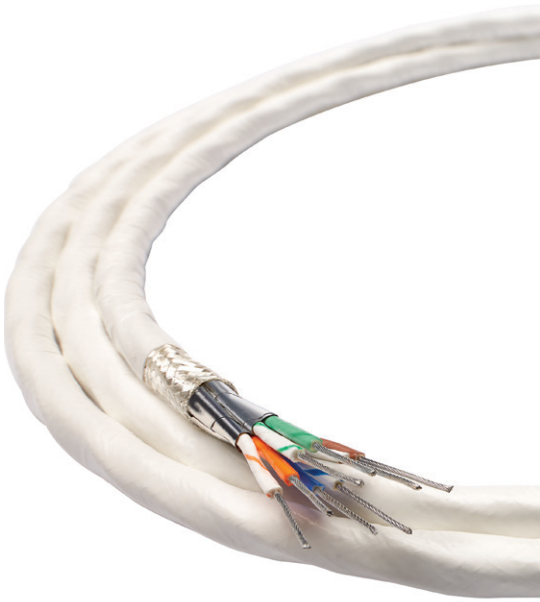
GORE® High Speed Data Cables
Ultralight Solutions for Aerospace & Defense

GORE® Ethernet Cables (Ultralight Cat6A)



The new Ultralight Cat6A version of GORE® Ethernet Cables features a next-generation design with weight savings up to 25% compared to our standard Cat6A version and as much as 50% compared to many other leading alternatives. This lightest-in-class version can further help reduce fuel burn and improve payload and cargo efficiency without compromising overall performance.

Building on Gore's proven high-speed cable portfolio, our Ultralight Ethernet Cat6A version delivers the same mechanical robustness, exceptional signal integrity, and outstanding EMI shielding trusted in many critical systems (Table 1). It reliably transmits data and video up to 10G BASE-T at lengths up to 80 meters (262 feet). It is also qualified to the most stringent aerospace and defense requirements for performance, reliability, and compliance.

With GORE® Ethernet Cables (Ultralight Cat6A), OEMs and system designers can now use a single interconnect solution to advance electrification, connectivity, and mission and flight readiness.

Standards Compliance

- ABD0031 (AITM 2.0005); BSS7230; FAR Part 25, Appendix F, Part I: Flammability
- 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
- ANSI/TIA 568.2-D: Balanced Twisted Pair Telecommunications Cabling and Components
- IEEE 802.3: Ethernet 10G BASE-T
- SAE AS4373™: Test Methods for Insulated Electric Wire (Contact Gore for available data)

Typical Applications

- Electrical Wiring Interconnection System (EWIS)
- Avionics/vetronics digital networks
- Cabin/flight management & mission systems
- Data storage
- Ethernet backbone
- HD camera/video systems

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Table 1: Cable Properties

Mechanical / Environmental

	Value	
Property	**Ultralight**	**Standard**
Weight kg/km (lb/1000 ft)	RCN9265-24: 49.0 (34.0) RCN9265-26: 36.0 (25.0)	RCN8966-24: 65.5 (44.0) RCN8966-26: 49.0 (33.0)
Jacket Material/Color	Engineered Fluoropolymer / White (Laser Markable)	
Conductor	Sliver-Plated Copper Alloy Conductor	
Conductor Color-Coding	Solid Blue & White / Blue Stripe, Solid Orange & White / Orange Stripe, Solid Green & White / Green Stripe, Solid Brown & White / Brown Stripe	
Dielectric Material	Expanded PTFE / PTFE	
Temperature Range °C	-65 to +200	

Electrical

	Value	
Property	**Ultralight**	**Standard**
Signal Transmission Speed Gb/s	Up to 10	
Standard Impedance Ohms	100 ± 10	
Typical Operating Voltage V	< 48	
Nominal Velocity of Propagation %	80	
Nominal Time Delay ns/m (ns/ft)	4.10 (1.25)	
Capacitance pF/m (pF/ft)	42.6 (13.0)	
Minimum Near-End Crosstalk (NEXT) dB 10 MHz 100 MHz 500 MHz 1000 MHz 2000 MHz	 59.2 52.3 42.2 — —	
Shielding Effectiveness dB	> 55	
Dielectric Withstanding Voltage Vrms Conductor-to-Conductor Conductor-to-Shield	 1500 1000	

Meet Size, Weight & Routing Constraints

We engineer the Ultralight Cat6A version of GORE® Ethernet Cables in a high-density, 4-pair design — now even lighter — for significant weight reduction (Figures 1 and 2). The compact, flexible construction with a tighter bend radius also enables easier and faster routing through tight airframes and EWIS bundles for long-term mission and flight assurance.

System designers can now reduce platform weight and free up valuable payload and cargo capacity without compromising mechanical strength, electrical performance, or long-term reliability.

Figure 1: High-Density, Ultralight Construction

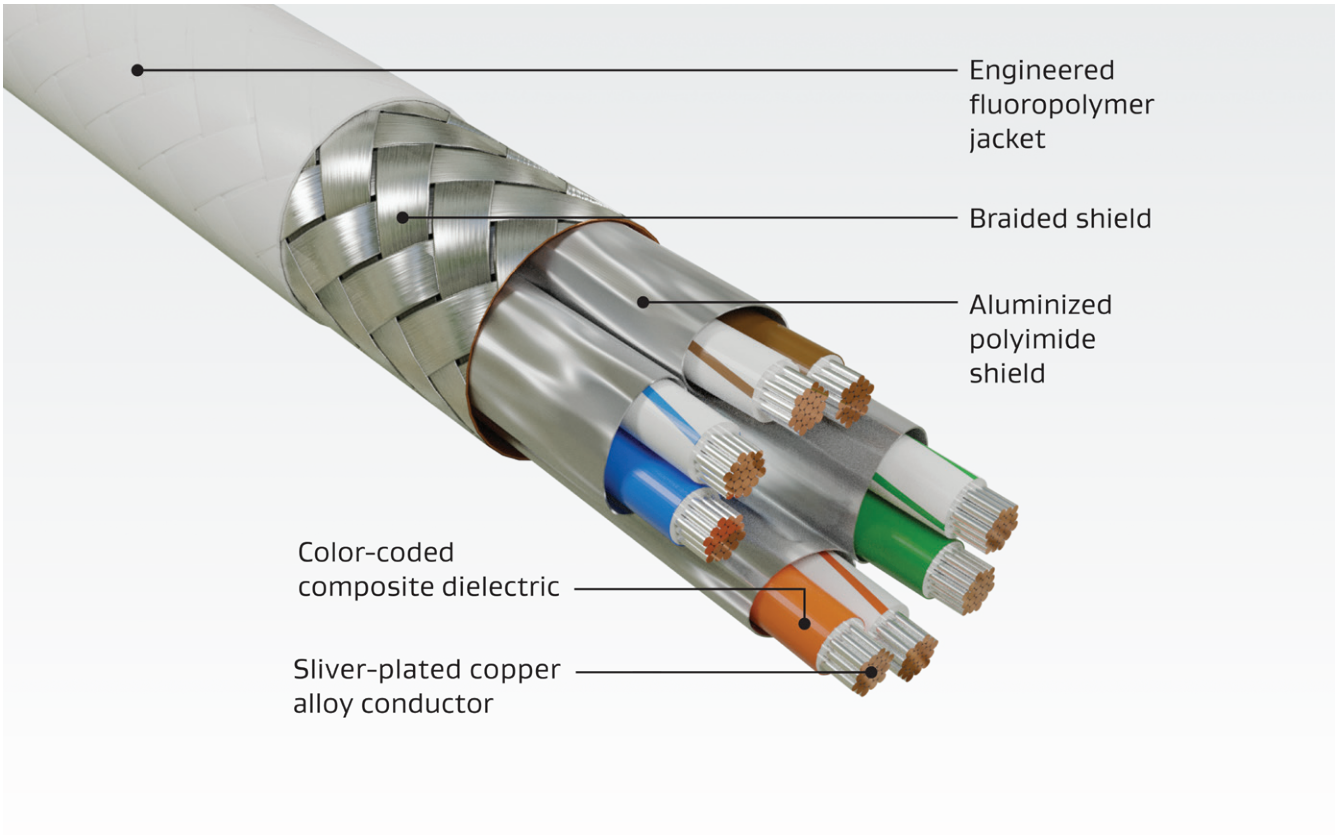
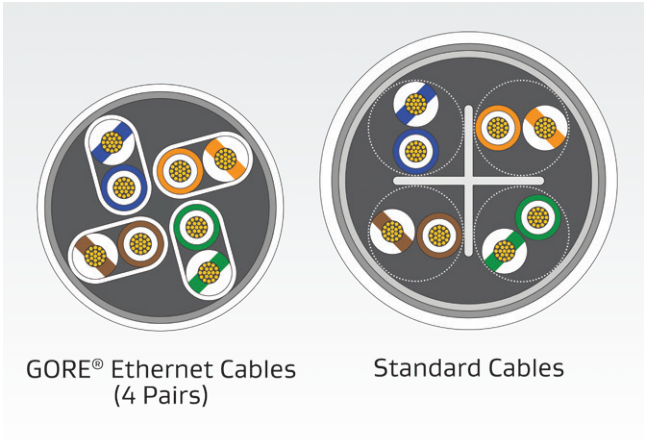


Figure 2: Reduced Ultralight Diameter



The Ultralight Cat6A version of GORE® Ethernet Cables is available in standard sizes (Table 2). Insertion loss values are based on the maximum recommended use length. Additionally, this version supports AS50881 EWIS specifications and is listed on the Qualified Products List (QPL).

Table 2: Cable Characteristics

Gore Part Number	AWG Size (Stranding)	Maximum Outer Diameter mm (in)	Minimum Bend Radius mm (in)	Nominal Weight kg/km (lbs/1000 ft)	Typical Insertion Loss dB/30 m (100 ft)		
					100 MHz	200 MHz	500 MHz
RCN9265-24	24 (19/36)	6.85 (0.26)	13.7 (0.54)	49.0 (34.0)	5.6	8.1	14.1
RCN9265-26	26 (19/38)	5.80 (0.23)	11.6 (0.46)	36.0 (25.0)	6.9	9.9	17.0

W. L. Gore & Associates
gore.com

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