant to any commercial customer with E₂O pre-installed with coaxial cable and empty micro conduit. As the customer's bandwidth needs increase, fiber can be blown in quickly and cost effectively.
- Or run a fiber line and unused coaxial cable under the same sheath for customers who need high-speed data with the option to add video down the road.

E₂O also enables current HFC system networks to begin serving business customers quickly using just the coaxial part of the solution. Once a customer requires data rates higher than the HFC network can provide, the network is easily upgradeable to fiber.



Residential customers

E₂O makes it easier and less expensive to keep up with your ever-changing residential market. As key target areas develop, you'll be ready and able to support streaming media, home networks and other IP-based services that customers have come to expect.

Bringing new customers on line is as easy as splicing E₂O to the nearest HFC node. It's the optimal solution for node splits to service new subdivisions, apartments or other multidwelling units (MDUs). Once installed, you'll have all the capacity you'll need for years to come.



An end-to-end solution from the connectivity experts

The E₂O hybrid cable is a custom-designed solution engineered, manufactured and supported by the connectivity experts at CommScope. As an end-to-end solutions provider, CommScope engineers and qualifies all the components, cable and fiber. Nothing is left to chance.

A pioneer in signal transmission solutions for the cable industry, CommScope brings deep experience and global resources to bear on your toughest connectivity challenges.

For more information on E₂O, including product specifications, images and related materials, please visit [CommScope's eCatalog](#).

Everyone communicates. It's the essence of the human experience. *How* we communicate is evolving. Technology is reshaping the way we live, learn and thrive. The epicenter of this transformation is the network—our passion. Our experts are rethinking the purpose, role and usage of networks to help our customers increase bandwidth, expand capacity, enhance efficiency, speed deployment and simplify migration. From remote cell sites to massive sports arenas, from busy airports to state-of-the-art data centers—we provide the essential expertise and vital infrastructure your business needs to succeed. The world's most advanced networks rely on CommScope connectivity.



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Visit our website or contact your local CommScope representative for more information.

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