

## QR® 540 Series Cables

### Product Descriptions



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.

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, eliminating RF leakage, 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.


### Aerial Installation

Catalog Number	Description	Cable Weight	Shipping Weight	Standard Length*
<b>QR 540 J CA</b> 	offers all of QR's standard construction features	91 lbs/kft (135 kg/km)	120 lbs/kft (179 kg/km)	3700 ft (1128 m)
<b>QR 540 J CAM109</b> 	has an integrated figure 8 galvanized solid steel messenger for self-supporting applications	132 lbs/kft (196 kg/km)	170 lbs/kft (253 kg/km)	3700 ft (1128 m)

### Underground Installation

Catalog Number	Description	Cable Weight	Shipping Weight	Standard Length*
<b>QR 540 JCASS</b> 	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)
<b>QR 540 2J(MA)CASS</b> 	offers twin polyethylene jackets separated with tough polypropylene tape for extra cut-through resistance	121 lbs/kft (180 kg/km)	170 lbs/kft (253 kg/km)	3700 ft (1128 m)
<b>QR 540 JACASS</b> 	features CommScope's Migra-Heal® floodant, a bonded, chrome-plated armor and twin polyethylene jackets for ultimate toughness	211 lbs/kft (314 kg/km)	260 lbs/kft (387 kg/km)	3700 ft (1128 m)

### Indoor/Riser Installation

Catalog Number	Description	Cable Weight	Shipping Weight	Standard Length*
<b>QR 540 J CAR</b> 	has a flame-retardant polyethylene jacket that meets NEC's CATVR rating	91 lbs/kft (135 kg/km)	126 lbs/kft (188 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

## Messenger Version

Diameter of Steel Messenger	0.109	2.77
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## Dual Jacket Version

Nominal Jacket Wall Thickness of Outer Jacket	0.043	1.09
Nominal Diameter Over Outer Jacket	0.700	17.78

## Armored Versions

Nominal Diameter Over Corrugated Armor	0.680	17.27
Nominal Armor Thickness	0.010	0.25
Nominal Diameter Over Outer Jacket	0.760	19.30
Nominal Thickness of Outer Jacket	0.040	1.02

## Mechanical Characteristics

Minimum Bending Radius:		
(Jacketed)	4.0 in.	10.2 cm
(Armored)	6.5 in.	16.5 cm
Maximum Pulling Tension	220 lbs.	100 kg <sub>f</sub>
Minimum Breaking Strength of Messenger	(109) 1,800 lbs.	816 kg <sub>f</sub>

## Electrical Characteristics

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

## Maximum D.C. Resistance @ 68°F (20°C)

<b>Copper Clad</b>		
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
30	0.34	0.34	1.12	1.12
45	0.41	0.41	1.35	1.35
50	0.43	0.44	1.41	1.44
55	0.45	0.47	1.48	1.54
83	0.55	0.58	1.80	1.90
108	0.63	0.66	2.07	2.17
150	0.74	0.79	2.43	2.59
181	0.84	0.88	2.76	2.89
193	0.87	0.90	2.85	2.95
211	0.91	0.95	2.99	3.12
220	0.93	0.98	3.05	3.22
250	0.99	1.03	3.25	3.38
270	1.03	1.07	3.38	3.51
300	1.08	1.13	3.54	3.71
325	1.13	1.18	3.71	3.87
350	1.17	1.23	3.84	4.03
375	1.22	1.27	4.00	4.17
400	1.26	1.32	4.13	4.33
425	1.30	1.37	4.27	4.49
450	1.35	1.40	4.44	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	5.23	5.38
750	1.80	1.85	5.92	6.07
865	1.90	2.00	6.23	6.56
1000	2.10	2.17	6.91	7.12

Specifications are subject to change without notice.