# GORE® Coaxial Cables (75 Ohms)

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.

### 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

**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**

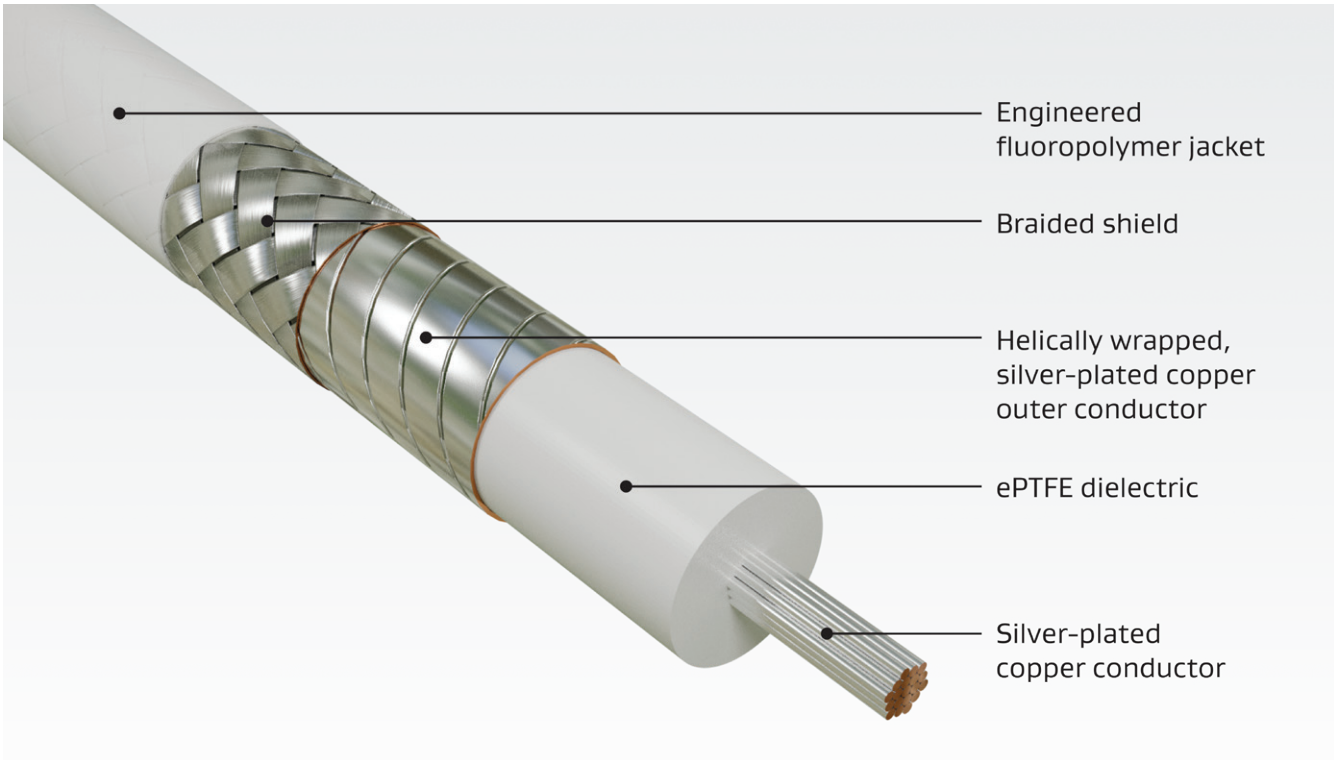


**Table 2: Cable Characteristics**

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.

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