

# GORE® Fibre Channel Cables (Quadrax, 150 Ohms)



This cable enhances noise immunity and EMI suppression while maintaining consistent signal integrity at data rates up to 1 GHz in hazardous aircraft environments (Table 1). Using the field-cancellation properties of a balanced cable design, it can transmit two differential signals within the same shield without interfering with each other.

Gore's low-dielectric cable geometry maximizes the performance of quadrax cable constructions. The cable diameter is 40% smaller, which makes it inherently lighter weight without jeopardizing toughness (Figures 1 and 2). The excellent flexibility and tight bend radius of this cable also make initial routing easier for aircraft maintainers.

Gore's high-speed fibre channel interconnect has been proven on many commercial, business, and defense aircraft such as the Falcon 7X, F-16, F-18, and AV-8B.

## Typical Applications

- Active electronically scanned arrays (AESA)
- Advanced mission computers
- Cabin/flight management systems
- Tactical aircraft moving maps

## Standards Compliance

- ABD0031 (AIMT 2.0005); BSS7230; FAR Part 25, Appendix F, Part I: Flammability
- ABD0031 (AIMT 3.0005); BSS7239: Toxicity
- ABD0031 (AIMT 3.0008B); BSS7238; FAR Part 25, Appendix F, Part V: Smoke Density
- ANSI/NEMA WC 27500: Environmental Testing, Jacket and Marking
- ANSI X3.303: Fibre Channel Physical and Signaling Interface-3 (FC-PH-3)
- EN3475-503: Test Methods for Scrape Abrasion
- SAE AS4373™: Test Methods for Insulated Electric Wire (Contact Gore for available data)

Table 1: Cable Properties

## Electrical

Property	Value
Standard Impedance Ohms	150 ± 10
Typical Operating Voltage V	< 15
Nominal Velocity of Propagation %	87
Nominal Time Delay ns/m (ns/ft)	4.0 (1.22)
Capacitance pF/m (pF/ft)	28.2 (8.6)
Typical Skew Within Pair ps/m (ps/ft)	3.0 (0.9)
Dielectric Withstanding Voltage Vrms	
Conductor-to-Conductor	1500
Conductor-to-Shield	1000

## Mechanical / Environmental

Property	Value
Jacket Material	FEP
Jacket Color	Black
Conductor	Silver-Plated Copper Alloy
Conductor Color-Coding	Black/White Stripe, Blue/White Stripe, Green/White Stripe, Solid White
Dielectric Material	ePTFE
Temperature Range °C	-65 to +200

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Figure 1: : Tough Construction

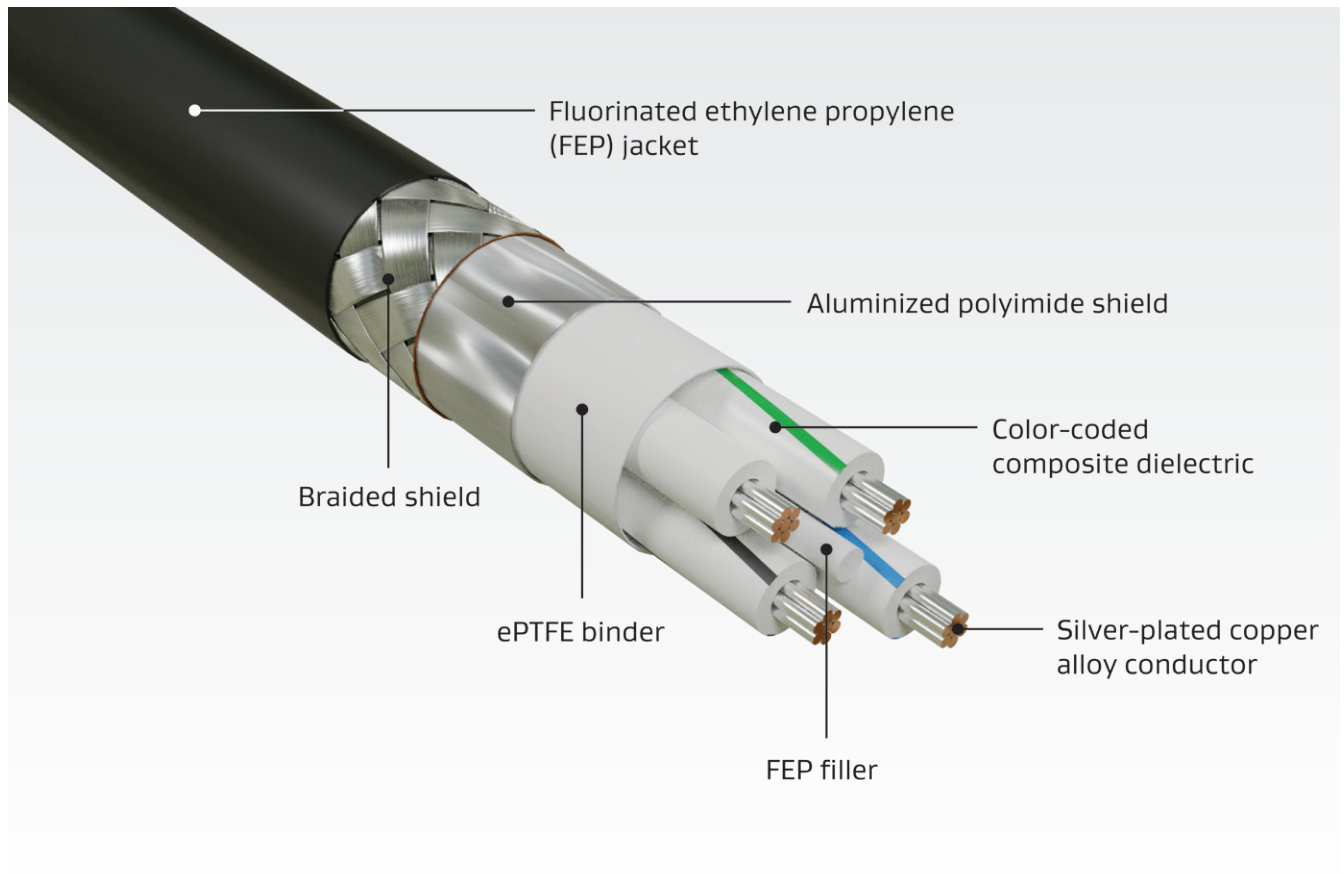
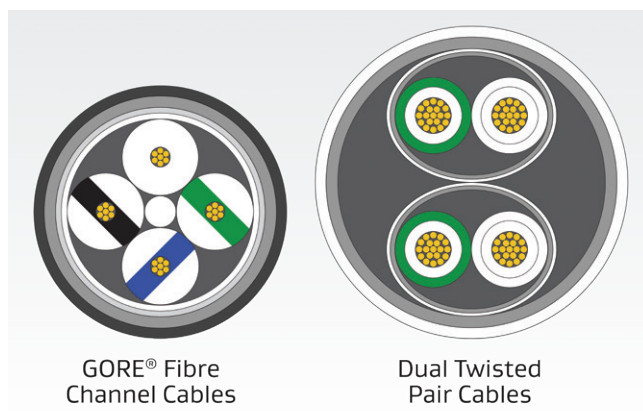


Figure 2: Low-Dielectric Cable Geometry



**Table 2: Cable Characteristics**

Gore Part Number	AWG Size (Stranding)	Nominal Outer Diameter mm (in)	Minimum Bend Radius mm (in)	Nominal Weight kg/km (lb/1000 ft)	Typical Insertion Loss dB/30 m (100 ft)
					500 MHz
RCN8328	26 (7/34)	4.8 (0.19)	25.0 (1.00)	34.0 (22.9)	10.0

### Contact-Connector Options

GORE® Fibre Channel Cables are designed to fit a variety of high-speed aerospace and defense connector systems and backshells such as ARINC and MIL-STD-38999 with size 8 contacts. Please contact the specific manufacturer such as Amphenol® and Glenair® for exact part numbers, tooling information, and termination instructions.

### Ordering Information

GORE® Fibre Channel Cables are available in a standard size (Table 2). Visit [gore.com/cable-distributors](http://gore.com/cable-distributors) for the list of distributors. In addition, visit [gore.com/hdrsamplerflyer](http://gore.com/hdrsamplerflyer) regarding Gore’s full inventory of sample products and lead times.

For more information or to discuss specific characteristic limits and application needs, please contact a Gore representative.

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