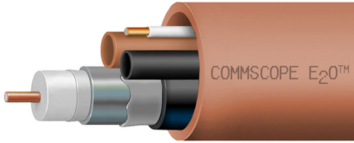


E#O® Coaxial/Microduct Hybrid Buried Cable



- E#O is a solution that enables service providers the ability to bridge HFC networks to FTTx. The E#O composite coaxial/fiber product line combines fiber, microducts, and coaxial cable preinstalled in conduit
- Serves businesses in a new commercial serving area
- Mitigates future cost of fiber installation
- Pre-installed in high density PE conduit for added physical protection
- One-step installation saves on construction cost
- Ideal for commercial data customers that also require video
- All products tested to industry standards
- *Product complies with the Build America, Buy America Act (BABAA) requirements of the Infrastructure Investment and Jobs Act of 2021 (Pub. L. 117- 58, §§ 70901-70953), or is the subject of a waiver approved by the Secretary of Commerce or designee. Compliance requirements and waiver applicability vary based on government funding program. Check the laws and regulations for your specific program.

Product Classification

Regional Availability	North America
Product Type	Coaxial fiber cable-in-conduit
Product Brand	E#O®
Government Funding	Build America Buy America (BABA) compliant*

General Specifications

Cable Series	QR 715
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Dimensions

Height	60.325 mm 2.375 in
Width	60.325 mm 2.375 in
Outer Jacket Thickness, nominal	4.724 mm 0.186 in

Material Specifications

Outer Jacket Material	High density polyethylene (HDPE)
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Mechanical Specifications

Minimum Bend Radius	660.4 mm 26 in
Pulling Tension, maximum	1,170.268 kg 2580 lb

Environmental Specifications

Environmental Space Buried

Packaging and Weights

Weight, gross 1,211.365 kg/km | 814 lb/kft

Regulatory Compliance/Certifications

Agency

ISO 9001:2015

Classification

Designed, manufactured and/or distributed under this quality management system



Included Products

359998100	-	ConQuest® Empty Conduit, 16 mm, SDR 11, terracotta
359998400	-	ConQuest® Empty Conduit, 16 mm, SDR 11, terracotta
360000000	-	ConQuest® Empty Conduit, 12.7 mm, black
360000013	-	ConQuest® Empty Conduit, 12.7 mm, black
5513592 QR® 715 JCASS	-	75 Ohm QR® Trunk and Distribution Cable, black PE jacket, flooded for underground
8220001	-	E#O® Coaxial/Microduct Hybrid Buried Cable PP Coated with Tone Wire
CX3799839 200T135 EMPTY DUCT COEX	-	ConQuest® Empty Conduit, 2 in, SDR 13.5, terracotta



ConQuest® Empty Conduit, 16 mm, SDR 11, terracotta

- *Product complies with the Build America, Buy America Act (BABAA) requirements of the Infrastructure Investment and Jobs Act of 2021 (Pub. L. 117- 58, §§ 70901-70953), or is the subject of a waiver approved by the Secretary of Commerce or designee. Compliance requirements and waiver applicability vary based on government funding program. Check the laws and regulations for your specific program.

Product Classification

Regional Availability	North America
Product Type	Empty conduit
Product Brand	ConQuest®
Government Funding	Build America Buy America (BABA) compliant*

General Specifications

Color	Terracotta
Conduit Type	Non-toneable
Density Test Method	ASTM D792A
Density, maximum	0.955 g/cm ³ 0.035 lb/in ³
Density, minimum	0.941 g/cm ³ 0.034 lb/in ³
Design Standard	ASTM D3350-05
Wall Type	Smooth

Dimensions

Length	1,828.8 m 6000 ft
Inner Diameter, nominal	12.725 mm 0.501 in
Outer Diameter, nominal	15.875 mm 0.625 in
Wall Thickness Designation	SDR 11
Wall Thickness, minimum	1.397 mm 0.055 in
Nominal Size	16 mm

Material Specifications

Flexural Modulus, minimum	551.581 N/mm ² 80000 psi
Flexural Property Test Method	ASTM D790

359998100

Hydrostatic Design Basis	Not pressure rated
Hydrostatic Design Test Method	ASTM D2837
Material Type	High density polyethylene (HDPE)
Melt Flow Rate Test Method	ASTM D1238
Melt Flow Rate, maximum	0.39 g/10 min

Mechanical Specifications

Minimum Bend Radius, unsupported	203.2 mm 8 in
Tensile Property Test Method	ASTM D638
Tensile Strength at yield, minimum	20.684 N/mm ² 3000 psi
Pulling Tension, maximum	95.254 kg 210 lb

Environmental Specifications

Environmental Stress Crack Resistance	Failure rate of 10% within 96 hours
Environmental Stress Test Method	ASTM D1693, ESCR Condition B

Packaging and Weights

Weight, net	68.456 kg/km 46 lb/kft
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Regulatory Compliance/Certifications

Agency	Classification
ISO 9001:2015	Designed, manufactured and/or distributed under this quality management system



* Footnotes

Environmental Stress Crack Resistance ESCR—Environmental Stress Crack Resistance

359998400



ConQuest® Empty Conduit, 16 mm, SDR 11, terracotta

Product Classification

Product Type	Empty conduit
Product Brand	ConQuest®

General Specifications

Color	Terracotta
Conduit Type	Non-toneable
Density Test Method	ASTM D792A
Density, maximum	0.955 g/cm ³ 0.035 lb/in ³
Density, minimum	0.941 g/cm ³ 0.034 lb/in ³
Design Standard	ASTM D3350-05
Wall Type	Smooth

Dimensions

Inner Diameter, nominal	12.725 mm 0.501 in
Outer Diameter, nominal	15.875 mm 0.625 in
Wall Thickness Designation	SDR 11
Wall Thickness, minimum	1.397 mm 0.055 in
Nominal Size	16 mm

Material Specifications

Flexural Modulus, minimum	551.581 N/mm ² 80000 psi
Flexural Property Test Method	ASTM D790
Hydrostatic Design Basis	Not pressure rated
Hydrostatic Design Test Method	ASTM D2837
Material Type	High density polyethylene (HDPE)
Melt Flow Rate Test Method	ASTM D1238
Melt Flow Rate, maximum	0.39 g/10 min

Mechanical Specifications

Minimum Bend Radius, unsupported	203.2 mm 8 in
Tensile Property Test Method	ASTM D638
Tensile Strength at yield, minimum	20.684 N/mm ² 3000 psi
Pulling Tension, maximum	95.254 kg 210 lb

Environmental Specifications

Environmental Stress Crack Resistance	Failure rate of 10% within 96 hours
Environmental Stress Test Method	ASTM D1693, ESCR Condition B

Packaging and Weights

Weight, net	68.456 kg/km 46 lb/kft
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Regulatory Compliance/Certifications

Agency	Classification
ISO 9001:2015	Designed, manufactured and/or distributed under this quality management system



* Footnotes

Environmental Stress Crack Resistance ESCR—Environmental Stress Crack Resistance

360000000



ConQuest® Empty Conduit, 12.7 mm, black

Product Classification

Product Type	Empty conduit
Product Brand	ConQuest®

General Specifications

Color	Black
Conduit Type	Non-toneable
Density Test Method	ASTM D792A
Density, maximum	0.955 g/cm ³ 0.035 lb/in ³
Density, minimum	0.941 g/cm ³ 0.034 lb/in ³
Design Standard	ASTM D3350-05
Wall Type	Smooth

Dimensions

Inner Diameter, nominal	10.008 mm 0.394 in
Outer Diameter, nominal	12.7 mm 0.5 in
Wall Thickness, minimum	1.346 mm 0.053 in
Nominal Size	12.7 mm

Material Specifications

Flexural Modulus, minimum	551.581 N/mm ² 80000 psi
Flexural Property Test Method	ASTM D790
Hydrostatic Design Basis	Not pressure rated
Hydrostatic Design Test Method	ASTM D2837
Material Type	High density polyethylene (HDPE)
Melt Flow Rate Test Method	ASTM D1238
Melt Flow Rate, maximum	0.39 g/10 min

360000000

Mechanical Specifications

Minimum Bend Radius, unsupported	152.4 mm 6 in
Tensile Property Test Method	ASTM D638
Tensile Strength at yield, minimum	20.684 N/mm ² 3000 psi
Pulling Tension, maximum	86.183 kg 190 lb

Environmental Specifications

Environmental Stress Crack Resistance	Failure rate of 10% within 96 hours
Environmental Stress Test Method	ASTM D1693, ESCR Condition B

Packaging and Weights

Weight, net	46.133 kg/km 31 lb/kft
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Regulatory Compliance/Certifications

Agency	Classification
ISO 9001:2015	Designed, manufactured and/or distributed under this quality management system



* Footnotes

Environmental Stress Crack Resistance ESCR—Environmental Stress Crack Resistance



ConQuest® Empty Conduit, 12.7 mm, black

- *Product complies with the Build America, Buy America Act (BABAA) requirements of the Infrastructure Investment and Jobs Act of 2021 (Pub. L. 117- 58, §§ 70901-70953), or is the subject of a waiver approved by the Secretary of Commerce or designee. Compliance requirements and waiver applicability vary based on government funding program. Check the laws and regulations for your specific program.

Product Classification

Regional Availability	North America
Product Type	Empty conduit
Product Brand	ConQuest®
Government Funding	Build America Buy America (BABA) compliant*

General Specifications

Color	Black
Conduit Type	Non-toneable
Density Test Method	ASTM D792A
Density, maximum	0.955 g/cm ³ 0.035 lb/in ³
Density, minimum	0.941 g/cm ³ 0.034 lb/in ³
Design Standard	ASTM D3350-05
Wall Type	Smooth

Dimensions

Inner Diameter, nominal	10.008 mm 0.394 in
Outer Diameter, nominal	12.7 mm 0.5 in
Wall Thickness, minimum	1.346 mm 0.053 in
Nominal Size	12.7 mm

Material Specifications

Flexural Modulus, minimum	551.581 N/mm ² 80000 psi
Flexural Property Test Method	ASTM D790
Hydrostatic Design Basis	Not pressure rated
Hydrostatic Design Test Method	ASTM D2837

360000013

Material Type	High density polyethylene (HDPE)
Melt Flow Rate Test Method	ASTM D1238
Melt Flow Rate, maximum	0.39 g/10 min

Mechanical Specifications

Minimum Bend Radius, unsupported	152.4 mm 6 in
Tensile Property Test Method	ASTM D638
Tensile Strength at yield, minimum	20.684 N/mm ² 3000 psi
Pulling Tension, maximum	86.183 kg 190 lb

Environmental Specifications

Environmental Stress Crack Resistance	Failure rate of 10% within 96 hours
Environmental Stress Test Method	ASTM D1693, ESCR Condition B

Packaging and Weights

Weight, net	46.133 kg/km 31 lb/kft
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Regulatory Compliance/Certifications

Agency	Classification
ISO 9001:2015	Designed, manufactured and/or distributed under this quality management system



* Footnotes

Environmental Stress Crack Resistance ESCR—Environmental Stress Crack Resistance

75 Ohm QR® Trunk and Distribution Cable, black PE jacket, flooded for underground



Product Classification

Product Type	Coaxial hardline cable
Product Brand	QR®

General Specifications

Cable Type	715 Series
Construction Type	Welded
Jacket Color	Black
Short Description	QR 715 JCASS SM PR997

Dimensions

Cable Length	914.4 m 3000 ft
Diameter Over Center Conductor, nominal	4.216 mm 0.166 in
Diameter Over Dielectric, nominal	17.424 mm 0.686 in
Diameter Over Jacket, nominal	19.939 mm 0.785 in
Diameter Over Outer Conductor, nominal	18.161 mm 0.715 in
Jacket Thickness, nominal	0.889 mm 0.035 in
Outer Conductor Thickness, nominal	0.368 mm 0.014 in

Electrical Specifications

Capacitance	50.197 pF/m 15.3 pF/ft
Capacitance Tolerance	±1.0 pF/ft
Characteristic Impedance	75 ohm
Characteristic Impedance Tolerance	±2 ohm
dc Resistance Note	Nominal values based on a standard condition of 20 °C (68 °F)

5513592 | QR® 715 JCASS

dc Resistance, Inner Conductor, nominal	1.903 ohms/km 0.58 ohms/kft
dc Resistance, Loop, nominal	3.281 ohms/km 1 ohms/kft
dc Resistance, Outer Conductor, nominal	1.378 ohms/km 0.42 ohms/kft
Jacket Spark Test Voltage	5000 Vac
Nominal Velocity of Propagation (NVP)	88 %
Operating Frequency Band	5–3000 MHz
Structural Return Loss	24 dB @ 1003–1218 MHz 24 dB @ 1219–1794 MHz 30 dB @ 5–1002 MHz
Structural Return Loss, Grade N	≥24 dB @ 1003–1218 MHz ≥24 dB @ 1219–1794 MHz ≥30 dB @ 5–1002 MHz

Attenuation

Frequency (MHz)	Attenuation (dB/100 m)	Attenuation (dB/100 ft)
5.0	0.36	0.11
55.0	1.21	0.37
85.0	1.51	0.46
204.0	2.4	0.73
211.0	2.43	0.74
250.0	2.66	0.81
300.0	2.92	0.89
350.0	3.18	0.97
400.0	3.44	1.05
450.0	3.67	1.12
500.0	3.9	1.19
550.0	4.1	1.25
600.0	4.3	1.31
750.0	4.89	1.49
865.0	5.31	1.62
1002.0	5.76	1.75
1218.0	6.43	1.96
1500.0	7.44	2.27
1794.0	8.3	2.53
1800.0	8.32	2.54
2000.0	8.88	2.71
2200.0	9.42	2.87

5513592 | QR® 715 JCASS

2500.0	10.21	3.11
2700.0	10.72	3.27
3000.0	11.46	3.49

Material Specifications

Center Conductor Material	Copper-clad aluminum
Dielectric Material	Foam PE
Jacket Material	PE
Outer Conductor Material	Aluminum

Mechanical Specifications

Pulling Tension, maximum	154.221 kg 340 lb
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Environmental Specifications

Corrosion Protection	Migraheal®
Environmental Space	Buried

Packaging and Weights

Packaging Type	Reel
Weight, gross	305.074 kg/km 205 lb/kft

Regulatory Compliance/Certifications

Agency	Classification
ISO 9001:2015	Designed, manufactured and/or distributed under this quality management system



E#O® Coaxial/Microduct Hybrid Buried Cable PP Coated with Tone Wire



- E#O is a solution that enables service providers the ability to bridge HFC networks to FTTx. The E#O composite coaxial/fiber product line combines fiber, microducts, and coaxial cable preinstalled in conduit
- Serves businesses in a new commercial serving area
- Mitigates future cost of fiber installation
- Pre-installed in high density PE conduit for added physical protection
- One-step installation saves on construction cost
- Ideal for commercial data customers that also require video
- All products tested to industry standards

Product Classification

Product Type	Coaxial fiber cable-in-conduit
Product Brand	E#O®

General Specifications

Conductor Elongation, maximum	1 %
Conductor Type	Solid
Insulation Elongation, minimum	200 %

Dimensions

Conductor Diameter	1.024 mm 0.04 in
Insulation Thickness, nominal	0.008 mm 0 in
Conductor Gauge	18 AWG

Electrical Specifications

Conductor Resistance	87.598 ohms/km 26.7 ohms/kft
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Material Specifications

Insulation Material Type	Polypropylene coated copper-clad steel wire
Outer Jacket Material	High density polyethylene (HDPE)

Mechanical Specifications

Conductor Tensile Strength, minimum	827.371 N/mm ² 120000 psi
Insulation Tensile Strength, minimum	31.026 N/mm ² 4500 psi

8220001

Environmental Specifications

Environmental Space

Buried

Regulatory Compliance/Certifications

Agency

ISO 9001:2015

Classification

Designed, manufactured and/or distributed under this quality management system





ConQuest® Empty Conduit, 2 in, SDR 13.5, terracotta

- *Product complies with the Build America, Buy America Act (BABAA) requirements of the Infrastructure Investment and Jobs Act of 2021 (Pub. L. 117- 58, §§ 70901-70953), or is the subject of a waiver approved by the Secretary of Commerce or designee. Compliance requirements and waiver applicability vary based on government funding program. Check the laws and regulations for your specific program.

Product Classification

Regional Availability	North America
Product Type	Empty conduit
Product Brand	ConQuest®
Government Funding	Build America Buy America (BABA) compliant*

General Specifications

Color	Terracotta
Conduit Type	Non-toneable
Density Test Method	ASTM D792A
Density, maximum	0.955 g/cm ³ 0.035 lb/in ³
Density, minimum	0.941 g/cm ³ 0.034 lb/in ³
Design Standard	ASTM D3350-05
Wall Type	Smooth

Dimensions

Length	762 m 2500 ft
Inner Diameter, nominal	50.876 mm 2.003 in
Outer Diameter, nominal	60.325 mm 2.375 in
Wall Thickness Designation	SDR 13.5
Wall Thickness, minimum	4.47 mm 0.176 in
Nominal Size	2 in

Material Specifications

Flexural Modulus, minimum	551.581 N/mm ² 80000 psi
Flexural Property Test Method	ASTM D790

CX3799839 | 200T135 EMPTY DUCT COEX

Hydrostatic Design Basis	Not pressure rated
Hydrostatic Design Test Method	ASTM D2837
Material Type	High density polyethylene (HDPE)
Melt Flow Rate Test Method	ASTM D1238
Melt Flow Rate, maximum	0.39 g/10 min

Mechanical Specifications

Minimum Bend Radius, unsupported	660.4 mm 26 in
Tensile Property Test Method	ASTM D638
Tensile Strength at yield, minimum	20.684 N/mm ² 3000 psi
Pulling Tension, maximum	1,170.268 kg 2580 lb

Environmental Specifications

Environmental Stress Crack Resistance	Failure rate of 10% within 96 hours
Environmental Stress Test Method	ASTM D1693, ESCR Condition B

Packaging and Weights

Weight, net	791.703 kg/km 532 lb/kft
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Regulatory Compliance/Certifications

Agency	Classification
ISO 9001:2015	Designed, manufactured and/or distributed under this quality management system



* Footnotes

Environmental Stress Crack Resistance ESCR—Environmental Stress Crack Resistance