



Headend Cable Products

- > QR Downlinks
- > Fiber Optics
- > Twisted Pair
- > Riser Cable

HEADEND CABLE PRODUCTS



Headend Cable

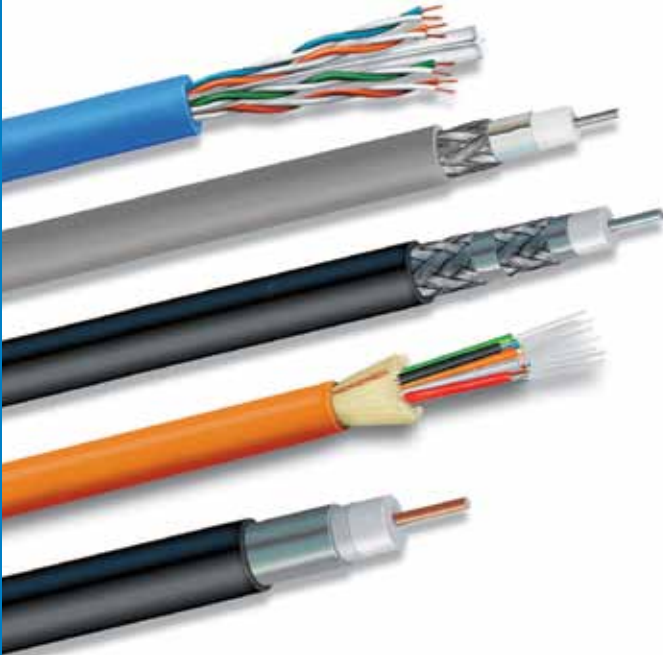
Product Overview	H3
Cable Construction	H4
CommScope Cable In Your Headend	H5
QR® Low-Loss Downlink Cable	
QR 320 Series.....	H7
QR 540 Series.....	H9
F59 Headend Interconnect Cable	
Headend Cable Products.....	H11
DS 3/4 Telephone Interconnect Cables.....	H12
Fiber Optic Cordage Cables	H13
Precision Video Cables.....	H14
Category UTP Cables	
UltraPipe™ Category 6e (plenum, riser & patch).....	H15
UltraMedia™ Category 6 (plenum and non-plenum).....	H17
DataPipe™ Category 5e.....	H19

Headend Consolidation/Interconnection

Cable networks will deliver much more than broadcast video. Advanced cable services such as high-speed data, telephony and on-demand content are a reality today, and will become increasingly popular in the future for consumer and business applications. These services are imperative to your competitive landscape as they provide a means for additional revenue growth and improved customer retention.

In many cases, you provide service to a wide variety of topographies ranging from densely populated urban settings to remote rural areas. In the past, there was no alternative to operating many autonomous headends. However, with the latest advancements in hardware, it makes economic sense to consolidate smaller properties and deliver content from one master headend to several smaller headends. As such, headends today are taking center stage as operational showcases.

Delivering more advanced services to consumers, cable performance and integrity are critical in the network, but aesthetics and the ease of identifying cables are important too. Along with cable identification, inventory management is simplified when you specify CommScope cable for your headend.



QR® Low-Loss Downlink Cable

Superior attenuation characteristics provide a longer downlink to headend connections. QR's continuously RF welded aluminum shield minimizes RF egress and ingress, and is craft-friendly.

Interconnect Signal Processing Equipment with F59 Headend Interconnect Cables

This quad-shielded product offers superior signal protection and is ideal for audio/video rack interconnection.

DS-3/4 Telephony Cable

Interconnect and cross-connect cables are designed to meet the requirements of small sizes while providing clear transmissions. DS-3 & 4 cables are available in either plenum, non-plenum or with a halogen-free jacket.

Fiber Optic Cordage Cable for the Headend

Fiber optic riser and plenum rated cordage cables provide super low-loss interconnections throughout video/audio/data systems. All fiber optic products are engineered to facilitate handling, stripping and termination.

Precision Video Cable

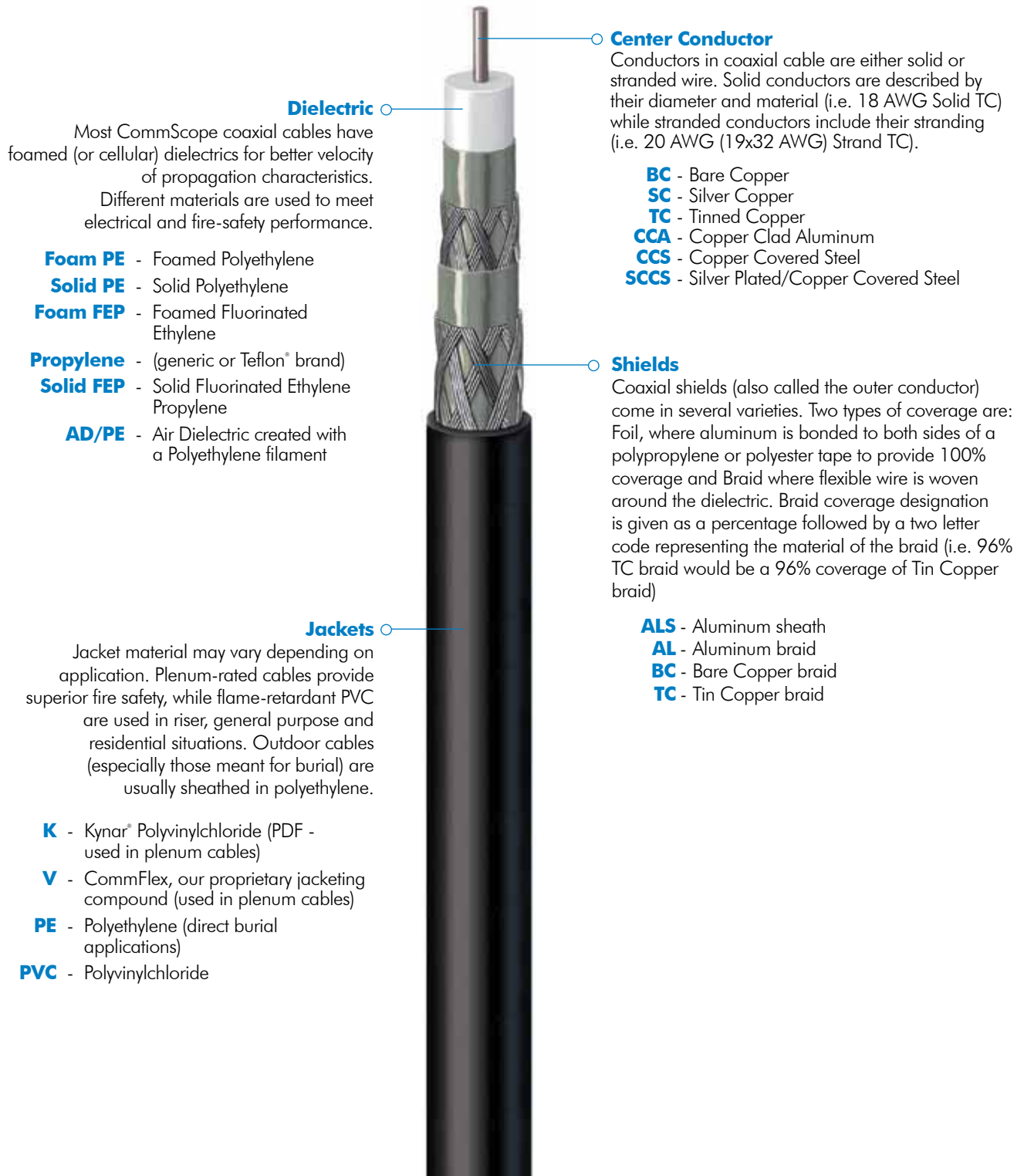
These professional-grade cables are engineered for critical digital and audio applications. With high bandwidth and low-loss, CommScope's Precision Video Cables are perfect for the exacting signal requirements of HDTV, High Speed Data, and Digital Video. A high level of shielding prevents unwanted signal interference and preserves signal clarity even over long distances.

Category Cables Meet the Demands of High Speed, Full Duplex Data Networks

Unshielded twisted pair (UTP) cable offered by CommScope includes premium designs to meet existing and proposed standards for Category 5e, 6 and 6e cable. Specify CommFlex™ jacketing for better resistance to kinking and for improved pulling and handling, critical for media access applications.

CommScope's Broadband Resource Center™

This repository of experience, knowledge, services & tools is provided to CommScope customers to assist installers, technicians, engineers, designers or managers of broadband service providers. Tools in various media and formats include: SpanMaster software for cable sag & tension calculations; center conductor sizing guides; attenuation slide rules; & call center spec assistance & review. Call us at 1-866-333-3BRC (3272) or e-mail brc@commscope.com for answers to product questions or issues related to any CommScope broadband product.



Dielectric

Most CommScope coaxial cables have foamed (or cellular) dielectrics for better velocity of propagation characteristics. Different materials are used to meet electrical and fire-safety performance.

- Foam PE** - Foamed Polyethylene
- Solid PE** - Solid Polyethylene
- Foam FEP** - Foamed Fluorinated Ethylene
- Propylene** - (generic or Teflon® brand)
- Solid FEP** - Solid Fluorinated Ethylene Propylene
- AD/PE** - Air Dielectric created with a Polyethylene filament

Jackets

Jacket material may vary depending on application. Plenum-rated cables provide superior fire safety, while flame-retardant PVC are used in riser, general purpose and residential situations. Outdoor cables (especially those meant for burial) are usually sheathed in polyethylene.

- K** - Kynar® Polyvinylchloride (PDF - used in plenum cables)
- V** - CommFlex, our proprietary jacketing compound (used in plenum cables)
- PE** - Polyethylene (direct burial applications)
- PVC** - Polyvinylchloride

Center Conductor

Conductors in coaxial cable are either solid or stranded wire. Solid conductors are described by their diameter and material (i.e. 18 AWG Solid TC) while stranded conductors include their stranding (i.e. 20 AWG (19x32 AWG) Strand TC).

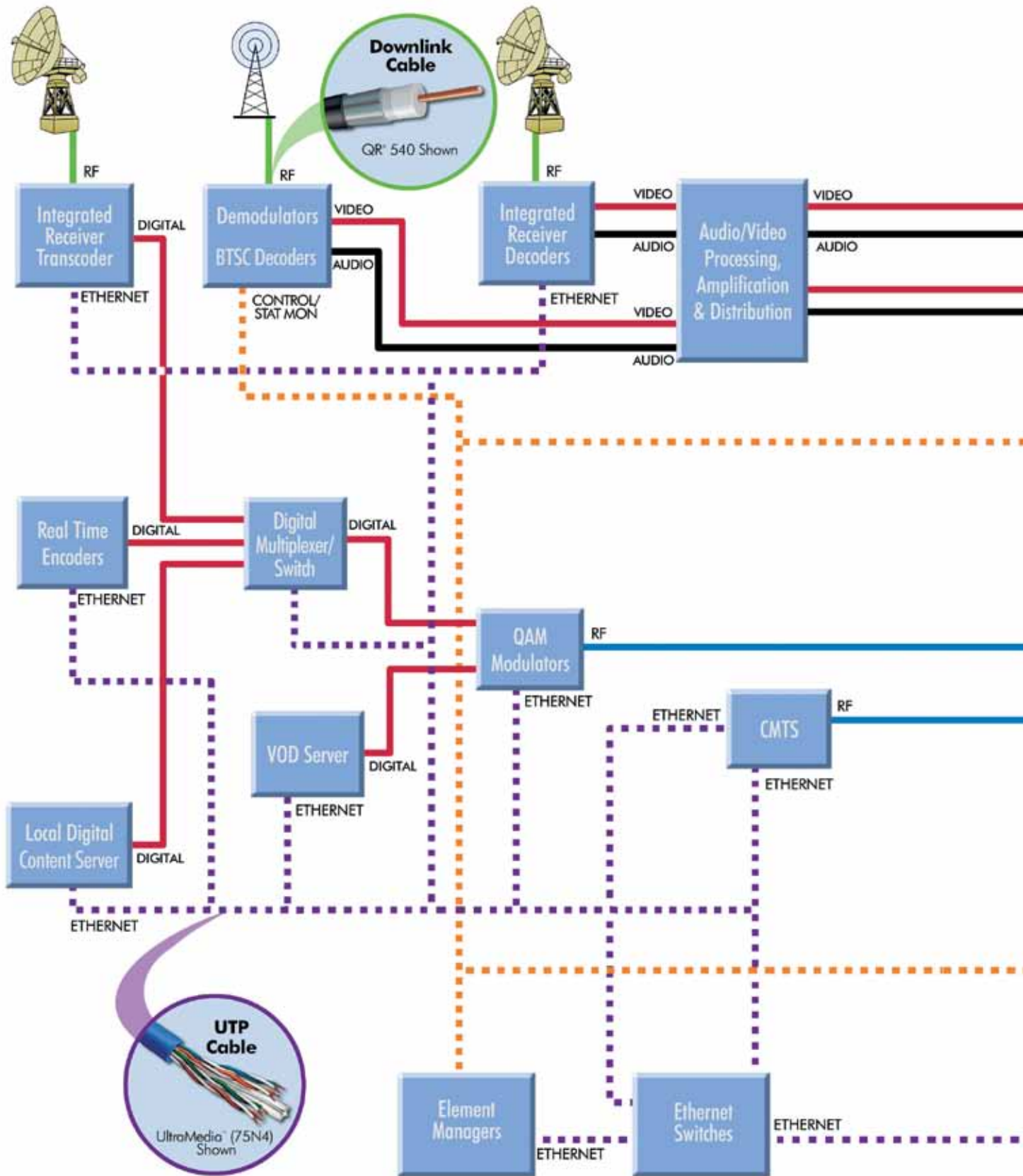
- BC** - Bare Copper
- SC** - Silver Copper
- TC** - Tinned Copper
- CCA** - Copper Clad Aluminum
- CCS** - Copper Covered Steel
- SCCS** - Silver Plated/Copper Covered Steel

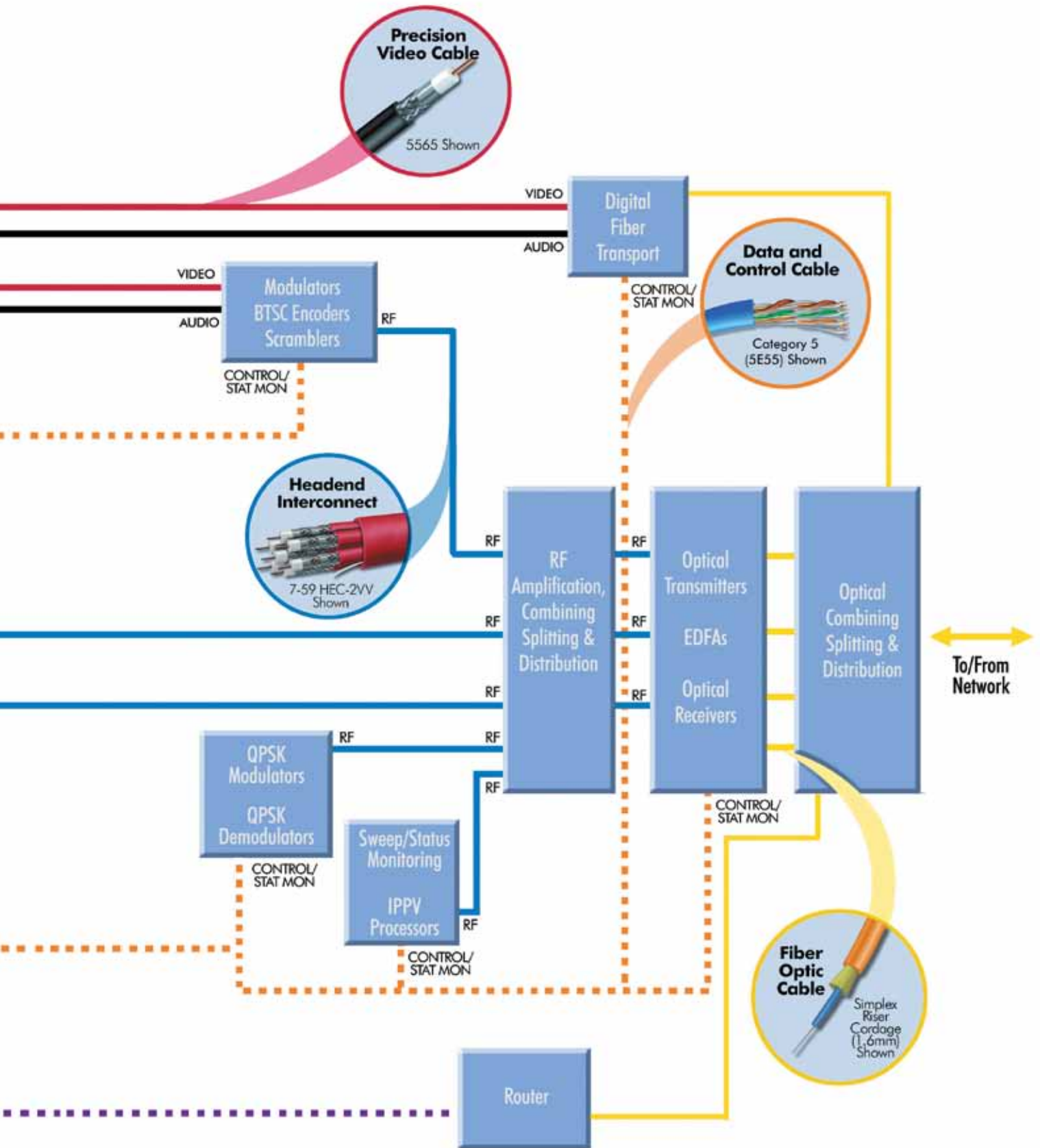
Shields

Coaxial shields (also called the outer conductor) come in several varieties. Two types of coverage are: Foil, where aluminum is bonded to both sides of a polypropylene or polyester tape to provide 100% coverage and Braid where flexible wire is woven around the dielectric. Braid coverage designation is given as a percentage followed by a two letter code representing the material of the braid (i.e. 96% TC braid would be a 96% coverage of Tin Copper braid)

- ALS** - Aluminum sheath
- AL** - Aluminum braid
- BC** - Bare Copper braid
- TC** - Tin Copper braid

Teflon is a registered trademark of E.I. DuPont de Nemours and Co.





QR® 320 Low-Loss Downlink Cables




Very Low Attenuation Antenna/Headend Connections

CommScope's patented QR® coaxial cable was developed to meet the increasing demands of tomorrow's broadband networks. QR has the highest reliability and flexibility of any Trunk and Distribution coaxial cable, low RF attenuation and an unprecedented 10 year warranty.

All QR cable products offer tough polyethylene jackets and a standardized, environmentally sealed connector interface engineered for reliability and craft friendliness.

Standard QR Construction

A precision aluminum strip is formed and continuously RF welded around a high compression micro-cellular foam dielectric core, minimizing RF egress and ingress, and the rigidity common in traditional coaxial products. The shield is fully bonded to the dielectric core, as is the copper clad aluminum center conductor. A tough polyethylene jacket is applied standard, which enhances cable reliability and allows QR's unique connector technology to form an environmental seal.

Catalog Number	Description	Cable Weight	Shipping Weight	Standard Length*
QR 320 JCAR  CATVR	has a flame-retardant polyethylene jacket that meets NEC's CATVR rating	56 lbs/kft (83 kg/km)	72 lbs/kft (108 kg/km)	3700 ft (1128 m)
QR 320 JCA  for outdoor, aerial	offers all of QR's standard construction features	47 lbs/kft (70 kg/km)	63 lbs/kft (94 kg/km)	3700 ft (1128 m)
QR 320 JCASS  for underground	features CommScope's Migra-Heal® floodant that seals jacket damage to inhibit corrosion	47 lbs/kft (70 kg/km)	63 lbs/kft (94 kg/km)	3700 ft (1128 m)

*Longer (and shorter) lengths are available

Physical Dimensions

Component	Inches	mm
Nominal Center Conductor Diameter	0.071	1.80
Nominal Diameter Over Dielectric	0.294	7.47
Nominal Diameter Over Outer Conductor	0.320	8.13
Nominal Outer Conductor Thickness	0.013	0.34
Nominal Diameter Over Jacket	0.395	10.03
Nominal Jacket Wall Thickness	0.0375	0.89

Mechanical Characteristics

Minimum Bending Radius	2.0 in.	50.8 mm
Maximum Pulling Tension	120 lbs.	54.5 kg _f

Electrical Characteristics

Capacitance	15.3 ± 1.0 pf/ft	50 ± 3.0 nf/km
Impedance	75 ± 3 ohms	
Velocity of Propagation	87%	

Nominal D.C. Resistance @ 68°F (20°C)

Copper Clad		
Inner Conductor	3.28 ohms/1000 ft.	10.76 ohms/km
Outer Conductor	0.99 ohms/1000 ft.	3.25 ohms/km
Loop	4.27 ohms/1000 ft.	14.01 ohms/km

Attenuation [@ 68° F. (20° C.)]

Frequency (MHz)	(dB/100 ft)		(dB/100 m)	
	Nominal	Maximum	Nominal	Maximum
5	0.23	0.24	0.76	0.79
55	0.81	0.84	2.67	2.76
83	1.04	1.07	3.41	3.51
211	1.68	1.73	5.51	5.68
250	1.80	1.86	5.92	6.10
300	1.98	2.04	6.49	6.69
350	2.18	2.25	7.16	7.38
400	2.31	2.38	7.57	7.81
450	2.44	2.52	8.02	8.27
500	2.64	2.72	8.66	8.92
550	2.76	2.85	9.07	9.35
600	2.89	2.98	9.48	9.78
750	3.24	3.34	10.63	10.96
865	3.51	3.62	11.52	11.88
1000	3.77	3.89	12.38	12.76

Specifications are subject to change without notice.

QR® 540 Low-Loss Downlink Cables

Very Low Attenuation Antenna/Headend Connections




CommScope's patented QR® coaxial cable was developed to meet the increasing demands of tomorrow's broadband networks. QR has the highest reliability and flexibility of any coaxial cable, low RF attenuation and an unprecedented 10 year warranty.

All QR cable products offer tough polyethylene jackets and a standardized, environmentally sealed connector interface engineered for reliability and craft friendliness.

QR 540 is optimized for use in broadband feeder plants. QR 540 offers lower attenuation than larger traditional products, with unmatched flexibility, reliability and cost effectiveness.

Standard QR Construction

A precision aluminum strip is formed and continuously RF welded around a high compression micro-cellular foam dielectric core, minimizing RF egress and ingress, and the rigidity common in traditional coaxial products. The shield is fully bonded to the dielectric core, as is the copper clad aluminum center conductor. A tough polyethylene jacket is applied standard, which enhances cable reliability and allows QR's unique connector technology to form an environmental seal.

Catalog Number	Description	Cable Weight	Shipping Weight	Standard Length*
QR 540 JCAR  CATVR	has a flame-retardant polyethylene jacket that meets NEC 820 riser rating	106 lbs/kft (158 kg/km)	135 lbs/kft (201 kg/km)	3700 ft (1128 m)
QR 540 JCA  for outdoor, aerial	offers all of QR's standard construction features	91 lbs/kft (135 kg/km)	120 lbs/kft (179 kg/km)	3700 ft (1128 m)
QR 540 JCASS  for underground	features CommScope's Migra-Heal® floodant that seals jacket damage to inhibit corrosion	92 lbs/kft (137 kg/km)	120 lbs/kft (179 kg/km)	3700 ft (1128 m)

*Longer (and shorter) lengths are available

Physical Dimensions

Component	Inches	mm
Nominal Center Conductor Diameter	0.124	3.15
Nominal Diameter Over Dielectric	0.514	13.03
Nominal Diameter Over Outer Conductor	0.540	13.72
Nominal Outer Conductor Thickness	0.0135	0.343
Nominal Diameter Over Jacket	0.610	15.49
Nominal Jacket Wall Thickness	0.035	0.89

Mechanical Characteristics

Minimum Bending Radius	4.0 in.	10.2 cm
Maximum Pulling Tension	220 lbs.	100 kg _f

Electrical Characteristics

Capacitance	15.3 ± 1.0 pf/ft	50 ± 3.0 nf/km
Impedance	75 ± 2 ohms	
Velocity of Propagation	88%	

Nominal D.C. Resistance @ 68°F (20°C)

Copper Clad

Inner Conductor	1.02 ohms/1000 ft.	3.34 ohms/km
Outer Conductor	0.59 ohms/1000 ft.	1.94 ohms/km
Loop	1.61 ohms/1000 ft.	5.28 ohms/km

Attenuation [@ 68° F. (20° C.)]

Frequency (MHz)	(dB/100 ft)		(dB/100 m)	
	Nominal	Maximum	Nominal	Maximum
5	0.13	0.14	0.43	0.46
55	0.45	0.48	1.48	1.56
83	0.55	0.58	1.80	1.90
211	0.91	0.95	2.99	3.12
250	0.99	1.03	3.25	3.38
300	1.08	1.13	3.54	3.71
350	1.17	1.23	3.84	4.04
400	1.26	1.32	4.13	4.33
450	1.35	1.40	4.43	4.59
500	1.41	1.49	4.63	4.89
550	1.51	1.56	4.95	5.12
600	1.59	1.64	5.22	5.38
750	1.80	1.85	5.91	6.07
865	1.90	2.00	6.23	6.56
1000	2.10	2.17	6.89	7.12

Specifications are subject to change without notice.

F59 Headend Interconnect Cables

For Audio/Video Rack Interconnection

Application





- Interconnection of signal processing equipment

Features

- Quad-shielded for superior signal protection
- ETL-listed CATV

Testing

- All reels swept-test to 1000 MHz/test report attached to reel

Catalog Number Safety Rating	Conductor Size & Type Nom DCR kft/km	Dielectric Type Nom OD in/mm	Shields Type & Coverage Nom DCR kft/km	Jacket Type & Thickness in/mm	Cable Color & Dimensions in/mm	Nominal Capacitance		Nom Vel. of Prop.	Nom Imp. ohms	Maximum Attenuation		
						pF/ft	pF/m			MHz	dB/100ft	dB/100m
F59 HEC-2VV  ETL CATV	20 AWG Silver-plated copper covered steel 46.8Ω/151Ω	Foam PE .144/3.66	AL foil, 95% AL braid AL foil and 95% AL braid 0.99Ω/3.2Ω	FR PVC .028/.70	Various .270/6.9	16.2	53.1	85%	75	5	0.86	2.82
										55	2.05	6.73
										83	2.45	8.04
										187	3.60	11.81
										211	3.80	12.47
										250	4.10	13.45
										300	4.45	14.60
										350	4.80	15.75
										400	5.10	16.73
										450	5.40	17.72
										500	5.70	18.70
										550	5.95	19.52
										600	6.20	20.34
										750	6.97	22.87
F59 HEC-2VV XP  ETL CATV	20 AWG Silver-plated copper covered steel 46.8Ω/151Ω	Foam PE .144/3.66	AL foil, 95% AL braid 95% AL braid AL foil 0.99Ω/3.2Ω	FR PVC .028/.70	Various .270/6.9	16.2	53.1	85%	75	5	0.86	2.82
										55	2.05	6.73
										83	2.45	8.04
										187	3.60	11.81
										211	3.80	12.47
										250	4.10	13.45
										300	4.45	14.60
										350	4.80	15.75
										400	5.10	16.73
										450	5.40	17.72
										500	5.70	18.70
										550	5.95	19.52
										600	6.20	20.34
										750	6.97	22.87
F Mini HEC  ETL CATV	23 AWG copper covered steel 47.8Ω/154Ω	Foam PE .100/2.54	AL tape, 95% AL braid AL tape 64% AL braid .5Ω/3.2Ω	FR PVC CMR/CATVR .025/.64	Various .202/5.13	16.9	55.4	82%	75	5	1.00	3.28
										55	2.82	9.27
										211	5.30	17.39
										250	5.72	18.75
										270	5.94	19.49
										300	6.26	20.54
										330	6.56	21.52
										350	6.75	22.16
										400	7.25	23.79
										450	7.70	25.25
										500	8.11	26.60
										550	8.54	28.02
										600	8.92	29.28
										750	10.01	32.85
8-F59 HEC-2 VV Bundled Headend Cable 	20 AWG Silver-plated copper covered steel 46.8Ω/151Ω	Foam PE .144/3.66	AL foil 95% AL braid AL foil and 95% AL braid 0.99Ω/3.2Ω	FR PVC .270/6.86	Various** 1.06/26.90	16.2	53.1	85%	75	5	1.00	3.28
										55	2.82	9.27
										211	5.30	17.39
										250	5.72	18.75
										270	5.94	19.49
										300	6.26	20.54
										350	4.80	15.75
										400	5.10	16.73
										450	5.40	17.72
										500	5.70	18.70
										550	5.95	19.52
										600	6.20	20.34
										750	6.97	22.87
										865	7.52	24.67
Specifications are subject to change without notice.												

DS3/4 Telephony Interconnect Cables

Lucent 735A and 734D Equivalent (Other styles available)

Application



- Low-attenuation interconnection of telephony devices (multiplexers, crossconnects, etc.)

Features

- Small diameters and flexible construction save space and aid installation
- Meets Telcordia GR-139-CORE, NEC/CEC CMR riser safety requirements

Testing

- All reels swept and tested for continuity and dielectric strength

Catalog Number Safety Rating	Conductor Size & Type Nom DCR kft/km	Dielectric Type Nom OD in/mm	Shield Type & Coverage Nom DCR kft/km	Jacket Type & Nom. Thickness in/mm	Cable Color OD in/mm	Nominal Capacitance of		Nom Vel. ohms Prop.	Nom Imp. on reel	Nom Wt per kft	Nominal Attenuation		
						pF/ft	pF/m				MHz Signal	dB/ 100ft	dB/ 100m
734S1  NEC CMR CEC CMR	20 AWG Solid SC 11Ω/35.1Ω	Foam PE .148/3.76	AL foil and 80% TC braid 2.7Ω/8.8Ω Minimum SRL 30dB @ 15-90 MHz	PVC .024/.56	Gray .236/6.0	16.2	53.13	80%	75	33/15	1	0.25	0.82
											CEPT1	0.27	0.89
											CEPT2	0.49	1.61
											5	0.54	1.77
											10	0.76	2.49
											CEPT3	0.99	3.25
											DS3	1.15	3.77
											STS1	1.25	4.10
											50	1.75	5.74
											CEPT4	2.09	6.85
											STS3	2.22	7.28
											100	2.53	8.30
											DS4	3.03	9.94
											200	3.79	12.43
											73501  NEC CMR CEC CMR	26 AWG Solid SC 39.5Ω/130Ω	Foam PE .077/2.0
CEPT1	0.56	1.84											
CEPT2	1.00	3.28											
5	1.10	3.61											
10	1.50	4.92											
CEPT3	2.40	7.87											
DS3	2.70	8.86											
STS1	2.80	9.18											
50	3.40	11.15											
CEPT4	4.60	15.09											
STS3	4.80	15.74											
100	4.99	16.37											
DS4	6.20	20.33											
200	7.70	25.26											




Standard packaging is 1000 ft (±10%) reels
 Minimum order quantities may apply

Specifications are subject to change without notice.

Fiber Optic Cordage Cables

Riser-rated Cordage for Video, Audio and Data

- Meets critical NEC/CEC riser (OFNR) safety standards
- Simplex and zipcord cables available in a variety of sizes
- Heavy-duty simplex cables help absorb extra handling stresses when using proper installation techniques
- Designed for ease of handling and termination

Cable Type/Unit Size	Catalog Number	Outer Diameter inch/mm	Minimum Bend Radius		Maximum Tensile Load		Weight	
			Loaded inch/cm	Unloaded inch/cm	Short term lbs./ Newtons	Long term lbs./Newtons	lbs/ kft	kg/ km
 Simplex/1.6mm	R-ØØ1-SP-XY-F16ZZ	0.067/1.70	2.0/5.0	1.2/3.0	35/156	11/47	1.8	2.7
Simplex/2.0mm	R-ØØ1-SP-XY-F20ZZ	0.079/2.00	2.0/5.0	1.2/3.0	50/222	15/67	2.8	4.1
Simplex/2.5mm	R-ØØ1-SP-XY-F25ZZ	0.098/2.50	2.0/5.0	1.2/3.0	60/267	18/80	4.2	6.3
Simplex/2.9mm	R-ØØ1-SP-XY-F29ZZ	0.114/2.90	2.3/5.8	1.2/3.0	60/267	18/80	5.8	8.7
 Zipcord/1.6mm	R-ØØ2-ZC-XY-F16ZZ	0.067 x 0.138/ 1.70 x 3.50	2.0/5.0	1.2/3.0	70/311	21/93	3.7	5.5
Zipcord/2.0mm	R-ØØ2-ZC-XY-F20ZZ	0.079 x 0.161/ 2.00 x 4.10	2.0/5.0	1.2/3.0	80/356	24/107	5.4	8.0
Zipcord/2.5mm	R-ØØ2-ZC-XY-F25ZZ	0.098 x 0.201/ 2.50 x 5.10	2.0/5.0	1.2/3.0	90/400	27/120	8.5	12.6
Zipcord/2.9mm	R-ØØ2-ZC-XY-F29ZZ	0.114 x 0.232/ 2.90 x 5.90	2.3/5.8	1.2/3.0	90/400	27/120	11.7	17.4
 Interconnect /2.9mm	R-ØØ2-IC-XY-F29ZZ	0.114/2.90	2.3/5.8	1.2/3.0	70/311	21/93	4.7	7.0

Variables in the Catalog Number:

XXX = Total Fiber Count

XY = Fiber Grade

8W LightScope ZWP® Dispersion-Unshifted, Matched-Clad Singlemode Fiber

8M Matched-Clad Singlemode Fiber

8T LightScope NZD™ Non-Zero Dispersion-Shifted Singlemode Fiber

6F 62.5µm, FDDI Grade Multimode Fiber

5M LaserCore® 150, 50µm, Multimode Fiber

5L LaserCore® 300, 50µm, Multimode Fiber

5K LaserCore® 500, 50µm, Multimode Fiber

ZZ = Standard Jacket Color **YL** (Yellow - Singlemode Cable)

OR (Orange - Multimode or Composite Cable)

AQ (Aqua - LaserCore Cable)

Fiber Identification Colors: 1/Blue, 2/Orange

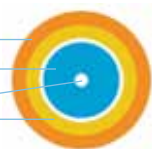
Riser Simplex Cable

Riser Rated Outer Jacket

900 µm Tight Buffer

250 µm Optical Fiber

Aramid Yarn



Riser Zipcord Cable

Riser Rated Outer Jacket

Aramid Yarn

900 µm Tight Buffer

250 µm Optical Fiber



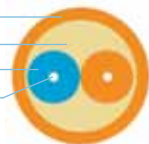
Riser 2-Fiber Interconnect Cable

Riser Rated Outer Jacket

Aramid Yarn

900 µm Tight Buffer

250 µm Optical Fiber



Mechanical Properties

Description	Specification	Test Method
Operating Temperature	-4° to 158°F (-20° to 70°C)	FOTP-3
Installation Temperature	-4° to 158°F (-20° to 70°C)	N/A
Storage Temperature	-40° to 158°F (-40° to 70°C)	N/A
Crush Resistance	Exceeds 57 lbf/in (10N/mm)	FOTP-41
Impact Resistance	Exceeds 0.54 lb-ft (0.74 N·m)	FOTP-25
Flexing	Exceeds 300 cycles	FOTP-104
Twist Bend	Exceeds	FOTP-85



CommScope Fiber Optic Premises Cables are qualified to the requirements of Telcordia GR-409-CORE, Issue 1

Specifications are subject to change without notice.

For more information, call Customer Service at 800.982.1708 or 828.324.2200 • Fax 828.328.3400 • custserv@commscope.com



Precision Video Cables

75Ω Coax Cable for Baseband Audio and Video Interconnection

Catalog Number Safety Rating	Conductor Size & Type Nom DCR kft/km	Dielectric Type Nom OD in/mm	Shields Type & Coverage Nom DCR kft/km	Jacket Type & Thickness in/mm	Cable Color & Dimensions in/mm	Nominal Capacitance		Nom Vel. of Prop.	Nom Imp. ohms	Nominal Attenuation		
						pF/ft	pF/m			MHz	dB/ 100ft	dB/ 100m
5565  NEC CMR CEC CMR	20 AWG Solid BC 10.5Ω/34.4Ω	Foam PE .144/3.66	AL foil and 90% TC braid 2.8Ω/9.18Ω	Flame- retardant PVC .030/.76	black .242/61	16.7	54.8	82%	75	1	0.31	1.03
										3.6	0.56	1.85
										10	0.90	2.95
										71.5	2.13	6.97
										135	2.81	9.23
										270	3.88	12.71
										360	4.56	14.97
										720	6.63	21.73
										1000	7.75	25.42
										5765  NEC CMR CEC CMR	18 AWG Solid BC 6.4Ω/21.0Ω	Foam PE .180/4.57
3.6	0.45	1.48										
10	0.72	2.36										
71.5	1.70	5.58										
135	2.25	7.38										
270	3.10	10.17										
360	3.65	11.97										
720	5.30	17.38										
1000	6.20	20.33										
1500	8.00	26.24										
2000	9.40	30.83										
2500	10.55	34.60										
3000	11.60	38.05										

Precision Video Cables

75Ω Miniature Coax Cable for HDTV, CMTS and Signal Distribution

Catalog Number Safety Rating	Conductor Size & Type Nom DCR kft/km	Dielectric Type Nom OD in/mm	Shields Type & Coverage Nom DCR kft/km	Jacket Type & Thickness in/mm	Cable Color & Dimensions in/mm	Nominal Capacitance		Nom Vel. of Prop.	Nom Imp. ohms	Nominal Attenuation		
						pF/ft	pF/m			MHz	dB/ 100ft	dB/ 100m
7538B Miniature Low-loss  NEC CMG(UL) CEC CMG(UL)	23 AWG Solid BC 20.3Ω/66.6Ω	Foam PE .100/2.54	AL foil and 95% TC braid 2.7Ω / 8.9Ω	Flame- retardant PVC .013/0.33	black, red or white 0.159/4.0	16.5	54.1	84%	75	1	0.38	1.24
										3.6	0.77	2.52
										10	1.29	4.23
										71.5	3.04	9.97
										135	4.18	13.71
										270	5.92	19.42
										360	6.70	21.98
										720	9.47	31.06
										1000	11.16	36.60
										1500	13.67	44.84
753808B HEC Miniature Low-loss  NEC CMG(UL) CEC CMR(UL)	23 AWG Solid BC 20.3Ω/66.6Ω	Foam PE .100/2.51	AL foil and 95% TC braid 2.7Ω / 8.9Ω	TPE .054/1.36	red or blue inner & outer jackets (blue shown) outer jacket 0.665/16.89	16.5	54.1	84%	75	Same as Above		
										Same as Above		
										Same as Above		
										Same as Above		
										Same as Above		
										Same as Above		
										Same as Above		
										Same as Above		
										Same as Above		
										Same as Above		

*HDTV version also available.

UltraPipe™ Category 6e 550MHz

Extended Bandwidth High Performance UTP Category 6e Cable

Highest Performance UTP Cable Available with Improved:

- Attenuation
- Crosstalk
- Return Loss



UltraPipe is the next evolution in Unshielded Twisted Pair (UTP). UltraPipe exceeds all Category 6 specifications and provides superior bandwidth performance up to 550MHz to support broadband video and high-speed, full-duplex transmission protocols.

UltraPipe offers a 60% improvement in signal strength by providing a 2db improvement in attenuation over proposed Category 6 cable. UltraPipe also offers a 300% improvement in PowerSum crosstalk performance, critical for Gigabit Ethernet networks. UltraPipe has a 25% improvement in return loss over proposed Category 6, maximizing cable balance and minimizing echo to improve overall channel performance.

CommScope proves this performance by individually testing every master reel of UltraPipe cable. We post test reports online via our unique WebTrak™ system, which allows you to review this data online at www.commscopewebtrak.com.

UltraPipe's patented design includes the revolutionary Isolator™ pair separator, which resolves NEXT and ELFEXT issues required for accurate transmission using all four pairs.

UltraPipe is an excellent Choice for Critical Network Applications.

Electrical Performance of UltraPipe

Frequency MHz	Attenuation (dB/100m)		Near End Crosstalk (dB)		ACR (dB) Min	PowerSum (dB)			ELFEXT (dB) Min	Return Loss (dB)	
	CommScope Max	EIA/TIA568 Category 6	CommScope Min	EIA/TIA568 Category 6		NEXT Min	ELFEXT Min	ACR Min		CommScope Min	EIA/ITA568 Category
1.0	2.0	2.0	81.3	74.3	79.3	78.3	70.8	76.3	74.8	23.0	20.0
4.0	3.7	3.8	72.3	65.3	68.6	69.3	58.8	65.5	62.8	23.6	23.0
8.0	5.2	5.3	67.8	60.8	62.6	64.8	52.7	57.5	56.7	25.4	24.5
10.0	5.8	6.0	66.3	59.3	60.5	63.3	50.8	57.4	54.8	26.0	25.0
16.0	7.3	7.6	63.2	56.2	55.9	60.3	46.7	52.8	50.7	26.0	25.0
20.0	8.2	8.5	61.8	54.8	53.6	58.8	44.8	50.5	48.8	26.0	25.0
25.0	9.2	9.5	60.3	53.3	51.2	57.3	42.8	48.0	46.8	25.5	24.3
31.25	10.3	10.7	58.9	51.9	48.6	55.9	40.9	45.4	44.9	25.0	23.6
62.5	14.8	15.4	54.4	47.4	39.6	51.4	34.9	36.5	38.9	23.5	21.5
100.0	19.0	19.8	51.3	44.3	32.3	48.3	30.8	29.3	34.8	23.0	20.1
155.0	24.1	25.2	48.4	41.4	24.4	45.5	27.0	21.5	31.0	21.6	18.8
200.0	27.7	29.0	46.8	39.8	19.1	43.8	24.8	16.4	28.8	21.0	18.0
250.0	31.3	32.8	45.3	38.3	14.0	42.3	22.8	11.5	26.8	18.3	17.3
350.0	37.8	NA	43.1	NA	5.3	40.2	19.9	3.2	23.9	17.3	NA
400.0	40.8	NA	42.3	NA	1.5	39.3	18.8	NA	22.8	16.9	NA
550.0	49.0	NA	40.2	NA	NA	37.2	16.0	NA	20.0	15.9	NA

Specifications are subject to change without notice.

UltraPipe™ Category 6e 550MHz

Extended Bandwidth High Performance UTP Category 6e Cable

Applications

- Broadband Video, Gigabit Ethernet, 155 Mb/s ATM, 100 Mb/s TP-PMD/CDDI and Fast Ethernet

Exceeds

- ANSI/TIA-568-B.2-1 Cat 6, CENELEC EN50173, ICEA S-90-661, NEMA WC 66-1999 Cat 6, NEMA Low-Loss Extended Frequency, AS/NZS 3085.1, ISO/IEC 11801 and TIA/EIA PN-4657


Features

- Patented design with Isolator™ pair separator for superior crosstalk performance
- Rugged design allows higher max pulling tensions
- Flexible jacket strips cleanly and resists kinking
- Coextruded color striped pairs for easy identification
- 1,000 to 0 footage markers every two feet (not available for outdoor cables)
- Larger gauge copper for low signal loss


Test Report

- Test reports available online at www.commscopewebtrak.com


Plenum

Catalog Number Safety Rating	No. of Pairs	Conductor Size and Material	Insulation Type & Thickness in / mm	Cable Jacket Material & Thickness in / mm	Cable Jacket OD and colors in / mm	Nominal Capacitance Pf/Ft	Input Impedance	Maximum DCR	Velocity of Propagation	Shipping Wt. in lbs. kft / km
6ECMP  ETL CMP/C(ETL)CMP	4	23 AWG Solid BC	3 prs: FEP .008/.20 1 pr: PE .008/.20	CommFlex .019/.48	.250/6.3 teal, pink, white, blue, yellow, and gray	14	100Ω ± 15%	20.3Ω/kft 6.7Ω/100m	71%	27.5/90

Non-Plenum

Catalog Number Safety Rating	No. of Pairs	Conductor Size and Material	Insulation Type & Thickness in / mm	Cable Jacket Material & Thickness in / mm	Cable Jacket OD and colors in / mm	Nominal Capacitance Pf/Ft	Input Impedance	Maximum DCR	Velocity of Propagation	Shipping Wt. in lbs. kft / km
6ECMR  ETL CMR/C(ETL)CMG	4	23 AWG Solid BC	PE .008/.20	FR-PVC .024/.61	.240/6.0 white, blue, yellow, teal, pink and gray	14	100Ω ± 15%	20.3Ω/kft 6.7Ω/100m	68%	25.6/84

Patch Cable Swept to 300 MHz

Catalog Number Safety Rating	No. of Pairs	Conductor Size and Material	Insulation Type & Thickness in / mm	Cable Jacket Material & Thickness in / mm	Cable Jacket OD and colors in / mm	Nominal Capacitance Pf/Ft	Input Impedance	Maximum DCR	Velocity of Propagation	Shipping Wt. in lbs. kft / km
6EJCM  ETL CM/C(ETL) CMG	4	24 AWG Stranded TC	PE .007/.19	CommFlex FR-PVC .020/.51	.230/5.8 white, blue, yellow, gray, and black	14	100Ω ± 15%	20.3Ω/kft 6.7Ω/100m	67%	20.0/66

Specifications are subject to change without notice.

UltraMedia™ Category 6e 400 MHz

Extended Bandwidth for High-Speed Voice/Video/Data Applications



CommScope's UltraMedia is the extended bandwidth cable that defines the new standard in UTP performance. UltraMedia's improved 400 MHz capability, unmatched ACR, PowerSum NEXT and precision balance make UltraMedia the best-performing Category 6+ UTP cable available.



Engineered specifically for high-speed, full-duplex, parallel transmission protocols that dominate new technologies, UltraMedia's patented design, which includes the revolutionary Isolator™ pair separator, resolves ELFEXT and balance issues required for accurate transmission using all four pairs. Exceeding both ANSI/TIA/EIA 568B.2-1 and ISO/IEC 11801 standards, UltraMedia is an excellent choice for critical network applications.

CommScope proves our Category cable performance by individually testing every master reel of UltraMedia cable. We post test reports online via our unique WebTrak™ system, which allows you to review this data online at www.commscopewebtrak.com.

Electrical Performance of UltraPipe

Parameter	UltraMedia Performance	% Improvement
Specified Frequency	400 MHz	60% improvement
Maximum Skew	≤25ns	300% improvement
PSUM ELFEXT & ELFEXT	1 dB vs. std. Cat 6	25% improvement
Capacitance Unbalance	58.2 pF ma @ 23°C	500% improvement
PSUM NEXT & NEXT	3 dB vs. std. Cat 6	25% improvement

Electrical Performance of UltraMedia vs. ANSI/TIA/EIA Category 6

Frequency MHz	Attenuation (dB/100m)		Near End Crosstalk (dB)		ACR (dB/100m) Min/Avg	PowerSum (dB)			ELFEXT (dB/100m) Min	Return Loss (dB)	
	CommScope Max	EIA/TIA568 Cat. 6	CommScope Min/Avg	EIA/TIA568 Cat.6		NEXT Min	ELFEXT Min	ACR Min		CommScope Min	EIA/ITA568 Cat.6
1.0	2.0	2.0	77.3/90	74.3	75.3/85	75.3	65.8	73.3	68.8	23.0	20.0
4.0	3.8	3.8	68.3/83	65.3	64.5/80	66.3	53.7	62.5	56.8	23.6	23.0
8.0	5.3	5.3	63.8/79	60.8	58.5/74	61.8	47.7	56.5	50.7	25.4	24.5
10.0	5.9	6.0	62.3/75	59.3	56.4/70	60.3	45.8	54.4	48.8	26.0	25.0
16.0	7.5	7.6	59.2/72	56.2	51.7/65	57.2	41.7	49.7	44.7	26.0	25.0
20.0	8.4	8.5	57.8/72	54.8	49.4/64	55.8	39.7	47.4	42.8	26.0	25.0
25.0	9.4	9.5	56.3/69	53.3	46.9/60	54.3	37.8	44.9	40.8	25.5	24.3
31.25	10.6	10.7	54.9/68	51.9	44.3/59	52.9	35.9	42.3	38.9	25.0	23.6
62.5	15.3	15.4	50.4/65	47.4	35.1/51	48.4	29.8	33.1	32.9	23.5	21.5
100.0	19.7	19.8	47.3/62	44.3	27.6/44	45.3	25.8	25.6	28.8	23.0	20.1
155.0	25.0	25.2	44.4/62	41.4	19.5/38	42.4	21.9	17.5	25.0	21.6	18.8
200.0	28.8	29.0	42.8/61	39.8	14.0/33	40.8	19.7	12.0	22.8	21.0	18.0
250.0	32.6	32.9	41.3/60	38.3	8.7/30	39.3	17.8	6.7	20.8	20.5	17.3
350.0	39.5		39.1/52		-0.4/20	37.1	14.9	-2.4	17.9	19.8	
400.0	42.7		38.3/52		-4.4/14	36.3	13.7	-6.4	16.8	16.9	

Specifications are subject to change without notice.

Applications

- Broadband Video, Gigabit Ethernet, 155 Mb/s ATM, 100 Mb/s TP-PMD/CDDI and Fast Ethernet

Exceeds/Meets

- CENELEC EN50173, ICEA S-90-661, ANSI/TIA/EIA 568-B.2-1 Category 6, NEMA WC 66-1999 Cat 6, NEMA Low-Loss Extended Frequency, AS/NZS 3085.1 and ISO/IEC 11801
- 3rd party verified to CommScope performances


Features

- Patented design with Isolator™ pair separator for superior bandwidth performance
- PSUM crosstalk compliant
- Flexible jacket strips cleanly and resists kinking
- Coextruded color striped pairs for easy identification
- 1,000 to 0 footage markers every two feet (not available for outdoor cables)


Test Report

- Test reports available online at www.commscopewebtrak.com

Plenum

Catalog Number Safety Rating	No. of Pairs	Conductor Size and Material	Insulation Type & Thickness in / mm	Cable Jacket Material & Thickness in / mm	Cable Jacket OD and colors in / mm	Nominal Capacitance Pf/Ft	Input Impedance	Maximum DCR	Velocity of Propagation	Shipping Wt. in lbs. kft / km
7504  ETL CMP/C(ETL)CMP	4	23 AWG Solid BC	3 prs: FEP .008/.20 1 pr: FSPE .008/.20	CommFlex .019/.48	.220/5.6 teal, pink, white, blue, yellow, and gray	14	100Ω ± 15%	20.3Ω/kft 6.7Ω/100m	71%	28/92

Non-Plenum

Catalog Number Safety Rating	No. of Pairs	Conductor Size and Material	Insulation Type & Thickness in / mm	Cable Jacket Material & Thickness in / mm	Cable Jacket OD and colors in / mm	Nominal Capacitance Pf/Ft	Input Impedance	Maximum DCR	Velocity of Propagation	Shipping Wt. in lbs. kft / km
75N4  ETL CMR/C(ETL)CMG	4	23 AWG Solid BC	PE .008/.20	FR-PVC .022/.6	.240/6.1 white, blue, teal, pink, yellow and gray	14	100Ω ± 15%	20.3Ω/kft 6.7Ω/100m	68%	26/85

Specifications are subject to change without notice.

DataPipe™ Category 5e 200 MHz

For ANSI/TIA/EIA 568B.2 Category 5e LANs



Taking Category 5e a step further, DataPipe is a 200 MHz cable developed for simultaneous bi-directional transmission over 4-pairs. Improvements to Category 5e were made and additional electrical requirements such as ISO/IEC 11801 input impedance were added. Typical applications include those of Category 5e and full duplex encoding schemes such as gigabit Ethernet. CommScope's Category 5e DataPipe cable features a CommFlex jacket to reduce friction during installation resulting in less strain on the twisted pairs.



CommScope proves our Category cable performance by individually testing every master reel of DataPipe cable. We post test reports online via our unique WebTrak™ system, which allows you to review this data online at www.commscopewebtrak.com.

Electrical Performance of DataPipe

Frequency MHz	Attenuation max dB/100m		Pair to Pair								PowerSum					
			NEXT dB min		ELFEXT dB/100m min		Return Loss dB min		ACR dB min		NEXT min dB		ELFEXT min dB/100m		ACR min dB	
	DataPipe	5EJ4	DataPipe	5EJ4	DataPipe	5EJ4	DataPipe	5EJ4	DataPipe	5EJ4	DataPipe	5EJ4	DataPipe	5EJ4	DataPipe	5EJ4
1.0	2.0	2.4	65.3	65.3	63.8	63.8	23.0	23.0	63.3	62.9	62.3	62.3	60.8	60.8	60.3	59.9
4.0	4.1	4.9	56.3	56.3	51.7	51.7	23.0	23.0	52.2	51.4	53.3	53.3	48.7	48.7	49.2	48.4
8.0	5.8	6.9	51.8	51.8	45.7	45.7	24.5	24.5	46.0	44.9	48.8	48.8	42.7	42.7	43.0	41.9
10.0	6.5	7.8	50.3	50.3	43.8	43.8	25.0	25.0	43.8	42.5	47.3	47.3	40.8	40.8	40.8	39.5
16.0	8.2	9.9	47.3	47.3	39.7	39.7	25.0	25.0	39.0	37.4	44.3	44.3	36.7	36.7	36.0	34.4
20.0	9.3	11.1	45.8	45.8	37.7	37.7	25.0	25.0	36.5	34.7	42.8	42.8	34.7	34.7	33.5	31.7
25.0	10.4	12.5	44.3	44.3	35.8	35.8	24.3	24.3	33.9	31.8	41.3	41.3	32.8	32.8	30.9	28.8
31.25	11.7	14.1	42.9	42.9	33.9	33.9	23.6	23.6	31.2	28.8	39.9	39.9	30.9	30.9	28.2	25.8
62.5	17.0	20.4	38.4	38.4	27.8	27.8	23.0	23.0	21.4	18.0	35.4	35.4	24.8	24.8	18.4	15.0
100.0	22.0	26.4	35.3	35.3	23.8	23.8	23.0	23.0	13.3	8.9	32.3	32.3	20.8	20.8	10.3	5.9
155.0	28.1	33.7	32.5	32.5	19.9	19.9	18.8	18.8	4.4		29.5	29.5	16.9	16.9	1.4	
200.0	32.4	38.9	30.8	30.8	17.7	17.7	18.0	18.0	-1.6		27.8	27.8	14.7	14.7	-4.6	

All tests include swept frequency measurements

Specifications are subject to change without notice.

Applications

- Gigabit Ethernet, 155 Mb/s ATM, 100 Mb/s TP-PMD/CDDI and Fast Ethernet

Exceeds

- ANSI/EIA 568B.2 Category 5e, ISO/IEC 11801, 3rd Party Verified to CommScope Performance Claims



Features

- PSUM crosstalk compliant
- Flexible jacket strips cleanly and resists kinking
- Coextruded color striped pairs for easy identification
- Performance specified to 200 MHz
- 1,000 to 0 footage markers every two feet (not available for outdoor cables)


Test Report

- Test report available online at www.commscopewebtrak.com.


Plenum

Catalog Number Safety Rating	No. of Pairs	Conductor Size and Material	Insulation Type & Thickness in / mm	Cable Jacket Material & Thickness in / mm	Cable Jacket OD and colors in / mm	Nominal Capacitance Pf/Ft	Input Impedance	Maximum DCR	Velocity of Propagation	Shipping Wt. in lbs. Kf / km
5E55  ETL CMP/C(ETL)CMP	4	24 AWG Solid BC	Foamed FEP .007/.18 FSPE .008/.20	CommFlex .016/.41	.175/4.45 white, blue, yellow, pink and gray	14	100Ω ± 15%	28.6Ω/kft 9.4Ω/100m	74%	21/68
5E40  ETL CMP/C(ETL)CMP	4	24 AWG Solid BC	FEP .007/.18	CommFlex .017/.43	.180/4.6 white, blue, pink, yellow, and gray	14	100Ω ± 15%	28.6Ω/kft 9.4Ω/100m	76%	21/68

Non-Plenum

Catalog Number Safety Rating	No. of Pairs	Conductor Size and Material	Insulation Type & Thickness in / mm	Cable Jacket Material & Thickness in / mm	Cable Jacket OD and colors in / mm	Nominal Capacitance Pf/Ft	Input Impedance	Maximum DCR	Velocity of Propagation	Shipping Wt. in lbs. Kf / km
5EN5  ETL CMR/C(ETL)CMG	4	24 AWG Solid BC	PE .008/.20	FR-PVC .022/.56	.200/5.0 white, blue, yellow, pink and gray	14	100Ω ± 15%	28.6Ω/kft 9.4Ω/100m	71%	21/68

Patch Cable

Catalog Number Safety Rating	No. of Pairs	Conductor Size and Material	Insulation Type & Thickness in / mm	Cable Jacket Material & Thickness in / mm	Cable Jacket OD and colors in / mm	Nominal Capacitance Pf/Ft	Input Impedance	Maximum DCR	Velocity of Propagation	Shipping Wt. in lbs. Kf / km
5EJ4  ETL CM/C(ETL) CMG	4	24 AWG Stranded TC	PE .008/.20	FR-PVC .020/.51	.218/5.5 white, blue, yellow, green, red, black, pink and gray	14	100Ω ± 15%	28.6Ω/kft 9.4Ω/100m	72%	20/66

Specifications are subject to change without notice.