

CABLE ASSEMBLY SOLUTIONS FOR SMARTSKY 4G SYSTEMS

PIC Wire & Cable® offers custom cable assemblies that are specifically designed for use with SmartSky Network's 4G LTE data connectivity. The SmartSky 4G LTE system is SmartSky Networks' newest in-flight connectivity solution designed to deliver the same data connectivity experience in air as passengers would experience on the ground. To ensure the system's continuous connectivity and high speed data rates, a reliable interconnect assembly is required. PIC Wire & Cable's assemblies are customizable and designed to meet an application's unique loss, length, weight and flexibility requirements.

Proper cable assembly is critical to optimizing the full benefits of interconnect technology. PIC Wire & Cable provides certified and tested assembly sets to streamline the system installation process. Engineering drawings are available to simplify the US Federal Aviation Administration (FAA) submission process for part modifications and installations.

Cable Options

PIC Wire & Cable offers a variety of RFMATES® and RFMATES ULTRALITE® cable solutions that meet or exceed SmartSky 4G LTE system performance requirements for RF loss and VSWR. These high performance cables were specially designed with low loss characteristics, that ensure signal reliability. The RFMATES ULTRALITE line is engineered with additional shielding protection and optimized for applications that require lightweight, flexible cables.

All RFMATES and RFMATES ULTRALITE cables have undergone a variety of EWIS tests, such as flammability and immersion fluid testing, including Skydrol. EWIS test reports are available upon request.

Cable Length and Loss							
Cable P/N	Physical Characteristics		Maximum Cable Length (Inches) by Application			Cable Loss db/ft	
	Weight lbs/100 ft (kg/100 m)	Bend Radius in (mm)	ABR P9 to FDQ-P2 (2.483 GHz) Max Loss 3.0 dB	ABR P4 to FDQ-P3 (2.483 GHz) Max Loss 6.0 dB	ABR - HPB 4 Cables (1.6 GHz) Max Loss 10.0 dB	1.6 GHz	2.483 GHz
UH25107	12.0 (17.9)	2.50 (63.50)	612	1318	2880	0.04	0.051
UH22089	7.2 (10.7)	1.70 (43.18)	512	1100	2351	0.061	0.049
UH67163	3.4 (5.1)	1.20 (30.48)	286	616	1324	0.087	0.109
UH44193	1.9 (2.9)	0.80 (20.32)	167	362	784	0.147	0.186
S22089	18.0 (26.8)	2.50 (63.50)	503	1083	2351	0.049	0.062
S55122	8.3 (12.4)	1.55 (39.37)	346	747	1600	0.072	0.09
S33141	6.5 (9.7)	1.40 (35.56)	260	560	1226	0.094	0.12
S44191	4.3 (6.4)	1.00 (25.40)	147	317	690	0.167	0.212
S86208	2.0 (2.9)	0.65 (16.51)	127	273	588	0.196	0.246

Table 1

Connector Options

PIC Wire & Cable has matching TNC connectors for its RFMATES and RFMATES ULTRALITE cables that are designed per MIL-PRF-39012 standard. See Figure 1 for a connector illustration detailing the construction elements that ensure signal integrity while protecting against fluid and vibration.

Cable P/N	TNC Str. Plug	TNC 90 Plug
UH25107	190408	190409
UH22089	150408	150409
UH67163	150508	150509
UH44193	150108	150109
S22089	190408	190409
S55122	190608	190609
S33141	190308	190309
S44191	190108	190109
S86208	190808	190809

Table 2

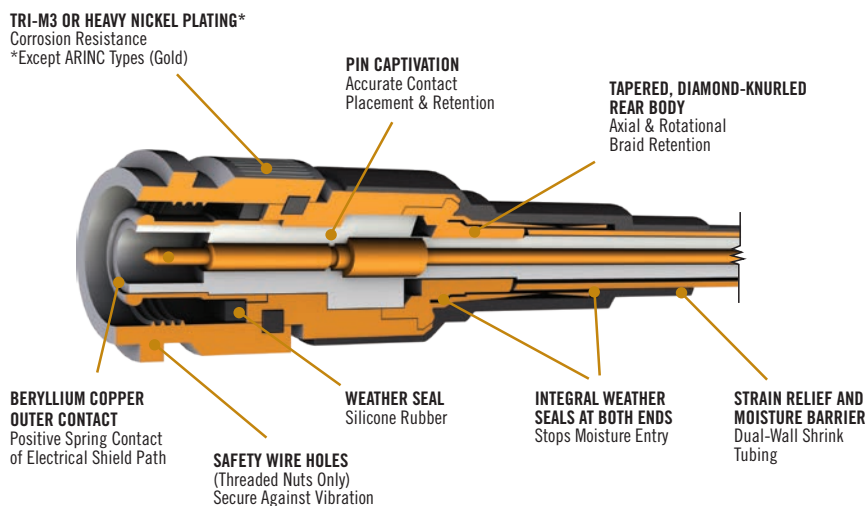


Figure 1

Assembly Part Number Builder

Easily build a part number with design details that meet the application's specific length and connector requirements. Ready to use engineering drawings are available to streamline the US Federal Aviation Administration (FAA) submission process for part modifications and installations.

SmartSky cable assembly drawings are accessible for download at www.picwire.com/assemblies/assembly-worksheets.

Sample Part Number: 34618- **A B C DDDD**

A = Assembly Application			B = Cable				C = Connector Configuration			DDDD = Assembly Length	
A	End A (From)	End B (To)	B	P/N	B	P/N	C	End A (ABR)	End B (FDQ & HPB)	DDDD	Length (in)
1	ABR P9	FDQ-P2 /TX	1	UH25107	6	S55122	1	TNC Straight	TNC 90	0001	1"
2	ABR P4	FDQ P3/RX	2	UH22089	7	S33141	2	TNC 90	TNC Straight
3	ABR P5	HPB/RX1	3	UH67163	8	S44191	3	TNC 90	TNC 90	2952	2952"
4	ABR P3	HPB/RX2	4	UH44193	9	S86208	4	TNC Straight	TNC Straight		
5	ABR P7	HPB/RX3									
6	ABR P6	HPB/GPS									

Table 3