

GORE® Coaxial Cables (75 Ohms)



Typical Applications

- Avionics/vectronics displays
- HD streaming camera/video systems
- Remote-controlled turret cameras

Standards Compliance

- FAR Part 25, Appendix F, Part I: Flammability
- MIL-C-17G: Cables, Radio Frequency, Flexible and Semi-Rigid
- SMPTE 292M: Bit-Serial Digital Interface for High Definition Television (HDTV)
- SMPTE 424M: 3 Gb/s Signal/Data Serial Interface for HDTV
- SMPTE 2081-1: 6 Gb/s Signal/Data Serial Interface for HDTV
- SMPTE 2082-1: 12 Gb/s Signal/Data Serial Interface for HDTV

Our cables are designed specifically for 4K video interface systems operating at 75 ohms (Table 1). They optimize signals and video transmission with ultra-low loss up to 6 GHz while maintaining controlled impedance. They are also proven to provide outstanding shielding effectiveness for less RF interference among electronics. They meet and even exceed stringent industry requirements while also meeting standards set forth by the Society of Motion Picture and Television Engineers (SMPTE).

These coaxial cables significantly reduce size and weight without jeopardizing mechanical strength and electrical reliability than standard legacy RG coaxial cables (Figure 1). They are also easier to install in aircraft and defense vehicles with overcrowded areas because of the smaller diameter that increases flexibility with a tighter bend radius.

With complete mechanical and electrical reliability, our coaxial cables save weight and reduce operating costs — making them an ideal replacement for legacy RG coaxial cables.

Table 1: Cable Properties

Electrical

Property	Value
Signal Transmission Speed GHz	Up to 6
Standard Impedance Ohms	75 ± 2
Typical Operating Voltage V	< 420
Nominal Velocity of Propagation %	83
Nominal Time Delay ns/m (ns/ft)	4 (1.26)
Capacitance pF/m (pF/ft)	53.2 (16.2)
Shielding Effectiveness dB through 2 MHz	> 100
Nominal Dielectric Constant	1.4

Mechanical / Environmental

Property	Value
Jacket Material	Engineered Fluoropolymer
Jacket Color	White (Laser Markable)
Conductor	Silver-Plated Copper
Dielectric Material	Expanded PTFE
Temperature Range °C	-55 to +200

GORE® Coaxial Cables (75 Ohms)

Figure 1: Small, Lightweight Construction

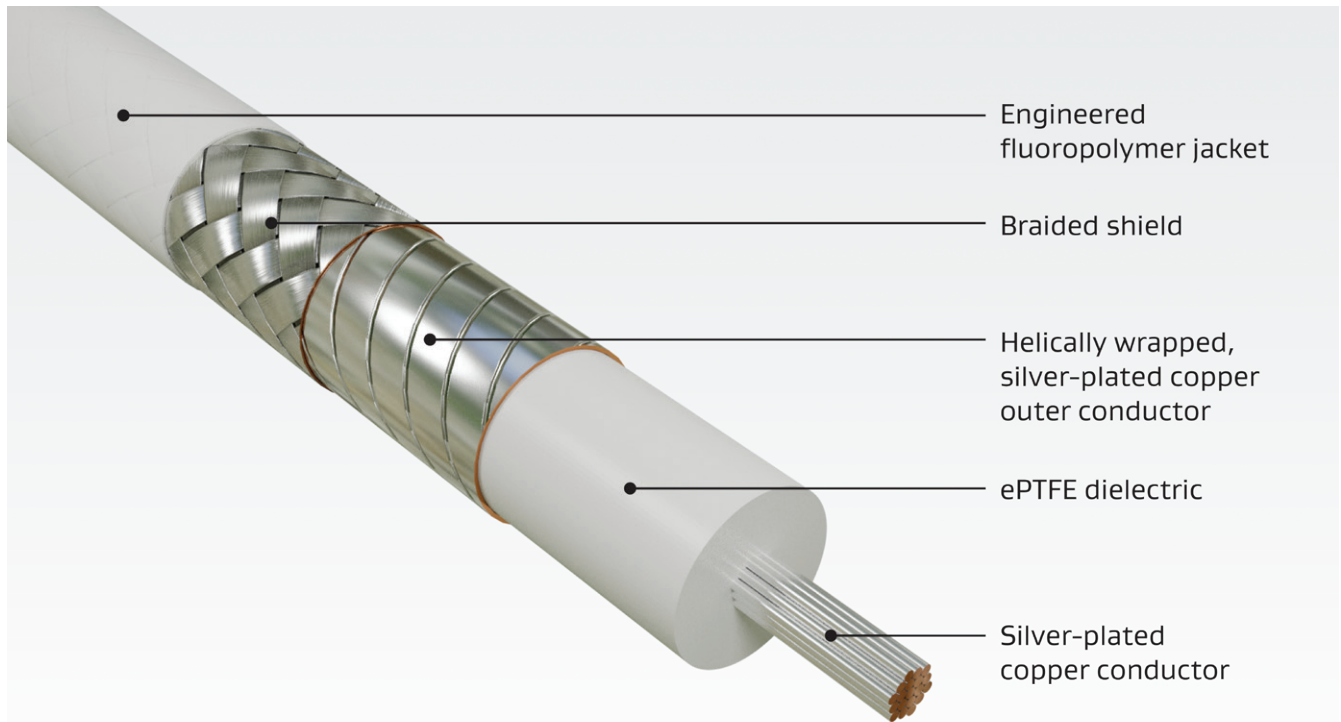


Table 2: Cable Characteristics

Insertion loss values are based on the maximum recommended use length.

Gore Part Number	AWG Size (Stranding)	Maximum Outer Diameter mm (in)	Minimum Bend Radius mm (in)	Nominal Weight kg/km (lb/1000 ft)	Typical Insertion Loss dB/30 m (100 ft)		Legacy RG Coaxial Cable Replacement
					3 GHz	6 GHz	
CXN3671	22 (19/34)	4.85 (0.19)	30.5 (1.2)	42.1 (28.3)	17.6	31.4	6, 59, 302

Gore Part Number	AWG Size (Stranding)	Maximum Outer Diameter mm (in)	Minimum Bend Radius mm (in)	Nominal Weight kg/km (lb/1000 ft)	Typical Insertion Loss dB/15 m (50 ft)		Legacy RG Coaxial Cable Replacement
					3 GHz	6 GHz	
CXN3680	26 (19/38)	2.54 (0.10)	16.0 (0.63)	17.0 (11.4)	17.06	24.76	174

Ordering Information

The 75-ohm version of GORE® Coaxial Cables is available in standard sizes (Table 2). To place an order, contact an authorized distributor for in-stock availability at gore.com/cable-distributors. For more information or to discuss specific characteristic limits and application needs, contact a Gore representative today at gore.com/aerospace-defense-contact.



Gore's 75-ohm coaxial cables for IFE systems are proven to save 22 kg (48 lb) on commercial aircraft.

Information in this publication corresponds to W. L. Gore & Associates' current knowledge on the subject. It is offered solely to provide possible suggestions for user experimentations. It is NOT intended, however, to substitute for any testing the user may need to conduct to determine the suitability of the product for the user's particular purposes. Due to the unlimited variety of potential applications for the product, the user must BEFORE production use, determine that the product is suitable for the intended application and is compatible with other component materials. The user is solely responsible for determining the proper amount and placement of the product. Information in this publication may be subject to revision as new knowledge and experience become available. W. L. Gore & Associates cannot anticipate all variations in actual end user conditions, and therefore, makes no warranties and assumes no liability in connection with any use of this information. No information in this publication is to be considered as a license to operate under or a recommendation to infringe any patent right.

NOTICE — USE RESTRICTIONS APPLY. Not for use in food, drug, cosmetic or medical device manufacturing, processing, or packaging operations.

GORE, *Together, improving life*, and designs are trademarks of W. L. Gore & Associates. © 2023 W. L. Gore & Associates, Inc.

