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ARINC 801 Fiber Optic Interconnects for Aerospace & Defense

A Complete End-to-End Solution
Featuring Connectors,
Termini & Cable Harnesses



ITT

ENGINEERED FOR LIFE

We Connect

the Aerospace & Defense Industry
with High-Speed Data, Video & Signal Transmission

From in-flight entertainment and ground-based communications, to military avionics and shipboard navigation, Cannon's ARINC 801 Fiber Optic interconnect solutions satisfy the Aerospace & Defense Industry's increasing demand for fast, reliable and secure data transmission, even in the in harshest environments.

The ITT Cannon Difference

- Proven application expertise
- Global capabilities & local support
- Unrivalled customization expertise
- A committed innovator & business partner

About ITT

ITT is a diversified leading manufacturer of highly engineered critical components and customized technology solutions for the energy, transportation and industrial markets. Building on its heritage of innovation, ITT partners with its customers to deliver enduring solutions to the key industries that underpin our modern way of life. Founded in 1920, ITT is headquartered in White Plains, N.Y., with employees in more than 35 countries and sales in a total of approximately 125 countries. For more information visit www.itt.com



ARINC 801 Fiber Optic Interconnects for commercial, military and shipboard applications



Designed for use in applications that require the quick and accurate data transfer, Cannon's ARINC 801 Fiber Optic Connectors are capable of operating at transmission speeds of 10 gigabits/sec (Gb/S) or more.

Built for optimum performance in extreme conditions, our ARINC 801 Fiber Optic Solutions deliver signals, video and data when it matters most.



Key Markets & Applications



Commercial Aerospace

Avionic Platforms, IFE, Signal, Video & Data Transmission, Navigation, Imaging, Sensing



Military

Remote Communications & Ground-Based, Navigation, Imaging, Sensing, Signal & Data Transmission



Shipboard Systems

Marine Transports, Navigation & Communications, Signals, Data & Signal Transmission

Built for optimum performance
in harsh environments.

Transmitting signals, video and
data when it matters most.

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Why Cannon?



- Robust, highly engineered ARINC 801 fiber optic connector series enables high-speed transmission of data, video and signals in extreme conditions and harsh environments
- Complete end-to-end solution includes connectors, termini & cable harnesses
- Use less power without sacrificing security or integrity
- Cost-efficient design for use in multiple markets and applications
- Comprehensive fiber optic manufacturing capabilities including testing, inspection and polishing (Flat, APC, PC)
- Complex assembly of a variety of cable constructions

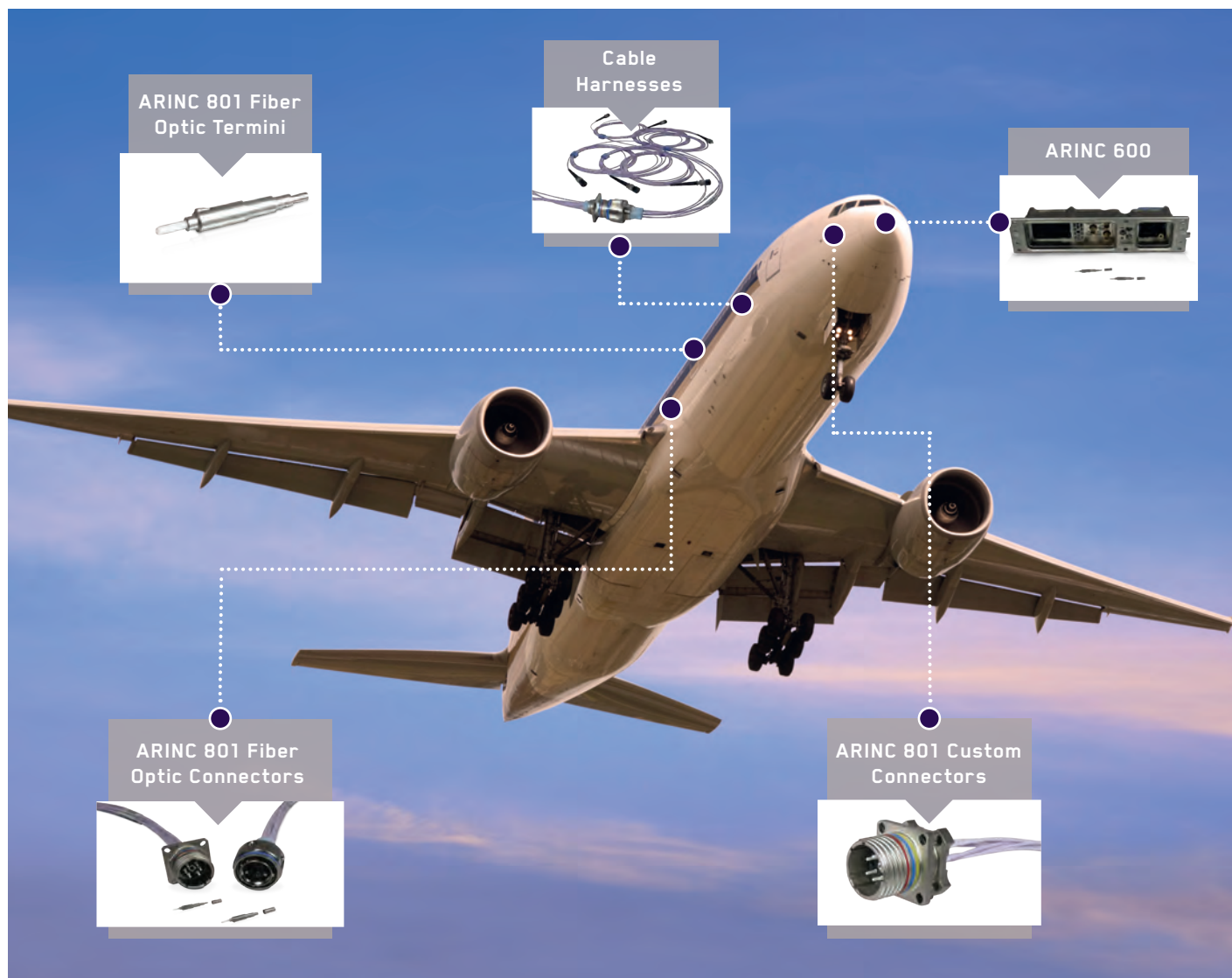
Fast, Lightweight & Highly Reliable



ITT Cannon's ARINC 801 Fiber Optic Series offers a complete line of Connectors, Termini and Cable Harnesses that enable the transmission of high speed data, video and signal transmission in harsh environments, where integrity and reliability are mission critical.

We offer complete fiber optic manufacturing services including testing, inspection and polishing (Flat, APC, PC), as well as complex assembly of a variety of cable constructions.

All capabilities are performed by our technicians and team members who are highly skilled and trained in the manufacturing and assembly of fiber optic interconnects.



Key Features

- Cannon's Size #16 Termini comply with ARINC 801 requirements
- Low loss termini with precision alignment features
- Termini designs available in both Pull-Proof and Non-Pull Proof types
- End-face finishes available in both APC and PC
- Genderless termini provide a common solution for plug and receptacle applications
- Removable alignment sleeve allows for easy field cleaning
- ARINC 801 Fiber Optic Connectors include a scoop-proof design that offers alternate keying positions
- Several standard ARINC 600 insert arrangements are available for Cannon's Rack & Panel connector family

Product Testing & Results*

Performance Characteristic

Insertion Loss, 0.30 dB Max

Return Loss, -20 dB Max

Termini Retention Force

Connector Coupling Forces

Connector Coupling Durability

Maintenance Aging

Thermal Cycling

Temperature Life, 1000 hours

Termini Walk-out Resistance

Vibration

Mechanical Shock

Humidity

Salt Spray

Test Method

TIA/EIA-455-171, Method D1(Multimode) D3 (Singlemode)

TIA/EIA-455-107

TIA/EIA-364-38B

TIA/EIA-364-13B, Type 1 Connectors per M38999

TIA/EIA-455-21, 100 Cycles

TIA/EIA-364-24B

TIA/EIA-455-3, Condition A-2

TIA/EIA-455-4C

ARINC 801, Para 2.4.5.4

TIA/EIA-455-11C, Cond. VI-A

TIA-455-14-A, Cond. A

TIA/EIA-455-5C, Method A, Exposure Time A.

TIA/EIA-455-16

*Full Qualification testing in progress

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ARINC 801 Termini for Aerospace

How to Order | Part Number Configurator



Descriptive Part Number

ARC / T - 1 - PP 125A

Series

Termini Assembly (Genderless)

Cable Jacket Ø (Dash No) - See Table 1

PP = Pull-Proof (Loose structure cable) NPP = Non-Pull Proof (tight structure cable or 900 micron buffer)

Ferrule Diameter A - See Table 2

Table 1

Dash No	Cable Micron Ø
1	900 Micron Buffer Only
2	2.0/1.7mm

Table 2

Ferrule ØA	Fiber Type	Ferrule Polish Type
125A	Singlemode 9/125	APC
125P	Micron Fiber	PC
1255A	Singlemode 9/125	APC
1255P	Micron Fiber	PC
126A	Singlemode 9/125	APC
126P	Micron Fiber	PC
126A	Multimode 50/125 or	APC
126P	62.5/125 Micron Fiber	PC

Material / Finish

- Ferrule: Zirconia Ceramic
- Terminus Body: Brass Alloy/Nickel
 - Crimp Sleeve: Brass Alloy/Nickel
 - Spring: Stainless Steel/Passivate

Notes

- Crimp sleeve is packaged loose with terminus assembly. Spares may be ordered separately, consult factory.
- Termini for 900 Micron buffer are not provided with crimp sleeves

ARC 38999-Style Series III with ARINC 801 Inserts

How to Order | Part Number Configurator



ARC38999-Style / 26 F D 6 P N XXXX

Series

Shell Style

/20: Wall-mount receptacle
/24: Jam-nut receptacle
/26: Straight plug

Service Class

Class F: Aluminum shell, Electroless nickel finish
Class W: Aluminum shell, OD Cad over electroless nickel finish
Class M: Composite shell, Electroless nickel finish
Class J: Composite shell, OD Cad over electroless nickel finish
Class K: Stainless steel shell, Passivated finish

Shell Size Code

Shell Size:	11	13	15	17	19	21	23	25
Shell Code:	B	C	D	E	F	G	H	J

Insert Arrangement (See Chart)

Shell Size:	B	C	D	E	F	G	H	J
Shell Code:	2	4	6	8	12	16	24	32

Termini (Pin or Socket)

P – With ASR (Standard for Plug)
S – Without ASR (Standard for Receptacle)

Alternate Positions

N (Normal) A,B,C, D & E

Modification Code

Consult Factory for Modification Codes (Omit for None)

Other connector styles available upon request

MATERIAL / FINISH

- Shells, Barrel, Coupling Nut: See above
- Inserts: Aluminum Alloy/Adonize
- Guide Pins: Stainless Steel / Passivate
- Seals: Fluorosilicone
- EMI/RFI/Ground Spring: Copper Alloy/Nickel

NOTES

- Alignment Sleeve Retainer (ASR) is supplied with plug connector only and may be ordered separately.

Alignment Sleeve Retainer (ASR)

How to Order | Part Number Configurator



Insert Assembly Table

Insert Assembly with Cavity Marking for Plug Connectors	Insert Arrangement
195-3001-100	11-02
195-3001-101	13-04
195-3001-102	15-06
195-3001-103	17-08
195-3001-104	19-12
195-3001-105	21-16
195-3001-106	23-24
195-3001-107	25-32
195-1021-000	BKA 12 Position

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MATERIAL / FINISH

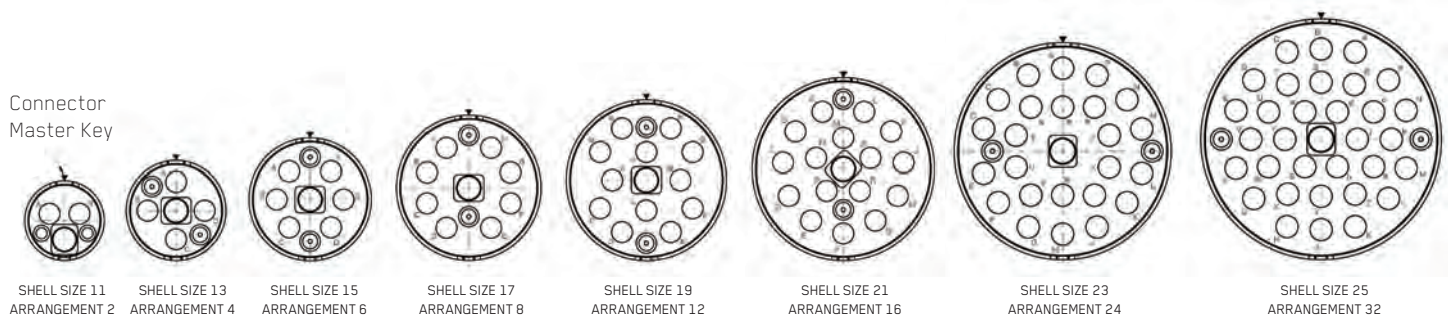
- Housing: Aluminum Alloy/Adonize
- Misc. Hardware: Stainless Steel / Passivate
- Alignment Sleeve: Zirconia Ceramic

NOTES

- Alignment sleeve retainer is designed to meet or exceed all mechanical and performance requirements of ARINC 801 specification
- Ceramic alignment sleeve replacements may be purchased separately

ARINC 801 Insert Arrangements

Connector Master Key



BKA Rack & Panel Connectors with ARINC 801 ASR

How to Order | Part Number Configurator



	BKA	R	D	2	QF203	M	3	00	01 *	F0
Connector Series										
RoHS										
Class										
Shell Size										
Connector Layout Description										
Size 1 Coax Insert Modifier										
Shell Style										
Connector Mounting Modifier										
Polarizing Position										
Modifier (Contact, Finish, Material)										

* = For Polarizing Position greater than 99, add third digit.

Insert	Description
17Q2	12x #16 Optical, 3x #16, 2x #8 (Quadrax)
12F5C2	5x #16 Optical, 4x #12, 1x #16, 2x #5 (Coax)
20F12T8	12x #16 Optical, 8x #8 (Twinax)
20F12Q8	12x #16 Optical, 8x #8 (Quadrax)
36F36	36x #16 Optical



17Q2



12F5C2



20F12T8



20F12Q8



36F36

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