



Aerospace & Avionics Data Bus & RF Cables

ASCB-C / ASCB-D

Avionics Standard Communications Bus Cable

ASCB-C / ASCB-D · 100 Ω / 120 Ω ± 6 Ω · 22–26 AWG SPC/Alloy · Foam FEP (78 % VoP) · Foil



ASCB-C & ASCB-D Bus

100 Ω / 120 Ω Twinax

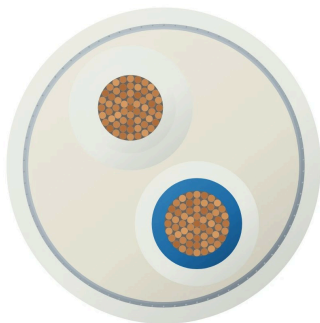
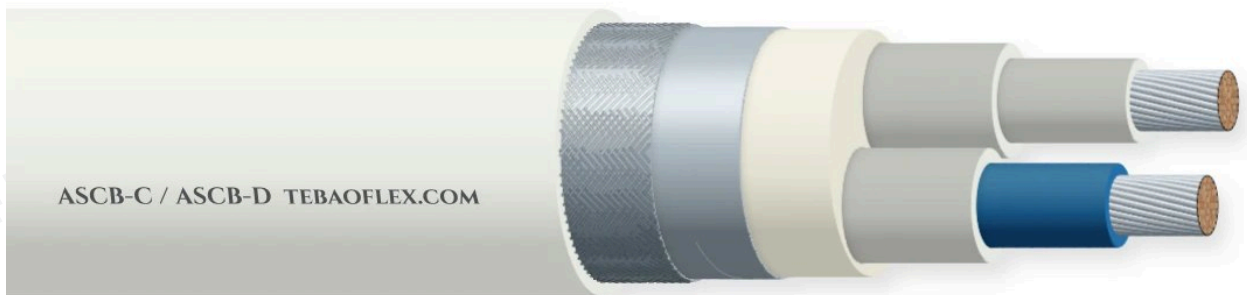
-55 to +200 °C FAR 25.853

Application

ASCB-C / ASCB-D Avionics Standard Communications Bus Cable is a high-integrity 100 Ω or 120 Ω fault-tolerant avionics data bus twinax/quadrax cable engineered for dual-redundant Integrated Modular Avionics (IMA), Primus Epic / SPZ-8000 flight control

Typical uses: Integrated Modular Avionics (IMA) Bays, Business & Regional Jet Flight Decks, Helicopter Dual-Redundant Bus Networks, Avionics Bench & Iron-Bird Simulators, MRO Cabin & Flight-Deck Retrofits

Construction



Cross-section, not to scale

1	19-strand SPC or Ag-Cu alloy conductors	AS22759 / ASCB Spec
2	Gas-injected foam FEP / PTFE dielectric	
3	100 % aluminised fluoropolymer/polyimide	MIL-DTL-27500
4	Silver-plated copper wire braid shield	MIL-DTL-27500
5	UV-laser-markable FEP / ETFE / PTFE	FAR 25.853

Technical data

Typical values

Characteristic impedance (ASCB-D)	100 Ω ± 5 Ω (ASCB-D) / 120 Ω ± 6 Ω (ASCB-C)
Velocity of propagation (VoP)	78.0 % – 80.0 % (4.20 ns/m delay)
Max. operating voltage	600 V rms
Operating temperature range	-55 °C to +200 °C continuous
Flammability & smoke rating	FAA FAR 25.853, ABD0031, BSS 7230
Cold-bend rating	-55 °C without cracking
Conductor gauges available	22 AWG, 24 AWG, and 26 AWG (19-strand)
Min. bend radius (fixed / install)	16 mm (5×D) / 32 mm (10×D)
Connector compatibility	Size 8 Twinax / Quadrx (D38999 & ARINC 600)
Aviation fluids & Skydrol	100 % resistant to Skydrol, Jet-A &
Wet/dry arc-tracking	Passes SAE AS4373 arc-track test
Abrasion resistance	Tough extruded FEP / ETFE / PTFE
Standards	ASCB-C (120 Ω) & ASCB-D (100 Ω) IMA Bus

Mutual pair capacitance	42.0 pF/m (120 Ω) / 46.5 pF/m (100 Ω)
Intra-pair propagation skew	≤ 1.5 ns / 100 m
Dielectric withstand test	1,500 V rms at 60 Hz
Storage temperature range	-65 °C to +200 °C
Thermal shock stability	-55 °C to +200 °C per AS4373
UV laser markability	High-contrast 355 nm UV laser printable
Outer jacket diameter (Twinax)	3.15 mm (Twinax) / 3.95 mm (Quadrx)
Nominal weight (24 AWG Twinax)	17.8 kg/km / 28.5 kg/km
Crush & vibration endurance	Closed-cell foam fluoropolymer
HIRF & lightning protection	100 % foil + ≥ 90 % SPC braid
Moisture & altitude sealing	Non-hygroscopic fluoropolymer core & sheath
RoHS / REACH status	Aerospace RoHS compliant

Sizes

4 standard constructions

Tick the sizes you need and send this page to info@tebaoflex.com or WhatsApp +86 185 9591 3361.

Order designation	Construction / Variant	Conductor	Outer Ø ≈ mm	Metal kg/km	Weight ≈ kg/km	Min. bend R fixed mm
Standard ASCB-C / ASCB-D variants 4 sizes						
☐ ASCB-C 120 Ω Twinax 1×2×24 AWG Foam FEP	120 Ω Pair + Foil + 90% SPC Braid	24 AWG (19×36 Alloy)	3.25	10.2	18.2	16
☐ ASCB-D 100 Ω Twinax 1×2×24 AWG Foam FEP	100 Ω Pair + Foil + 90% SPC Braid	24 AWG (19×36 Alloy)	3.10	10.2	17.5	16
☐ ASCB-D 100 Ω Quadrx 1×4×24 AWG Star-Quad	2× 100 Ω Pairs + Foil + SPC Braid	4 × 24 AWG (19×36)	3.95	19.5	28.5	20
☐ ASCB-C 120 Ω Twinax 1×2×22 AWG Long-Run	120 Ω Pair + Foil + 90% SPC Braid	22 AWG (19×34 SPC)	3.65	15.0	25.4	18

– Dimensions and weights are nominal production values subject to manufacturing tolerances per ASCB-C / ASCB-D Avionics Bus / MIL-DTL-27500.

Impedance, capacitance & electrical data

4 sizes

Configuration	Max. conductor DC R Ω / km @ 20 °C	Characteristic Z ₀ Ω	Capacitance pF / m	Velocity VoP %	Test voltage V rms
120 Ω Pair + Foil + 90% SPC Braid	1.5	100	48.0	78	1,500
100 Ω Pair + Foil + 90% SPC Braid	1.5	100	48.0	78	1,500
2× 100 Ω Pairs + Foil + SPC Braid	1.5	100	48.0	78	1,500
120 Ω Pair + Foil + 90% SPC Braid	1.6	100	48.0	78	1,500

– Transmission parameters measured at 1–100 MHz (+20 °C) in accordance with ASCB-C / ASCB-D Avionics Bus / MIL-DTL-27500.

Standards and approvals

- ✓ ASCB-C (120 Ω) & ASCB-D (100 Ω)
- ✓ MIL-DTL-27500 / SAE AS6070
- ✓ FAA FAR 25.853 / ABD0031

Certifications



Management systems: ISO 9001, ISO 14001, ISO 45001

Request a quotation

Send the size, length and destination. An application engineer replies within 2 business hours.

WhatsApp / phone

+86 185 9591 3361

Email

info@tebaoflex.com

Web

tebaoflex.com/cables/ascb-c-ascb-d-avionics-standard-communications-bus-cable



Typical values for this cable type, based on ASCB-C / ASCB-D Avionics Bus / MIL-DTL-27500. Values for your order are confirmed in the quotation. Subject to change without notice. Jiangsu Tebaoflex Special Cable Co., Ltd., Taicang, Jiangsu, China.