



# Coaxial solutions

Our history of innovation enables your future of growth

COMMSCOPE®



# Your coaxial network is more valuable than ever

Fiber grabs the headlines, but, day-in and day-out, your coaxial and hybrid fiber coaxial cable keeps producing. Good thing, because in the near future, it will need to do even more.

As bandwidth demands skyrocket, you'll need to extract additional capacity from your access network. As new services become available, deployment speed and quality of service will be key. New architectures will call for flexible solutions that are familiar to designers and field installers alike. Outside connected devices like power amps, nodes and 5G small cells will require reliable dc power up to 90v.

Coaxial cabling not only helps you transition to the next level of fiber-deep designs, it maximizes your existing investment. With DOCSIS 4.0 on the way, your network's coax cabling is more vital than ever. More valuable, too. At least part of that value is due to CommScope.

Today, wherever you find innovation that allows service providers to extend the life and value of their coaxial cable plant, you're almost sure to find CommScope.

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# 40+ years of continuous technology innovation

When it comes to using coaxial cabling to maximize your network's potential, few bring more experience, innovation and success than CommScope. For over 40 years, our coaxial and HFC solutions have powered many of the world's best networks. Our history helps lay the foundation for your future growth.

## 1978

### **P3 Design and Process for Coaxial Cable**

This proprietary method of producing a more robust, lower-loss coaxial cable enabled high-speed internet delivery to residences/buildings and soon became the industry standard worldwide. This development led to the industry's first foam FEP dielectrics.

## 1980

### **QR Cable**

Patented coaxial design featured a foam core, adhesive, thin wall aluminum outer shield and bonded jacket. The result? A trunk/distribution cable with superior reliability, flexibility and attenuation performance that could easily integrate with existing Outside Plant (OSP).

## 1996

### **Cable in Conduit (CIC)**

To help speed deployment and better protect outside plant buried cables, CommScope develops one of the first cable-in-conduit (CIC) solutions. The cabling is installed (either in the factory or the field) inside a high-density polyethylene (HDPE) continuous conduit for faster installation and better protection.

## 2004

### **Advanced Coring Technology (ACT)**

Advanced method for cleaner preparation of drop cables greatly reduced the time needed to core and connectorize the cable. A pre-coated, strippable center conductor shears away under the torsional forces when coring the cable, eliminating cable and connector damage exhibited when using traditional methods.

## 2008

### **XPRESSPREP®**

The inner and outer shielding foils are permanently bonded to the cable's dielectric and inner jacket. The result is a consistently repeatable, cost-efficient process for faster and cleaner cable preparation. XPRESSPREP® also improves shielding by preventing environmental stress and cracking of the foil layers.

## 2017

### **Electrical to Optical (E<sub>2</sub>O) Hybrid Cable**

Highly customizable, the E<sub>2</sub>O hybrid cable enables operators to combine coaxial cable, optical fiber and/or microducts all inside a single ruggedized sheath. The flexible design enables customers to build in the capacity and space you need to handle future upgrades with little to no associated installation costs.

1978 ..... 2000 ..... 2021

## 1978

### **450 MHz Cable**

The CommScope launch of our first 450 MHz coaxial cable helped to push the industry forward, enabling operators to provide up to 65 analog channels.

## 1994

### **Introduction of 1 GHz Coaxial Cable**

The development of the 1 GHz coaxial cable set the stage for the development of operator networks as we know them today. The expanded bandwidth enabled providers to offer up to 158 analog channels.

## 1999

### **Brightwire®**

CommScope introduces a unique dry anti-corrosion treatment that provides effective corrosion prevention without gels or floodants. Combined with XPRESSPREP® technology, Brightwire® drop cable lowers initial and long-term operational costs. The technology quickly becomes an industry standard.

## 2004

### **F50 Flexible Cable**

CommScope F50 flexible feeder cables enable operators to significantly reduce installation cost by using drop installers instead of distribution installers. The F50 cables also provide an important option for MDU applications requiring a low attenuation, high flexibility solution. Other F50 applications include marine docks where the F50's resiliency and flexibility tend to outperform traditional drop cables.

## 2012

### **Alternate Jacket**

As provider networks expand, rodent damage increases. CommScope develops an innovative cable jacket with nontoxic, food-grade additives that are extremely repulsive to the rodents' sense of taste and smell. The Alternate Jacket significantly reduces rodent damage and the associated repair costs.

## 2020

### **Cable Certification to 1.8 GHz**

CommScope increases in-house performance validation testing criteria, requiring all of our coaxial cable to be swept test for extended frequency operation up to 1.8 GHz. This helps ensure operators can leverage the latest advances in DOCSIS technology for years to come.

Our history helps lay the foundation for your future growth

# One provider. All the coax solutions you need

CommScope proven, innovative end-to-end solutions cover the entirety of your coaxial and HFC network—headend to home. Now, one trusted partner can provide all the cabling and active/passive components you need to maximize and optimize network performance, growth and efficiency. Certified to meet tomorrow's 3G specifications and designed to support next-gen architectures, our coax cabling and RF connectivity solutions are engineered and tested with your future in mind.

## The difference is in the details

### Hardline and drop cabling

Developed for low RF attenuation and easy integration with existing plant cable, our hardline and drop cables meet the increasing demands of your evolving network.



For trunk and distribution applications, the 75-ohm P3® and QR® coaxial cables are considered the industry's standard. Both use the CommScope patented Advanced Coring Technology™ that eliminates many of the issues caused by poor cleaning and cable prep practices. All CommScope P3® and QR® cables are manufactured and inspected to exceed the SCTE's DOCSIS® 3.1 extended frequency testing requirements.

CommScope drop cables feature XPRESSPREP® and Brightwire® technology for superior shielding and corrosion-resistant performance. Tested to 3 GHz and certified to 1.8 GHz (beyond DOCSIS 3.1 specifications), they provide a solid foundation for future growth.

### Passive devices

Our passive coaxial and RF devices provide the reliable, low-loss performance that keeps your customers happy and your maintenance costs low. Couplers, splitters and taps are manufactured to the highest standards to ensure that active components in the network function efficiently and effectively. The difference is in the details: soldering and sealing, insisting on non-ferric-based designs to prevent network interference such as passive intermodulation (PIM). With one of the broadest and deepest portfolios in the industry, we ensure you have the passive RF network components you need to seamlessly transition from 1.2 GHz to 1.8 GHz and beyond.



## Active components

When you need to distribute a clear signal to multiple locations within a single structure, CommScope subscriber amplifiers and components deliver excellent performance and reliability with ultra-low noise signal amplification.

Manufactured with an aluminum housing to dissipate heat more effectively, our innovative amps feature flat-end brass “F” ports and our four-sided center conductor contact design—ensuring the cleanest connection and the strongest possible signal.

- Meets or exceed all ANSI/SCTE requirements
- Excellent performance and reliability with ultra-low noise signal amplification
- Innovative positive tilt compensates for higher attenuation at higher frequencies

- Variety of housing options (all ports down, etc.)
- Lifeline passive VoIP designs
- MoCA-compatible designs
- NTSC and PAL mid-splits 6 kV surge protection



In addition, we also provide a full line of outside plant actives, including nodes and line extenders.

# now meets next

## HFC solutions

With DOCSIS 3.1 providing up to 10 Gbps downstream and 1Gbps upstream, network operators have just begun to tap its potential. The HFC network is the bridge that enables operators to leverage the optical potential of DOCSIS 3.1 while maximizing the return on their legacy copper investment.

CommScope HFC cabling and connectivity solutions help operators transition strategically to next generation technologies and architectures:

- Extended spectrum 1.2 → 3 GHz
- Full Duplex DOCSIS
- Mid/high split
- DOCSIS 4.0
- Node splits/segmentations
- SDV

- Selective subscriber migration
- Fiber Deep

When you're ready to go all in—full IP, distributed access architecture, dynamic IP ad insertion, etc.—CommScope has everything you need to complete your migration without missing a beat.



*CommScope HFC cabling and connectivity solutions help operators transition strategically to the next generation.*

# Our tools and services take you further

Beyond cabling and components, CommScope has developed a broad spectrum of supporting services, tools and programs to help your network run smoother. The following are just a few of the many value-added opportunities available.



## WebTrack/cTrak



WebTrack/cTrak enables you to quickly and easily access a wide range of product information regarding any CommScope product. Have a question about a connector or component? Need to access the test results for a reel of cable? Simply open WebTrack (on your computer) to launch the cTrak app (mobile device) and scan the barcode or QR code, or type the serial number located on the product. The program automatically brings up the product information available:

- Certified test results
- Date of manufacture
- Sales order number
- Installation instructions
- And much more

## cCalc™



The CommScope cCalc™ app combines the most useful calculating tools for your enterprise network in one easy-to-use mobile app. Log measurements for multiple calculations, exchange projects between users, define and save your favorite configurations, and export data quickly and easily. It's all at your fingertips with cCalc™.

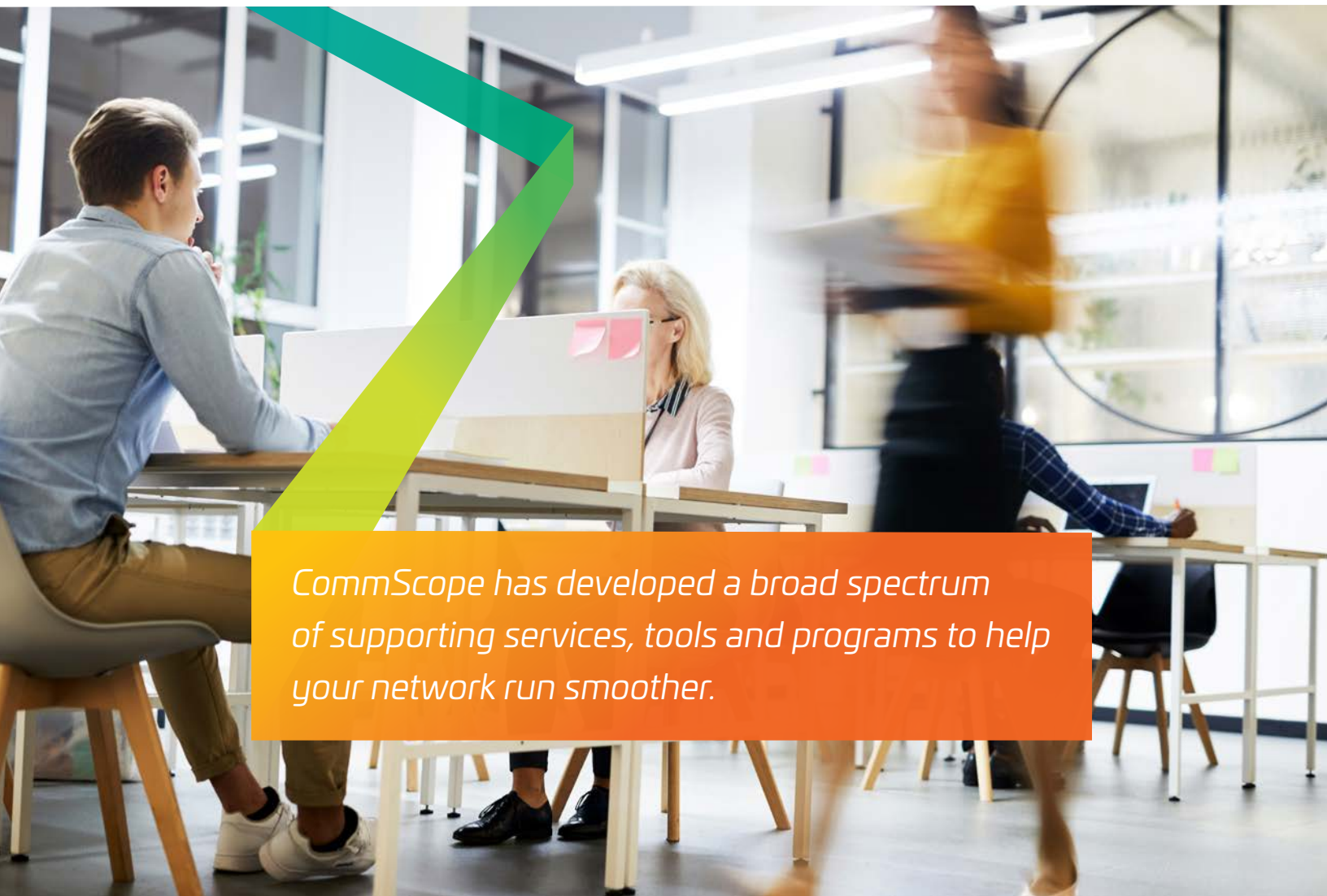
# Keep pace and make yourself indispensable

## CommScope Infrastructure Training Academy

Long regarded as the industry's gold standard for technical training, the CommScope Infrastructure Academy helps installers, technicians, engineers and integrators stay up-to-date and CommScope-certified on coax connectivity. Our flexible and globally available training platform features online classes—novice to expert—enabling participants to hone their skills while making the best use of their time and budget. The CommScope Infrastructure Academy forms the educational foundation for CommScope's global PartnerPRO™ Network. Since its inception, the academy has provided the training that enables network members to keep their skills razor-sharp and deliver the consistent value their customers expect.

## Broadband Applications and Construction Manual

The Drop Cable Applications and Construction Guide is written for the cable installation professional who, due to the diverse services offered by CATV and telecommunication service providers, needs a quick and handy reference to practical installation information, especially in the case of retrofitting. We've tried to simplify the decision-making process as to which cables to choose for what installation, taking into account factors such as performance over distance, preventing RF interference and fire/safety codes.



*CommScope has developed a broad spectrum of supporting services, tools and programs to help your network run smoother.*

# Our commitment

CommScope embraces its stewardship of the environment by seeking to protect the well-being of our employees, customers, suppliers, and communities. We strive to minimize the environmental impact of our business by developing products, services, and practices that are innovative, safe, and sustainable.

## Greenhouse gases, energy use, and consumption of resources

CommScope is committed to doing our part to reduce greenhouse gas emissions, energy consumption, and water usage. We have already surpassed our 2020 goal—a 65-percent reduction in 2008 CO<sub>2</sub>-equivalent output from manufacturing—by achieving a 77-percent decrease. We're also committed to reducing annual companywide consumption of energy and water by two percent. To achieve this goal, we champion innovative projects such as compressed air management, LED lighting replacements, material substitutions, motor management, and water reuse.

## Recycling and landfill diversion

Each year, CommScope manufacturing facilities, distribution centers, and offices recycle more than 50 million pounds of production materials through environmental initiatives like ReelSmart®. This innovative reel recycling program, available throughout North America, directly helps customers reduce their carbon footprint and waste stream. As customers exhaust their cable reels in the field, they contact CommScope. We coordinate to have the broken down empty reels shipped to a CommScope facility where they are refurbished and recycled in support of a circular economy.

The environmental benefits of the ReelSmart® program add up. Three recycled wooden reels save approximately one tree, eliminating about 600 lbs of waste from the landfill and saving customers three cubic feet of space in their cable yard. In the U.S. alone, CommScope recycles

at least 1,200 reels per year. Like so many of our services, the CommScope ReelSmart® reel recycling program is offered at no cost to our customers.

[Read more about our Reel Recycle Program.](#)



## Recognition and reporting

CommScope's ongoing commitment and strong focus on corporate social responsibility (CSR) and sustainability has been recognized for the past five years with a **Gold medal** rating by **EcoVadis**, a global leader in monitoring and benchmarking sustainability in global supply chains. Furthermore, 83 percent of our manufacturing facilities are ISO 14001:2015 certified.

The CommScope annual sustainability report follows the **Global Reporting Initiative (GRI) Standards** and provides information about our economic, environmental, and/or social impacts—positive or negative—toward our sustainable development goals. The report details our efforts to protect the environment, promote the health and safety of our workforce, and support the communities where we operate. The most recent report can be found at [commscope.com](https://www.commscope.com).

*CommScope strives to minimize its environmental impact by developing products, services, and practices that are innovative, safe, and sustainable.*





## It's our job to know what's next

As a leading global provider of network infrastructure solutions CommScope offers the hands-on experience and worldwide capabilities to keep your network ready for what's next. As an active participant within the key standards bodies, we understand where the technology is heading. We work hand in hand with organizations such as TIA and Ethernet Alliance to raise the bar of network technology. CommScope not only builds solutions to deliver peak performance—we also certify them.

Most importantly, we're always looking ahead, just over the horizon. So, you can count on us to deliver solutions that anticipate the demand for bandwidth without boundaries. Whether you're expanding your network's footprint or planning your next migration, look to CommScope for the technology and strategies that can help your network reach its full potential.

When you have questions, we provide answers; when you need inspiration, we supply the innovation; when you need us the most, we're at our best. Let us help you take your network into the future.

*CommScope offers the hands-on experience and worldwide capabilities to keep your network ready for what's next.*

CommScope pushes the boundaries of communications technology with game-changing ideas and ground-breaking discoveries that spark profound human achievement. We collaborate with our customers and partners to design, create and build the world's most advanced networks. It is our passion and commitment to identify the next opportunity and realize a better tomorrow. Discover more at [commscope.com](https://commscope.com).

**COMMSCOPE®**

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