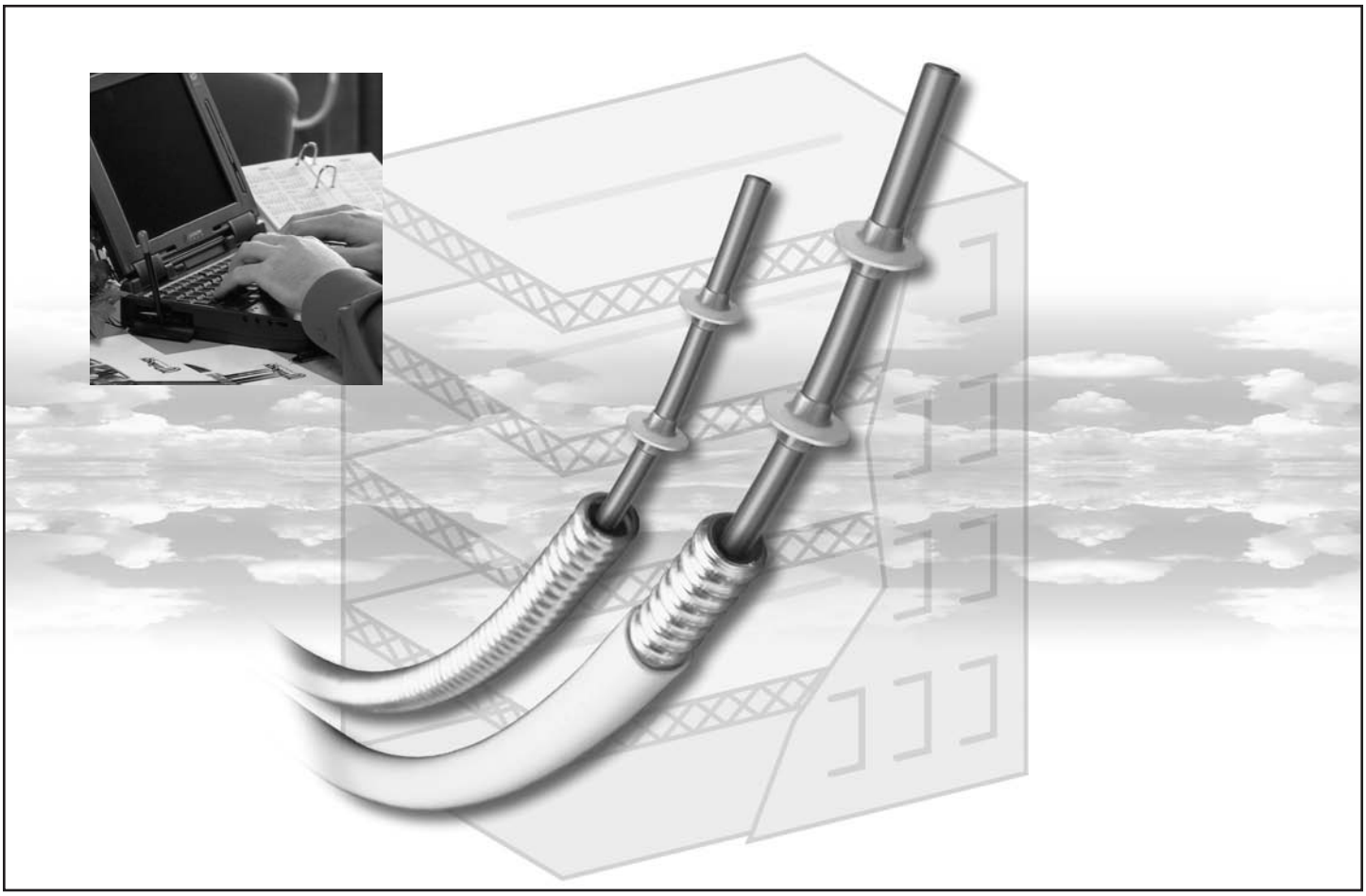
Table Of Contents



AirCell® PLENUM CABLES

Overview

Trilogy's AirCell® Plenum 50 and 75 Ohm coaxial cables provide the most effective solution to your networking applications. AirCell® Plenum cables are certified for use in plenum air spaces or other environments within buildings where stringent fire protection codes are in effect. Specific applications for these cables include LAN's and WAN's, wireless PBX's, cellular, PCS, and paging.

AirCell® Plenum cables utilize a superior air-dielectric construction. Because each has a unique dielectric disc and corrugated outer conductor design, AirCell® Plenum cables offer a lightweight combination of excellent flexibility and high crush strength, and unbeatable electrical performance. These attributes make AirCell® Plenum cables the product of choice for superior performance in hospitals, office buildings, malls, underground walkways, or any indoor area that needs to meet stringent fire codes.

Through innovative design and research, Trilogy has pioneered AirCell® Plenum coaxial cables to eliminate the use of Teflon, while retaining superior electrical performance. AirCell® Plenum cables exceed all of the requirements of the UL 910 Steiner Tunnel Test for smoke generation and flame propagation.

Trilogy's AirCell® Plenum cables are available in both radiating and non-radiating versions in 1/2" size with impedances of 50 Ohms or 75 Ohms.

Advantages of AirCell® Plenum Cables

Low attenuation

The patented air-dielectric design and 93% velocity of propagation in AirCell® Plenum cables result in low attenuation, which provides a highly efficient signal transfer in your RF system and maximum system performance.

Increased Flexibility

AirCell® Plenum cables are designed for the restricted areas of overhead plenums where multiple bends are required. Because AirCell® Plenum cables use a corrugated aluminum outer conductor to ensure excellent flexibility, installation of these cables is much easier. The AirCell® Plenum cable features a 5 inch bend radius and can endure multiple bends during installation without damaging the structure of the cable.

Superior Durability

AirCell® Plenum cables are longitudinally strong, crush resistant, and flexible. This rugged construction ensures that installations are trouble free and that in-service life and system reliability is maximized.

Ease of Connectorization

AirCell® Plenum cable connectorization is extremely simple, fast, and requires no soldering. The two-piece design of connectors for AirCell® Plenum cable can be easily attached in the field with standard hand tools. AirCell® connectors provide high resistance to connector pull-out and excellent electrical contact. Together, Trilogy's cables and connectors are an unbeatable match that optimize entire system performance.

Level of Fire Retardancy

AirCell® Plenum cables comply with Underwriters' Laboratories, Inc.'s (UL) and the National Electric Code's (NEC) most stringent fire retardancy requirements.

AirCell® Fire Retardancy Ratings		Applications
UL VW1/CMX	Vertical Wire Flame Test	For use in enclosed raceways, conduit and dwellings. Must be listed as flame retardant.
UL 1581/CATV	Vertical Tray Flame Test	General purpose except in risers and plenums. Must be listed as flame retardant.
UL 1666/CMR	Riser Cable Test	For use in vertical runs in a shaft or from floor to floor. Must be listed as flame retardant.
UL 910/CMP	Steiner Tunnel Test	This test is the highest level of fire retardancy in the National Electric Code. Therefore, cables meeting this requirement can also be used in the above lower level categories.
CSA C.22.2/FT6	Canadian Plenum Test	Canadian version of UL 910/CMP.

Premium Performance Cable

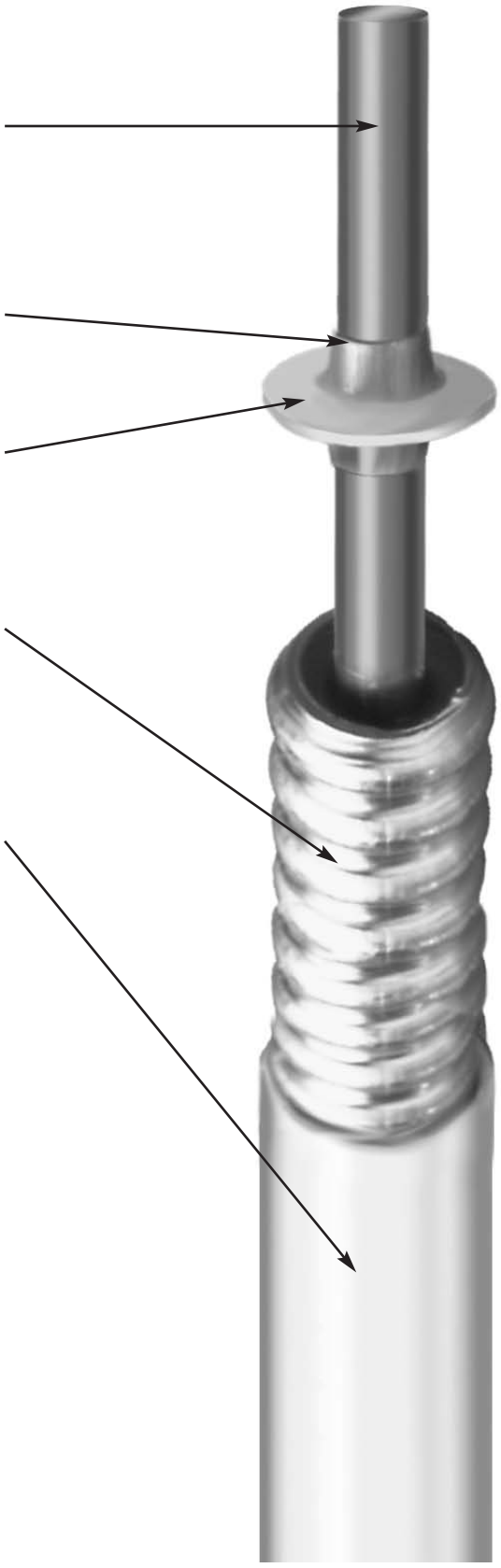
Center Conductor
The center conductor of the cable consists of a copper-clad electrical grade aluminum wire, nominal 10% copper by volume which conforms to ASTM B-566, class 10A. This lightweight conductor provides both high quality and strength.

Conductor Adhesive
The center conductor is coated with a proprietary adhesive that ensures the discs are securely bonded to the center conductor.

Dielectric Discs
The dielectric discs are injection molded from virgin polyethylene (ASTM D-1248). These discs are regularly spaced to provide structural integrity while minimizing attenuation.

Aluminum Outer Conductor
The outer conductor is a continuously formed corrugated and welded electrical grade aluminum tube. In-process monitoring assures weld integrity, maintains proper aluminum thickness, and corrects physical dimensions.

Jacket
The Jacket is composed of a highly flame retardant, low smoke material meeting the fire retardant provisions for plenum applications. Consequently, this cable is certified according to the test methods of UL 910 and the listing requirements of NEC 820-51 and NEC 820-53 (a) for CATVP cables. In addition, it exceeds FT6 provisions of the Canadian Electric Code.



AirCell®

PLENUM CABLE

Trilogy® COMMUNICATIONS INC.

Cable Specifications Summary

50 and 75 Ohm Plenum and Plenum Radiating, 1/2"

	Plenum			Plenum Radiating	
	50 Ohm	50 Ohm	75 Ohm	50 Ohm	50 Ohm
Outer Conductor	**Aluminum**	**Copper**	**Aluminum**	**Aluminum**	**Copper**
Jacketing	**Product Code**	**Product Code**	**Product Code**	**Product Code**	**Product Code**
Jacketed CMP (UL-910, UL-444), Canadian CSA 22.2/FT6	AP6012J50	APC012J50	AP012J75	AQ012J50	AQC012J50
Unjacketed UL-444	AP012U50	N/A	N/A	N/A	N/A
Characteristics					
Dia. Over Outer Conductor, in (mm)	0.540 (13.72)	0.540 (13.72)	0.540 (13.72)	0.540 (13.72)	0.540 (13.72)
Dia. Over Jacket, in (mm)	0.615 (15.62)	0.615 (15.62)	0.615 (15.62)	0.615 (15.62)	0.615 (15.62)
Cable Weight, lb/ft (kg/m)					
Jacketed	0.129 (0.192)	0.190 (0.280)	0.104 (0.155)	0.122 (0.181)	0.17 (0.25)
Unjacketed	0.082 (0.122)	N/A	N/A	N/A	N/A
Min. Bending Radius, in (mm)	5 (127)	5 (127)	5 (127)	5 (127)	5 (127)
Impedance, Ohms	50	50	75	50	50
Velocity of Propagation	94%	94%	95%	93%	96%
Maximum Frequency, GHz	10	10	12	10	10
Peak Power Rating, kW	35	40	35	35	40
Attenuation, dB/100 ft (dB/100 m)					
100 MHz	0.70 (2.30)	0.65 (2.13)	0.71 (2.32)	0.97 (3.19)	0.92 (3.01)
450 MHz	1.50 (4.92)	1.43 (4.69)	1.48 (4.87)	2.60 (8.52)	1.96 (6.42)
900 MHz	2.14 (7.02)	1.98 (6.49)	2.14 (7.01)	4.09 (13.40)	2.78 (9.13)
1000 MHz	2.30 (7.54)	2.10 (6.89)	2.26 (7.41)	4.27 (14.00)	2.94 (9.63)
1700 MHz	3.05 (10.00)	2.79 (9.15)	3.01(9.88)	5.66 (18.60)	3.85 (12.63)
2000 MHz	3.33 (10.92)	3.05 (10.00)	3.29 (10.80)	6.43 (21.10)	4.18 (13.72)
2300 MHz	3.59 (11.78)	3.33 (10.92)	3.52 (11.60)	7.12 (23.38)	4.49 (14.74)
2400 MHz	3.67 (12.04)	3.42 (11.22)	3.60 (11.80)	7.34 (24.10)	4.59 (15.07)
3000 MHz	4.14 (13.58)	3.83 (12.56)	4.03 (13.20)	8.82 (29.00)	5.15 (16.90)
Average Power/Coupling Loss	**Average Power Rating, kW**			**Coupling Loss, dB***	
100 MHz	3.98	4.82	1.97	49	55
450 MHz	1.85	2.21	0.94	61	63
900 MHz	1.29	1.55	0.66	63	65
1000 MHz	1.21	1.46	0.62	64	65
1700 MHz	0.98	1.10	0.46	65	66
2000 MHz	0.84	1.01	0.43	69	67
2300 MHz	0.78	0.94	0.40	70	68
2400 MHz	0.77	0.91	0.39	70	68

*** 50% Coupling Loss at standards 6ft (2m), ± 5 dB**

AirCell®

PLENUM CABLE

Trilogy® COMMUNICATIONS INC.

Cable Specifications

50 Ohm Plenum, 1/2" (6 GHz) – AP6012J50

Description	Product Number
Standard Cable	
1/2", Corrugated, (6 GHz), Jacketed CMP (UL-910, UL-444), Canadian CSA 22.2/FT6	AP6012J50
Physical Dimensions	
Center Dia., in (mm)	0.188 (4.78)
Dia. Over Dielectric, in (mm)	0.470 (11.94)
Dia. Over Outer Conductor, in (mm)	0.540 (13.72)
Dia. Over Jacket, in (mm)	0.615 (15.62)
Center Conductor	Copper-Clad Aluminum
Outer Conductor	Corrugated Aluminum
Jacket Color	Off-white
Electrical Characteristics	
Maximum Frequency, GHz	10
Peak Power Rating, KW	35
DC Res., Ohms/1000 ft (1000m)	
Center	0.46 (1.51)
Outer	0.51 (1.67)
DC Breakdown, kV	4
Capacitance, pF/ft (m)	22 (72.12)
Inductance, mH/ft (m)	0.057 (0.187)
Jacket Spark, kV RMS	8
VSWR min, (dB)	1.25 (19.0)
VSWR in-band, (dB)	1.13 (24.3)
Impedance, Ohms	50
Velocity of Propagation	94%
Mechanical Characteristics	
Min. Bend. Radius, in (mm) – Single	2 (50.8)
Min. Bend. Radius, in (mm) – Multiple	5 (127)
Cable Weight, lb/ft (kg/m)	0.129 (0.192)
Bending Moment, ft.lb (N·m)	1 (1.4)
Tensile Strength, lb (kg)	250 (114)
Flat Plate Crush, lb/in (kg/mm)	78 (1.39)
Number of Bends, minimum	15
Number of Bends, typical	25
Recommended Install Temp., °F (°C)	+5 to 194 (-15 to 90)
Recommended Storage Temp., °F (°C)	+5 to 194 (-15 to 90)
Recommended Operating Temp., °F (°C)	+5 to 194 (-15 to 90)

Attenuation and Average Power			
Frequency MHz	Attenuation dB/100 ft	dB/100m	Avg. Pwr. kW
100	0.70	2.30	3.98
450	1.50	4.92	1.85
500	1.59	5.22	1.75
600	1.75	5.74	1.58
700	1.87	6.13	1.47
800	1.96	6.43	1.37
900	2.14	7.02	1.29
960	2.23	7.31	1.24
1000	2.30	7.54	1.21
1500	2.85	9.35	0.98
1700	3.05	10.00	0.98
1800	3.14	10.30	0.93
1950	3.24	10.63	0.85
2000	3.33	10.92	0.84
2100	3.42	11.22	0.82
2200	3.50	11.48	0.80
2300	3.59	11.78	0.78
2400	3.67	12.04	0.77
2500	3.75	12.30	0.75
2700	3.90	12.82	0.72
3000	4.14	13.58	0.68
3300	4.33	14.20	0.61
3400	4.45	14.60	0.60
4000	4.91	16.10	0.55
4900	5.61	18.40	0.50
5000	5.69	18.66	0.49
5200	5.92	19.42	0.48
5300	6.03	19.78	0.47
5600	6.37	20.89	0.46
5825	6.83	22.40	0.45

Standard conditions:

For attenuation, VSWR 1.0, ambient temperature 20°C (68°F)

For average power, VSWR 1.0, ambient temperature 40°C (104°F), inner conductor temperature 100°C (212°F), no solar loading

Regulatory Compliance/Certifications:

RoHS 2011/65/EU compliant

TL 9000 H-V – All cables designed and manufactured under this quality management system

100% made in USA

AirCell®

PLENUM CABLE

Trilogy® COMMUNICATIONS INC.

Cable Specifications

50 Ohm Plenum, 1/2” (6 GHz)
Copper Outer Conductor – APC012J50

Description	Product Number
Standard Cable	
1/2", Corrugated, Jacketed CMP (UL-910, UL-444), Canadian CSA 22.2/FT6	APC012J50
Physical Dimensions	
Center Dia., in (mm)	0.188 (4.78)
Dia. Over Dielectric, in (mm)	0.470 (11.94)
Dia. Over Outer Conductor, in (mm)	0.540 (13.72)
Dia. Over Jacket, in (mm)	0.615 (15.62)
Center Conductor	Copper-Clad Aluminum
Outer Conductor	Corrugated Copper
Jacket Color	Off-white
Electrical Characteristics	
Maximum Frequency, GHz	10
Peak Power Rating, KW	40
DC Res., Ohms/1000 ft (1000m)	
Center	0.46 (1.51)
Outer	0.39 (1.28)
DC Breakdown, kV	4
Capacitance, pF/ft (m)	22 (72.12)
Inductance, mH/ft (m)	0.057 (0.187)
Jacket Spark, kV RMS	8
VSWR min, (dB)	1.25 (19.0)
VSWR in-band, (dB)	1.13 (24.3)
Impedance, Ohms	50
Velocity of Propagation	94%
Mechanical Characteristics	
Min. Bend. Radius, in (mm) – Single	2 (50.8)
Min. Bend. Radius, in (mm) – Multiple	5 (127)
Cable Weight, lb/ft (kg/m)	0.190 (0.280)
Bending Moment, ft.lb (N·m)	3 (4.1)
Tensile Strength, lb (kg)	275 (125)
Flat Plate Crush, lb/in (kg/mm)	110 (2.00)
Number of Bends, minimum	15
Number of Bends, typical	20
Recommended Install Temp., °F (°C)	+5 to 194 (-15 to 90)
Recommended Storage Temp., °F (°C)	+5 to 194 (-15 to 90)
Recommended Operating Temp.,°F (°C)	+5 to 194 (-15 to 90)

Attenuation and Average Power			
Frequency MHz	Attenuation dB/100 ft	dB/100m	Avg. Pwr. kW
100	0.65	2.13	4.82
450	1.43	4.69	2.21
500	1.52	4.99	2.10
600	1.64	5.38	1.91
700	1.75	5.74	1.76
800	1.87	6.13	1.68
900	1.98	6.49	1.55
960	2.04	6.69	1.49
1000	2.10	6.89	1.46
1500	2.62	8.59	1.18
1700	2.79	9.15	1.10
1800	2.88	9.45	1.07
1950	3.01	9.87	1.02
2000	3.05	10.00	1.01
2100	3.14	10.30	0.99
2200	3.23	10.59	0.96
2300	3.33	10.92	0.94
2400	3.42	11.22	0.91
2500	3.48	11.41	0.90
2700	3.65	11.97	0.86
3000	3.83	12.56	0.81
3300	4.02	13.19	0.76
3400	4.08	13.38	0.66
4000	4.45	14.60	0.69
4900	5.00	16.40	0.60
5000	5.06	16.60	0.60
5200	5.34	17.52	0.58
5300	5.48	17.97	0.57
5600	5.90	19.35	0.53
5825	6.32	20.73	0.49

Standard conditions:

For attenuation, VSWR 1.0, ambient temperature 20°C (68°F)

For average power, VSWR 1.0, ambient temperature 40°C (104°F), inner conductor temperature 100°C (212°F), no solar loading

Regulatory Compliance/Certifications:

RoHS 2011/65/EU compliant

TL 9000 H-V – All cables designed and manufactured under this quality management system

100% made in USA

AirCell®

PLENUM RADIATING CABLE

Trilogy® COMMUNICATIONS INC.

Cable Specifications

50 Ohm Plenum Radiating, 1/2" – AQ012J50

Description	Product Number
Standard Cable	
1/2", Corrugated, Jacketed CMP (UL-910, UL-444), Canadian CSA 22.2/FT6	AQ012J50
Physical Dimensions	
Center Dia., in (mm)	0.188 (4.78)
Dia. Over Dielectric, in (mm)	0.470 (11.94)
Dia. Over Outer Conductor, in (mm)	0.540 (13.72)
Dia. Over Jacket, in (mm)	0.615 (15.62)
Center Conductor	Copper-Clad Aluminum
Outer Conductor	Corrugated Aluminum
Jacket Color	Off-white
Electrical Characteristics	
Maximum Frequency, GHz	10
Peak Power Rating, KW	35
DC Res., Ohms/1000 ft (1000m)	
Center	0.46 (1.51)
Outer	0.51 (1.67)
DC Breakdown, kV	4
Capacitance, pF/ft (m)	22 (72.12)
Inductance, mH/ft (m)	0.057 (0.187)
Jacket Spark, kV RMS	8
VSWR min, (dB)	1.38 (16.0)
VSWR in-band, (dB)	1.30 (17.7)
Impedance, Ohms	50
Velocity of Propagation	94%
Mechanical Characteristics	
Min. Bend. Radius, in (mm) – Single	2 (50.8)
Min. Bend. Radius, in (mm) – Multiple	5 (127)
Cable Weight, lb/ft (kg/m)	0.122 (0.181)
Bending Moment, ft.lb (N·m)	1 (1.4)
Tensile Strength, lb (kg)	250 (114)
Flat Plate Crush, lb/in (kg/mm)	50 (0.89)
Number of Bends, minimum	10
Number of Bends, typical	15
Recommended Install Temp., °F (°C)	+5 to 194 (-15 to 90)
Recommended Storage Temp., °F (°C)	+5 to 194 (-15 to 90)
Recommended Operating Temp., °F (°C)	+5 to 194 (-15 to 90)

Attenuation and Average Power			
Frequency MHz	**Attenuation dB/100 ft	dB/100m	*Coupling Loss dB
30	0.55	1.81	49
50	0.64	2.11	49
88	0.90	2.96	49
100	0.97	3.19	49
108	1.02	3.35	49
150	1.27	4.14	49
174	1.40	4.60	50
200	1.54	5.06	50
300	2.04	6.70	51
400	2.40	7.88	58
450	2.60	8.52	61
500	2.78	9.13	61
512	2.82	9.26	61
600	3.13	10.30	62
700	3.46	11.36	62
800	3.77	12.38	63
824	3.84	12.61	63
894	4.07	13.37	63
900	4.09	13.40	63
960	4.20	13.79	64
1000	4.27	14.00	64
1250	4.83	15.86	64
1500	5.34	15.50	65
1700	5.66	18.60	65
1800	5.82	19.10	66
1950	6.29	20.60	69
2000	6.43	21.10	69
2300	7.12	23.38	70
2400	7.34	24.10	70
3000	8.82	29.00	70

Standard conditions:
Test per IEC61196-4

*95% Coupling Loss at 6 ft (2 m), ± 5 dB
The coupling loss values given are average values of all three antenna orientations (radial, parallel, and orthogonal) of dipole antenna.

**Attenuation ± 10% at 68°F

Regulatory Compliance/Certifications:

RoHS 2011/65/EU compliant

TL 9000 H-V – All cables designed and manufactured under this quality management system

100% made in USA

AirCell®

PLENUM RADIATING CABLE

Trilogy® COMMUNICATIONS INC.

Cable Specifications

50 Ohm Plenum Radiating, 1/2”
Copper Outer Conductor – AQC012J50

Description	Product Number
Standard Cable	
1/2", Corrugated, Jacketed CMP (UL-910, UL-444), Canadian CSA 22.2/FT6	AQC012J50
Physical Dimensions	
Center Dia., in (mm)	0.188 (4.78)
Dia. Over Dielectric, in (mm)	0.470 (11.94)
Dia. Over Outer Conductor, in (mm)	0.540 (13.72)
Dia. Over Jacket, in (mm)	0.615 (15.62)
Center Conductor	Copper-Clad Aluminum
Outer Conductor	Corrugated Copper
Jacket Color	Off-white
Electrical Characteristics	
Maximum Frequency, GHz	10
Peak Power Rating, KW	40
DC Res., Ohms/1000 ft (1000m)	
Center	0.46 (1.51)
Outer	0.42 (1.38)
DC Breakdown, kV	4
Capacitance, pF/ft (m)	22 (72.12)
Inductance, mH/ft (m)	0.057 (0.187)
Jacket Spark, kV RMS	8
VSWR min, (dB)	1.38 (16.0)
VSWR in-band, (dB)	1.30 (17.7)
Impedance, Ohms	50
Velocity of Propagation	94%
Mechanical Characteristics	
Min. Bend. Radius, in (mm) – Single	2 (50.8)
Min. Bend. Radius, in (mm) – Multiple	5 (127)
Cable Weight, lb/ft (kg/m)	0.17 (0.25)
Bending Moment, ft.lb (N·m)	3.0 (4.1)
Tensile Strength, lb (kg)	250 (114)
Flat Plate Crush, lb/in (kg/mm)	110 (2.0)
Number of Bends, minimum	15
Number of Bends, typical	20
Recommended Install Temp., °F (°C)	+5 to 194 (-15 to 90)
Recommended Storage Temp., °F (°C)	+5 to 194 (-15 to 90)
Recommended Operating Temp., °F (°C)	+5 to 194 (-15 to 90)

Attenuation and Average Power			
Frequency MHz	**Attenuation dB/100 ft	dB/100m	*Coupling Loss dB
30	0.50	1.64	55
50	0.65	2.82	55
88	0.86	2.82	55
100	0.92	3.01	55
108	0.95	3.13	56
150	1.12	3.69	56
174	1.21	3.97	63
200	1.30	4.26	63
300	1.59	5.23	63
400	1.84	6.05	63
450	1.96	6.42	63
500	2.06	6.77	64
512	2.09	6.85	64
600	2.26	7.43	64
700	2.45	8.03	64
800	2.62	8.60	64
824	2.66	8.73	64
894	2.77	9.10	64
900	2.78	9.13	65
960	2.87	9.43	65
1000	2.94	9.63	65
1250	3.29	10.79	65
1500	3.61	11.84	66
1700	3.85	12.63	66
1800	3.96	13.00	66
1950	4.13	13.55	66
2000	4.18	13.72	67
2300	4.49	14.74	68
2400	4.59	15.07	68
3000	5.15	16.90	69

Standard conditions:

Test per IEC61196-4

*95% Coupling Loss at 6 ft (2 m), ± 5 dB
The coupling loss values given are average values of all three antenna orientations (radial, parallel, and orthogonal) of dipole antenna.
**Attenuation ± 10% at 68°F

Regulatory Compliance/Certifications:

RoHS 2011/65/EU compliant
TL 9000 H-V – All cables designed and manufactured under this quality management system
100% made in USA

AirCell®

PLENUM CABLE

Trilogy® COMMUNICATIONS INC.

Cable Specifications

75 Ohm Plenum, 1/2" – AP012J75

Description	Product Number
Standard Cable	
1/2", Corrugated Cable, Jacketed CMP (UL-910, UL-444), Canadian CSA 22.2/FT6	AP012J75
Physical Dimensions	
Center Dia., in (mm)	0.123 (3.12)
Dia. Over Dielectric, in (mm)	0.435 (11.05)
Dia. Over Outer Conductor, in (mm)	0.540 (13.72)
Dia. Over Jacket, in (mm)	0.615 (15.62)
Center Conductor	Copper-Clad Aluminum
Outer Conductor	Corrugated Aluminum
Jacket Color	Off-white
Electrical Characteristics	
Maximum Frequency, GHz	12
Peak Power Rating, KW	35
DC Res., Ohms/1000 ft (1000m)	
Center	1.09 (3.58)
Outer	0.51 (1.67)
DC Breakdown, kV	4
Capacitance, pF/ft (m)	14.84 (48.68)
Inductance, mH/ft (m)	0.080 (0.264)
Jacket Spark, kV RMS	8
VSWR min, (dB)	1.25 (19.0)
VSWR in-band, (dB)	1.13 (24.3)
Impedance, Ohms	75
Velocity of Propagation	95%
Mechanical Characteristics	
Min. Bend. Radius, in (mm) – Single	2 (50.8)
Min. Bend. Radius, in (mm) – Multiple	5 (127)
Cable Weight, lb/ft (kg/m)	0.104 (0.155)
Bending Moment, ft.lb (N·m)	1 (1.4)
Tensile Strength, lb (kg)	145 (66)
Flat Plate Crush, lb/in (kg/mm)	78 (1.39)
Number of Bends, minimum	15
Number of Bends, typical	20
Recommended Install Temp., °F (°C)	+5 to 194 (-15 to 90)
Recommended Storage Temp., °F (°C)	+5 to 194 (-15 to 90)
Recommended Operating Temp., °F (°C)	+5 to 194 (-15 to 90)

Attenuation and Average Power			
Frequency MHz	Attenuation dB/100 ft	dB/100m	Avg. Pwr. kW
5	0.15	0.49	9.33
10	0.21	0.70	6.60
20	0.30	0.98	4.66
30	0.37	1.21	3.78
50	0.48	1.57	2.93
88	0.66	2.18	2.10
100	0.71	2.32	1.97
108	0.74	2.42	1.90
150	0.87	2.85	1.61
174	0.93	3.07	1.50
200	1.00	3.29	1.40
300	1.20	3.94	1.17
400	1.40	4.59	1.00
450	1.48	4.87	0.94
500	1.57	5.15	0.89
512	1.59	5.21	0.88
600	1.73	5.68	0.81
700	1.87	6.13	0.75
800	2.02	6.62	0.69
824	2.05	6.73	0.68
894	2.14	7.01	0.66
960	2.21	7.25	0.63
1000	2.26	7.41	0.62
1250	2.57	8.43	0.54
1500	2.81	9.22	0.50
1700	3.01	9.88	0.46
1950	3.25	10.66	0.43
2000	3.29	10.79	0.43
2300	3.52	11.54	0.40
2400	3.60	11.81	0.39
3000	4.03	13.22	0.35

Standard conditions:

For attenuation, VSWR 1.0, ambient temperature 20°C (68°F)

For average power, VSWR 1.0, ambient temperature 40°C (104°F), inner conductor temperature 100°C (212°F), no solar loading

Regulatory Compliance/Certifications:

RoHS 2011/65/EU compliant

TL 9000 H-V – All cables designed and manufactured under this quality management system

100% made in USA

AirCell®

ULTRA-FLEX CABLE

Trilogy® COMMUNICATIONS INC.

Cable Specifications

50 Ohm Ultra-Flex Cable, 1/2" – AU012J50/ AU012R50

Description	Product Number
Standard Cable	
1/2", Ultra-Flex, Black Polyethylene Jacket	AU012J50
Riser Cable	
1/2", Low-Smoke, Non-Halogenated, Fire Retardant Jacket, IEC332-1, IEC332-3C, UL-1666, CMR	AU012R50
Physical Dimensions	
Center Dia., in (mm)	0.188 (4.78)
Dia. Over Dielectric, in (mm)	0.435 (11.05)
Dia. Over Outer Conductor, in (mm)	0.550 (13.97)
Dia. Over Jacket, in (mm)	0.630 (16.00)
Center Conductor	Copper-Clad Aluminum
Outer Conductor	Corrugated Aluminum
Electrical Characteristics	
Maximum Frequency, GHz	10
Peak Power Rating, KW	35
DC Res., Ohms/1000 ft (1000m)	
Center	0.46 (1.51)
Outer	0.51 (1.67)
DC Breakdown, kV	4
Capacitance, pF/ft (m)	22.3 (73.16)
Inductance, mH/ft (m)	0.056 (0.184)
Jacket Spark, kV RMS	8
VSWR min, (dB)	1.25 (19.0)
VSWR in-band, (dB)	1.13 (24.3)
Impedance, Ohms	50
Velocity of Propagation	92%
Mechanical Characteristics	
Min. Bend. Radius, in (mm)	3.5 (89)
Cable Weight, lb/ft (kg/m)	0.135 (0.202)
Bending Moment, ft.lb (N·m)	1 (1.4)
Tensile Strength, lb (kg)	250 (114)
Flat Plate Crush, lb/in (kg/mm)	78 (1.39)
Number of Bends, minimum	12
Number of Bends, typical	20
Recommended Install Temp., °F (°C)	-40 to 170 (-40 to 77)
Recommended Storage Temp., °F (°C)	-94 to 170 (-70 to 77)
Recommended Operating Temp., °F (°C)	-40 to 170 (-40 to 77)

Attenuation and Average Power			
Frequency MHz	Attenuation dB/100 ft	dB/100m	Avg. Pwr. kW
30	0.39	1.29	7.45
50	0.51	1.68	5.74
88	0.68	2.24	4.30
100	0.73	2.39	4.03
108	0.76	2.49	3.87
150	0.90	2.95	3.27
174	0.97	3.19	3.03
200	1.04	3.43	2.81
300	1.29	4.23	2.28
400	1.50	4.93	1.96
450	1.60	5.24	1.84
500	1.69	5.54	1.74
512	1.71	5.61	1.72
600	1.86	6.11	1.58
700	2.02	6.63	1.45
800	2.17	7.13	1.35
824	2.21	7.24	1.33
894	2.31	7.57	1.27
960	2.40	7.86	1.23
1000	2.45	8.04	1.20
1250	2.77	9.08	1.06
1500	3.06	10.04	0.96
1800	3.39	11.10	0.87
1900	3.49	11.44	0.84
2000	3.59	11.78	0.82
2300	3.88	12.73	0.76
3000	4.51	14.80	0.65

Standard conditions:

For attenuation, VSWR 1.0, ambient temperature 20°C (68°F)

For average power, VSWR 1.0, ambient temperature 40°C (104°F), inner conductor temperature 100°C (212°F), no solar loading

Regulatory Compliance/Certifications:
RoHS 2011/65/EU compliant

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AirCell®

IN-CONDUIT CABLE

Trilogy® COMMUNICATIONS INC.

Cable Specifications

50 Ohm In-Conduit, 1/2" – AC012J50/ AC012R50

Description	Product Number
Standard Cable	
1/2", In-Conduit, 50 Ohm, Corrugated, Black Polyethylene Jacket	AC012J50
Riser Rated Cable	
1/2", In-Conduit, 50 Ohm, Corrugated, Low-Smoke, Non-Halogenated, Fire Retardant Jacket, IEC332-1, IEC332-3C, UL-1666, CMR	AC012R50
Physical Dimensions	
Center Dia., in (mm)	0.188 (4.78)
Dia. Over Dielectric, in (mm)	0.470 (11.94)
Dia. Over Outer Conductor, in (mm)	0.540 (13.72)
Dia. Over Jacket, in (mm)	0.615 (15.62)
Center Conductor	Copper-Clad Aluminum
Outer Conductor	Corrugated Aluminum
Electrical Characteristics	
Maximum Frequency, GHz	10
Peak Power Rating, KW	35
DC Res., Ohms/1000 ft (1000m)	
Center	0.46 (1.51)
Outer	0.51 (1.67)
DC Breakdown, kV	4
Capacitance, pF/ft (m)	22 (72.12)
Inductance, mH/ft (m)	0.057 (0.187)
Jacket Spark, kV RMS	8
VSWR min, (dB)	1.25 (19.0)
VSWR in-band, (dB)	1.13 (24.3)
Impedance, Ohms	50
Velocity of Propagation	94%
Mechanical Characteristics	
Min. Bend. Radius, in (mm) – Single	2 (50.8)
Min. Bend. Radius, in (mm) – Multiple	5 (127)
Cable Weight, lb/ft (kg/m)	0.129 (0.192)
Bending Moment, ft.lb (N·m)	1 (1.4)
Tensile Strength, lb (kg)	250 (114)
Flat Plate Crush, lb/in (kg/mm)	78 (1.39)
Number of Bends, minimum	15
Number of Bends, typical	25
Recommended Install Temp., °F (°C)	+5 to 194 (-15 to 90)
Recommended Storage Temp., °F (°C)	+5 to 194 (-15 to 90)
Recommended Operating Temp., °F (°C)	+5 to 194 (-15 to 90)

Attenuation and Average Power			
Frequency MHz	Attenuation dB/100 ft	dB/100m	Avg. Pwr. kW
100	0.70	2.30	3.98
450	1.50	4.92	1.85
500	1.59	5.22	1.75
600	1.75	5.74	1.58
700	1.87	6.13	1.47
800	1.96	6.43	1.37
900	2.14	7.02	1.29
960	2.23	7.31	1.24
1000	2.30	7.54	1.21
1500	2.85	9.35	0.98
1700	3.05	10.00	0.98
1800	3.14	10.30	0.93
1950	3.24	10.63	0.85
2000	3.33	10.92	0.84
2100	3.42	11.22	0.82
2200	3.50	11.48	0.80
2300	3.59	11.78	0.78
2400	3.67	12.04	0.77
2500	3.75	12.30	0.75
2700	3.90	12.82	0.72
3000	4.14	13.58	0.68
3300	4.33	14.20	0.61
3400	4.45	14.60	0.60
4000	4.91	16.10	0.55
4900	5.61	18.40	0.50
5000	5.69	18.66	0.49
5200	5.92	19.42	0.48
5300	6.03	19.78	0.47
5600	6.37	20.89	0.46
5825	6.83	22.40	0.45

Standard conditions:

For attenuation, VSWR 1.0, ambient temperature 20°C (68°F)

For average power, VSWR 1.0, ambient temperature 40°C (104°F), inner conductor temperature 100°C (212°F), no solar loading

Regulatory Compliance/Certifications:

RoHS 2011/65/EU compliant

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AirCell®

IN-CONDUIT CABLE

Trilogy® COMMUNICATIONS INC.

Cable Specifications

50 Ohm In-Conduit, 1/2”

Copper Outer Conductor – ACC012J50/ ACC012R50

Description	Product Number
Standard Cable	
1/2", In-Conduit, 50 Ohm, Corrugated, Copper Outer Conductor, Black Polyethylene Jacket	ACC012J50
Fire Retardant Cable	
1/2", In-Conduit, 50 Ohm, Corrugated, Copper Outer Conductor, Fire Retardant Jacket, Meet / Exceed CMR	ACC012R50
Physical Dimensions	
Center Dia., in (mm)	0.188 (4.78)
Dia. Over Dielectric, in (mm)	0.470 (11.94)
Dia. Over Outer Conductor, in (mm)	0.540 (13.72)
Dia. Over Jacket, in (mm)	0.615 (15.62)
Center Conductor	Copper Clad Aluminum
Outer Conductor	Corrugated Copper
Electrical Characteristics	
Maximum Frequency, GHz	10
Peak Power Rating, KW	40
DC Res., Ohms/1000 ft (1000m)	
Center	0.46 (1.51)
Outer	0.39 (1.28)
DC Breakdown, kV	4
Capacitance, pF/ft (m)	22 (72.12)
Inductance, mH/ft (m)	0.057 (0.187)
Jacket Spark, kV RMS	8
VSWR min, (dB)	1.25 (19.0)
VSWR in-band, (dB)	1.13 (24.3)
Impedance, Ohms	50
Velocity of Propagation	94%
Mechanical Characteristics	
Min. Bend. Radius, in (mm) – Single	2 (50.8)
Min. Bend. Radius, in (mm) – Multiple	5 (127)
Cable Weight, lb/ft (kg/m)	0.19 (0.28)
Bending Moment, ft.lb (N·m)	3.0 (4.1)
Tensile Strength, lb (kg)	275 (125)
Flat Plate Crush, lb/in (kg/mm)	110 (2.0)
Number of Bends, minimum	15
Number of Bends, typical	20
Recommended Install Temp., °F (°C)	+5 to 194 (-15 to 90)
Recommended Storage Temp., °F (°C)	+5 to 194 (-15 to 90)
Recommended Operating Temp., °F (°C)	+5 to 194 (-15 to 90)

Attenuation and Average Power			
Frequency MHz	Attenuation dB/100 ft	dB/100m	Avg. Pwr. kW
100	0.65	2.13	4.82
450	1.43	4.69	2.21
500	1.52	4.99	2.10
600	1.64	5.38	1.91
700	1.75	5.74	1.76
800	1.87	6.13	1.68
900	1.98	6.49	1.55
960	2.04	6.69	1.49
1000	2.10	6.89	1.46
1500	2.62	8.59	1.18
1700	2.79	9.15	1.10
1800	2.88	9.45	1.07
1950	3.01	9.87	1.02
2000	3.05	10.00	1.01
2100	3.14	10.30	0.99
2200	3.23	10.59	0.96
2300	3.33	10.92	0.94
2400	3.42	11.22	0.91
2500	3.48	11.41	0.90
2700	3.65	11.97	0.86
3000	3.83	12.56	0.81
3300	4.02	13.19	0.76
3400	4.08	13.38	0.66
4000	4.45	14.60	0.69
4900	5.00	16.40	0.60
5000	5.06	16.60	0.60
5200	5.34	17.52	0.58
5300	5.48	17.97	0.57
5600	5.90	19.35	0.53

Standard conditions:

For attenuation, VSWR 1.0, ambient temperature 20°C (68°F)

For average power, VSWR 1.0, ambient temperature 40°C (104°F), inner conductor temperature 100°C (212°F), no solar loading

Regulatory Compliance/Certifications:

RoHS 2011/65/EU compliant

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