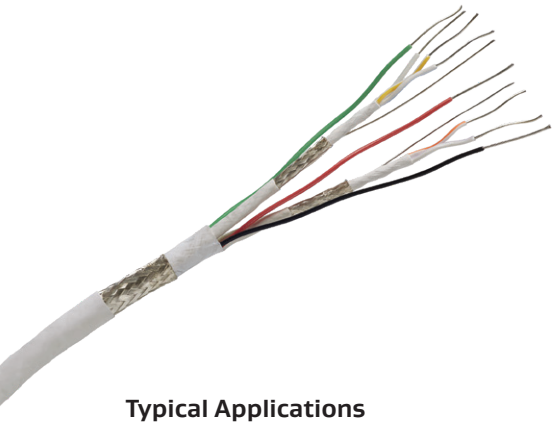
GORE® USB Cables (2.0 / 3.0 / 3.1)



Each version of these cable bundles equally deliver non-stop signal transmission up to 10 Gb/s ensuring high volumes of data and video are uploaded and downloaded instantly (Table 1). They also support the latest power management systems allowing soldiers, passengers, and aircrews to charge carry-on devices quickly and easily without delays.

In addition, these sturdy cable bundles provide added protection that withstands extreme air and land environments for lifetime service (Figure 1). Gore's USB cables have been proven to meet complex design requirements and stringent industry standards for soldier systems and small at-seat modules in commercial aircraft.

Typical Applications

- Content loading
- Data transfer
- Electronic flight Bag (EFB)
- HD streaming video systems
- Peripheral/sensor networking
- Portable electronic devices
- Power remote devices
- Soldier systems
- Vehicle/dismount connectivity

Standards Compliance

- ABD0031 (AITM 3.0005); BSS7239: Toxicity
- ABD0031 (AITM 3.0008B); BSS7238; FAR Part 25, Appendix F, Part V: Smoke Density
- ANSI/NEMA WC 27500: Environmental Testing, Jacket and Marking
- CS/FAR Part 25, Section 25.853, Appendix F, Part I (b)(7): Flammability
- SAE AS4373™: Test Methods for Insulated Electric Wire (Contact Gore for available data)
- VG95218-31: Performance Requirements (GSC-01-85201-VG)

Table 1: Cable Properties

Electrical

Property	Value
Signal Transmission Speed Gb/s	Up to 10
Standard Impedance Ohms High-Speed Pairs Low-Speed Pairs	 90 ± 5 90 ± 10
Typical Operating Voltage V	< 15
Nominal Velocity of Propagation %	80
Nominal Time Delay ns/m (ns/ft)	4.07 (1.24)
Capacitance pF/m (pF/ft)	50.0 (15.2)
Maximum Skew Within Pair[a] ps/m (ps/ft)	15.0 (4.6)
Dielectric Withstanding Voltage Vrms Conductor-to-Conductor Conductor-to-Shield	 1500 1000

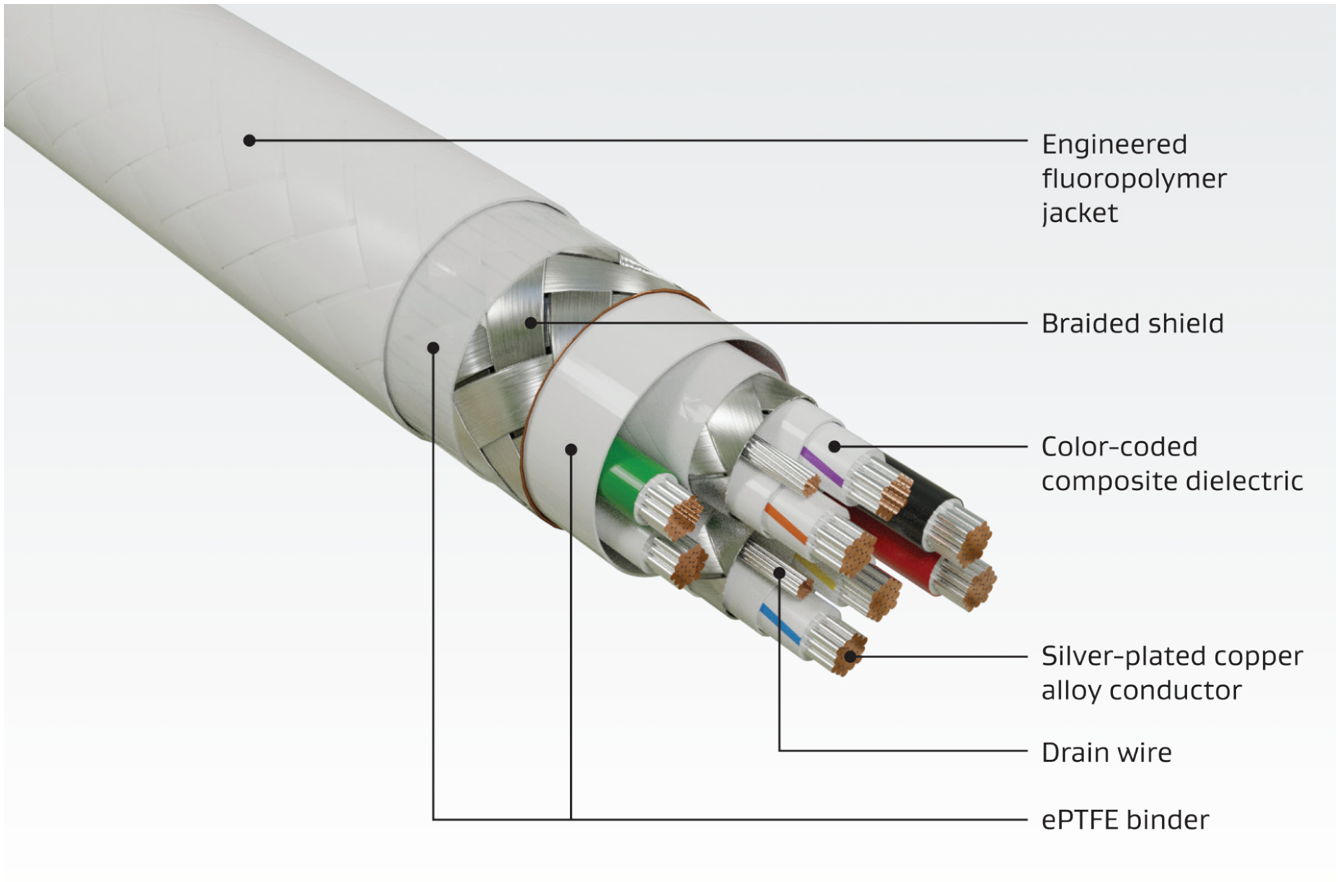
Mechanical / Environmental

Property	Value
Jacket Material	Engineered Fluoropolymer or PU Halogen-Free[b]
Jacket Color	EF: White (Laser Markable) PU: Black[b]
Conductor	Silver-Plated Copper Alloy
Conductor Color-Coding	High-Speed Pairs: Blue/White, Yellow/White, Orange/White, Violet/White Low-Speed Pairs: Green/White Power Pair: Black/Red
Dielectric Material	Expanded PTFE/PTFE
Temperature Range °C	-65 to +200

a. Shielded twisted pairs only.
b. Based on Gore's part number GSC-01-85201-VG for military vehicle systems.

GORE® USB Cables (2.0/3.0/3.1)

Figure 1: Sturdy Cable Bundle



Cable Preparation

Laser stripping is the ideal method to prep GORE® USB Cables. Alternatively, Gore recommends using thermal or sharp mechanical strippers. Also, a unique method is to make a short, horizontal slit in the jacket material, peel it back to allow for contact termination and return the jacket to its original position for a neat closure (Figure 2). For more information regarding cable preparation, contact a Gore representative.

Connector Systems & Backshells

GORE® USB 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. Contact the specific manufacturer such as Amphenol® and Glenair® for exact part numbers, tooling information, and termination instructions.

Figure 2: Peel-Back Method

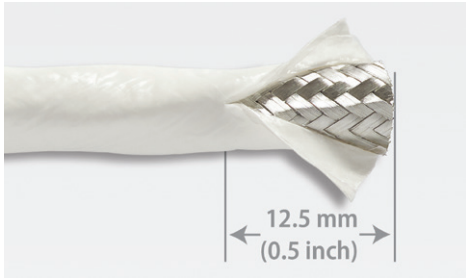


Table 2: Cable Characteristics

2.0 Version

Gore Part Number	AWG Size (Stranding)	Nominal Outer Diameter mm (in)	Minimum Bend Radius mm (in)	Nominal Weight kg/km (lb/1000 ft)	Nominal Insertion Loss dB/1 m (3.28 ft)		
					96 MHz	200 MHz	400 MHz
RCN8800-22D-22P-H	Data Pair: 22 (19/34) Power Pair: 22 (19/34)	5.1 (0.20)	15.0 (0.60)	52.0 (35.0)	0.33[a]	0.55[a]	1.00[a]
RCN8800-24D-22P-H	Data Pair: 24 (19/36) Power Pair: 22 (19/34)	4.8 (0.19)	13.0 (0.50)	48.0 (32.0)	0.33[a]	0.55[a]	1.00[a]
RCN8800-26D-24P-H	Data Pair: 26 (19/38) Power Pair: 24 (19/36)	4.3 (0.17)	10.0 (0.39)	46.1 (31.0)	0.42	0.71	1.29

3.0 Version

Gore Part Number	AWG Size (Stranding)	Nominal Outer Diameter mm (in)	Minimum Bend Radius mm (in)	Nominal Weight kg/km (lb/1000 ft)	Nominal Insertion Loss dB/1 m (3.28 ft)			
					1250 MHz	2500 MHz	5000 MHz	7500 MHz
GSC-01-85201-VG	Data Pair: 26 (19/38) Power Pair: 22 (19/34)	8.0 (0.31)	40.0 (1.58)	97.0 (65.1)	1.70	2.50	3.90	5.00

3.1 Version

Gore Part Number	AWG Size (Stranding)	Nominal Outer Diameter mm (in)	Minimum Bend Radius mm (in)	Nominal Weight kg/km (lb/1000 ft)	Nominal Insertion Loss dB/1 m (3.28 ft)			
					1250 MHz	2500 MHz	5000 MHz	7500 MHz
GSC-03-84761-24D	Data Pair: 26 (19/38) Power Pair: 24 (19/36)	5.8 (0.23)	Static (< 20 bends): 15.0 (0.59) Dynamic: 60.0 (2.36)	65.0 (43.7)	1.70	2.50	3.90	5.00

a. Values are limited in length due to timing of protocol.

Samples & Ordering Information

GORE® USB Cables are available in standard sizes (Table 2). To place an order, contact an authorized distributor for in-stock availability at **gore.com/cable-distributors**. To view our full inventory and order complimentary samples of selected products for prototyping and evaluation in your application, visit **gore.com/hsdc-sample-inventory-air-defense.**

For more information or to discuss specific characteristic limits and application needs, contact a Gore representative today at **gore.com/aerospace-defense-contact.**

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