

Custom Multicore Cables

Aptiv's multicore cables feature a variety of insulated conductors within one outer jacket. They are a lightweight, space-saving and reliable solution for signal, power and data transmission all in one cable. Built to your specified requirements, our multicore cables are suitable for aerospace, medical, defence, industrial and marine applications.

KEY FEATURES & BENEFITS

- Application-Specific – Designed to meet exact electrical, mechanical, and environmental needs
- Space & Weight Savings – Combines multiple cables into one compact design
- High Performance – Optimized materials and construction for signal integrity and power delivery
- Durable & Resistant – Withstands chemicals, oils, abrasion, UV, moisture, and extreme temperatures
- Reliable – Fewer failure points for consistent performance in harsh conditions
- Cost-Effective – Simplifies routing and reduces installation time and materials
- Integrated Design – Supports signal, power, coax, fiber, and even pneumatic/hydraulic lines
- Flexible Options – Available in high-flex and continuous-motion designs
- Shielded Protection – Configurable EMI/RFI shielding for sensitive applications

PRODUCT SPECIFICATIONS

Electrical Properties	
Voltage Rating	30V to 1000V (1kV); Dependent on insulation thickness and application
Insulation Resistance	$\geq 100 \text{ M}\Omega/\text{km}$ at 500 VDC
Current Rating	0.1A to 100A+ (per conductor)
Shielding Effectiveness	40 dB to 90 dB

Mechanical Properties	
Conductor Material	Bare Copper, Tinned Copper, Silver-Plated Copper, High-Strength Alloys
Insulation Material	PVC, PE, PP, TPE, TPES, FEP, ETFE, PFA, XLPE, PUR,
Jacket Material	PVC, PUR, TPE, FEP, ETFE, PFA, LSZH, Nylon, TPES
Number of Conductors	2 to 150+
Wire Gauge	36 AWG to 500 MCM
Shielding Type	Individual/Overall Foil, Braid (Copper/Tinned Copper), Spiral, Served
Outer Diameter	2 mm to 70 mm
Min. Bend Radius	3x to 20x cable O.D.
Flex Cycles	100,000 to 20 million cycles

PRODUCT SPECIFICATIONS CONTD.

Environmental Properties	
Operating Temperature	-60°C to +260°C
Chemical Resistance	Resistant to oils, greases, acids, alkalis, solvents, fuels
UV Resistance	Yes (sunlight resistant rated)
Moisture Resistance	Water-resistant, Submersible (for specific types)
Abrasion Resistance	High (for ruggedized jackets)
Flame Retardancy	UL VW-1, CSA FT4, IEC 60332, NFPA 79
RoHS and REACH Compliance	Compliant
Cold Bend/Impact	Rated for low temperatures
Halogen-Free	Available (LSZH versions)