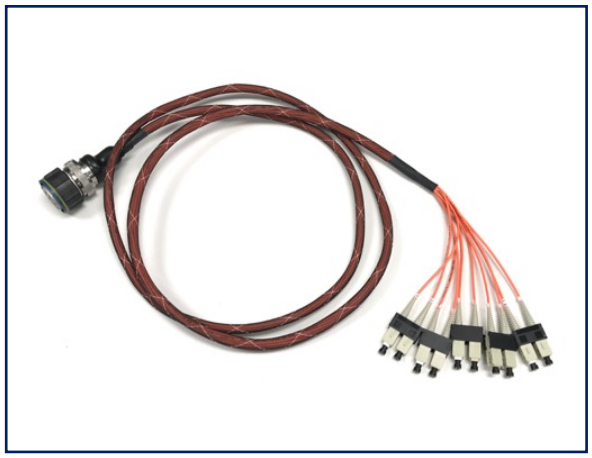
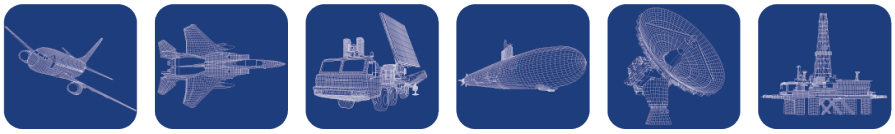
Features:

- Simplex and multichannel fiber optic cables: OM1, 2, 3, 4, SMF-28, POF
- Mil/Aero connectors: D38999, M28876, GPRB/EPXB, EN4165, Micro 38999, TFOCA, D-sub
- MIL/AERO termini: M29504/4, /5, /14, /15, ARINC 801, EN-4531, Jewel, Expanded Beam
- Commercial connectors: LC, SC, FC, ST, SMA
- COTWORKS' LC-R, LC-801, and TAO termini/connectors
- Superior insertion loss and return loss performance
- 100% endface quality and 100% interferometer measurements



100% Endface Quality and 100% Interferometer Measurements



COMMERCIAL AEROSPACE | MILITARY AEROSPACE | MILITARY TACTICAL | SUBSEA NETWORKING | RADAR & SENSING | OIL & EXPLORATION

General Description

COTSWORKS manufactures fiber optic cable assemblies using the highest quality materials and processes available. Our facility includes redundant manufacturing and test equipment including automated polishers, programmable curing ovens, interferometers, video microscopes with Pass/Fail software, and high-resolution OTDRs with no dead zone and accuracy to 40 microns. All cabling, connectors, termini, and accessories go through incoming inspection, manufacturing and assembly, and final testing following standard industry procedures, specifications, and customer requirements. An optical test report with video microscope images and interferometer data is available on request.

Cable Specifications

Cable Type

- CAB = Glass Fiber Optic Cable
- MQJ = Measurement Quality Jumper
- POF = Plastic Optical Fiber cable

Mode Type

- MM 50, 62.5, 100 micron Multimode cable
- SM 9 micron Singlemode cable
- POF Large Core fiber options
- Simplex or Duplex

Termini and Connectors

- Standard 2.5mm such as SC, FC, ST, etc.
- Standard 1.25mm such as LC, ARINC801
- Aerospace/Military: M29504, M28876, D38999, GPRB/EPXB etc.

Fiber Type

- Bare fiber, standard, or bend insensitive
- 900µm buffer fiber, PVC or polyimide
- Standard Tele/Datacomm, Avionics, Kevlar reinforced rugged outdoor jacketing

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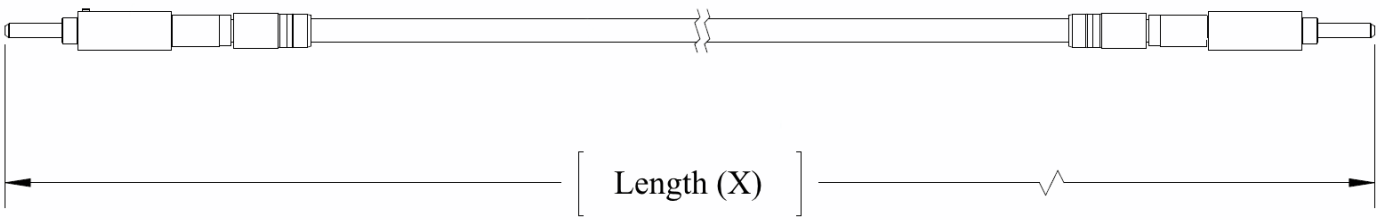
440.446.8800 | sales@cotsworks.com

Ordering Information



Jumper Cable Part Number Builder

FIBER-	MM-	LC-	LX-	1M-	D
Default Part Number	**MODE**	**CON#1**	**CON#2**	**LENGTH**	**CABLE TYPE**

Mode Type
MM = 850/1300nm
SM = 1270–1610nm

Connector/Termination Options
LC = LC Connector
LCA = APC LC Connector
LCR = Rugged LC Connector
LCT = Rugged Metal LC Connector
SC = SC Connector
SCA = APC SC Connector
ST = ST Connector
SMA = SMA Connector
FC = FC Connector
FCA = APC FC Connector
LX = ARINC 801 terminus
LXA = APC ARINC 801 terminus
TAO = Tool-Less ARINC 801 terminus
MP = Pin M29504/4 terminus
MS = Socket M29504/5 terminus
M14 = Pin M29504/14 terminus
M15 = Socket M29504/15 terminus
JCP2 = JSFC18-2 Pin terminus
JCS2 = JSFC17-2 Socket terminus

Notes:
1. Contact COTSWORKS for options not listed.

Length - Add number to "x" field for length
xM = Meters
xCM = Centimeters
xMM = Millimeters
xF = Feet
xI = Inches

Cable Type
A1 = 62.5/125µ 1.2mm Jacketed Aerospace Grade
A2 = 50/125µ 1.2mm Jacketed Aerospace Grade
B1 = 62.5/125µ 1.8mm Jacketed Aerospace Grade (Violet Colored Jacket)
B2 = 62.5/125µ 1.8mm Jacketed Aerospace Grade (Yellow Colored Jacket)
B3 = 50/125µ 1.8mm Jacketed Aerospace Grade (Violet Colored Jacket)
B4 = 50/125µ 1.8mm Jacketed Aerospace Grade (Yellow Colored Jacket)
B6 = 9/125µ 1.8mm Jacketed Aerospace Grade (Yellow Colored Jacket)
D = 62.5/125µ 2mm Jacketed Lab Grade
G = 62.5/125µ 900µ OM1 Buffered Cable
G50 = 50/125µ 900µ OM2 Buffered Cable
G53 = 50/125µ 900µ OM3 Buffered Cable
H = 9/125µ 2mm Jacketed Lab Grade
J = 9/125µ 900µ Buffered Cable
M = 50/125µ OM3 2mm Jacketed Lab Grade
M4 = 50/125µ OM4 2mm Jacketed Lab Grade
OS = 9/125µ 2mm Jacketed (Industrial Temp)
S1 = 62.5/125µ 2mm Jacketed (Industrial Temp)
S2 = 50/125µ 2mm Jacketed (Industrial Temp)
U = 50/125µ 900µ OM4 Buffered Cable

Multi-Channel Part Number Builder

FIBER-	MM-	xC-	Cxxx
Default Part Number	Mode	Channel Count	Custom Designator

Mode Type
- MM = 850/1300nm
- SM = 1270-1610nm

Channel Count
- xC = Add variable to "x" field for count

Custom Designator
- To be assigned by COTSWORKS

Contact COTSWORKS for custom cable configurations.

Product	Industry Standard Max Insertion Loss(dB)	COTSWORKS Typical Insertion Loss
M29504/14 & 15 (M28876)	0.75	0.35
M29504/4 & 5 (D38999)	1.00	0.50
ARINC 801 & LX & TAO	0.30	0.15
LC & LC APC	0.75	0.35
LC RUGGED	0.75	0.35
SC & SC APC	0.75	0.35
ST	0.75	0.35
FC & FC APC	0.75	0.35
JSF-2 PIN	0.75	0.35
JSF-2 SOCKET	0.75	0.35

Notes:

1) Contact COTSWORKS for options not listed.
2) Example of how to calculate Insertion Loss for cable assembly with M29504/4 termini to LC connector:
   Industry Standard: 1.00dB + 0.75dB = 1.75dB Max Insertion Loss
   COTSWORKS typical: 0.50dB + 0.35dB = 0.85dB

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Standard Cable Assembly Length Tolerances

Cable Length (feet)	Tolerance (feet)	Examples		
		Nominal (feet)	Min Length (feet)	Max Length (feet)
Up to 1	+0.125/–0	0.5	0.5	0.625
> 1 to 5	+/–0.125	3	2.875	3.125
> 5 to 50	+5%/–0	20	20	21
> 50 to 100	+4%/–0	75	75	78
> 100 to 250	+3%/–0	200	200	206
> 250 to 500	+2%/–0	400	400	408
> 500	+1%/–0	700	700	707

Cable Length (meter)	Tolerance (meter)	Examples		
		Nominal (meter)	Min Length (meter)	Max Length (meter)
Up to 0.5	+0.04 / -0	0.25	0.25	0.29
> 0.5 to 1.5	+/-0.04	1.2	1.16	1.24
> 1.5 to 15	+5%/–0	10	10	10.5
> 15 to 30	+4%/–0	25	25	26
> 30 to 75	+3%/–0	50	50	51.5
> 75 to 150	+2%/–0	100	100	102
> 150	+1%/–0	300	300	303

Notes:

1) Contact COTSWORKS for tolerance requirements less than 1.5 inches or 40mm.
2) Unless otherwise specified, the final overall length of a single fiber cable assembly shall be measured or determined from connector/terminus ferrule tip to ferrule tip.
3) Unless otherwise specified, the final overall length of a multi-fiber cable assembly shall be measured or determined from the front of the multi-channel connectors and/or connector/terminus ferrule tip.

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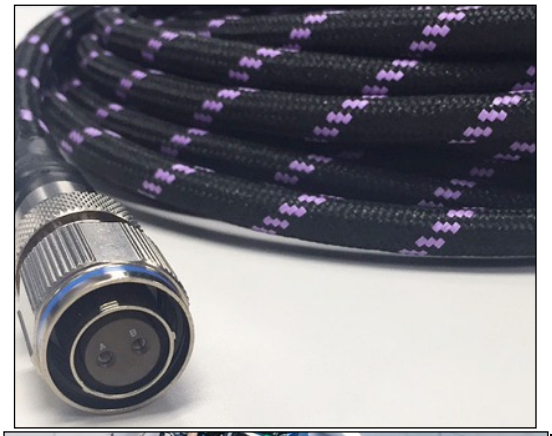
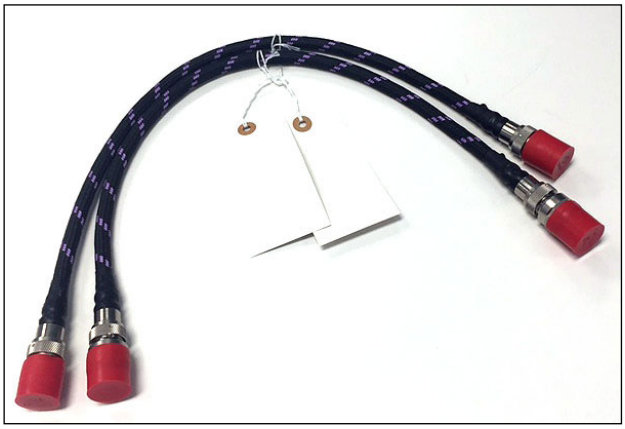
COTSWORKS produces the highest quality cable assemblies for aerospace, military, and industrial applications. 100% of the termination end-face geometry and end-face quality is inspected after being polished with manual and automated software. The cables are also 100% measured for Insertion Loss performance. Return Loss is an available testing option. A final visual inspection after all the appropriate industry and best practices are followed is performed along with optional serialization. All operators are trained in several industry standards.





In addition to the cable assemblies, COTSWORKS supports our customers with on-site training, cable installation, testing, and troubleshooting using the latest optical test equipment for maintenance of avionics, vetronics, and industrial networking applications.