

Custom designed  
cables and  
interconnect systems  
for medical  
applications



**axon'**  
CABLE & INTERCONNECT



**AMGAB**  
SPECIALKABEL



## Custom designed cables and interconnect systems for medical applications

Axon' Cable specialises in the design and manufacture of custom designed cables and assemblies for medical applications. The company's know-how is based on its expertise in various fields :

- Conductor design and manufacture
- Composite cables
- Jacket and tube extrusion
- Plastic injection moulding and overmoulding
- Interconnect technologies
- High performance custom designed connectors

The company specialises in offering **one-stop shop** interconnect solutions based on :

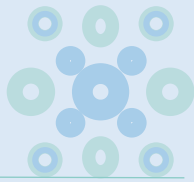
- Miniaturisation
- Flexibility (qualification with our own test capabilities on request)
- Flex life
- Biocompatibility and sterilisation : autoclaveable cables and assemblies (Medical approvals : ISO 10993, USP XXIII class VI)
- Antibacterial materials
- Hydrophobic materials
- Robust overmoulding
- High cosmetic quality
- Non magnetic cables and assemblies
- EMI protection
- Materials in compliance with RoHS directives

## Applications

- External systems for medical implants
- Patient care : monitoring, patient diagnostics
- Dental equipment
- Endoscopy
- Medical imaging
- X-ray & Magnetic Resonance Imaging (MRI)
- Ultrasound probes
- Biological analysis
- Beauty therapy systems
- ECG : heart sensors
- Oxymetry : blood oxygen saturation monitoring



# Expertise in polymer technologies



- Biocompatibility and sterilisation : Silicon, PU, TPE, PVC compounds tested to USPXXIII class VI and ISO 10993 approvals.
- Autoclaveable cables and assemblies
- Sterilisable cables and assemblies (Cidex®, Korsorex®)
- Hydrophobic PTFE tubing
- Custom designed colouring with FDA approved colourants.



- PTFE tubes for micro-catheters with walls as thin as 30 µm.
- PTFE Multilumen tubing (several channels in the same tube).
- Celloflon® dielectric material : Axon' patented expanded PTFE. The use of Celloflon® enables the manufacture of lighter, smaller, more flexible coaxial cables.
- Thermo-forming : biocompatible shapes made with a Celloflon® membrane.
- Noso-free® cables and assemblies : antibacterial jacketing to improve protection against nosocomial infections.
- Low noise coaxial cables : to control noise due to oscillations or vibrations, while maintaining the dielectric properties of the cable.



## Miniature cables

- Miniature composite, miniature camera and hybrid cables.
- PTFE and Celloflon® (expanded PTFE) wires
- Miniature Picocoax® coaxial cables : an excellent combination of a tiny diameter (e.g 0.20 mm) with capacitance of 50 to 100 pF/m.
- Flat Flexible Cables in both unshielded and shielded versions, for board to board interconnect with pitches of 0.50 mm and 0.30 mm.
- Axolink® Flat Display Connection (FDC). Our plug and play solutions for flat display interconnect consist of Flat Flexible Cables with connectors for fine pitch (DF-9, DF-19, FI-S, FI-X)- Axon' also offer shielded flat cables terminated with connectors compatible with FI-R connectors for full HD flat displays (LVDS standard).



# Miniaturisation

Axon' is expert in the design and manufacture of highly reliable ultra-miniature cables and assemblies.

## Cabling solutions

- Axon's Picoflex® solution allows multiple miniature coaxials to be simply plugged into a PCB via ZIF connector technology. Available in 0.5 mm pitch, and compatible with Picocoax® AWG 40 to 46.
- Custom designed miniature cabling : Termination of wires to miniature printed circuits.
- Custom designed equipment to test miniature cabling solutions.

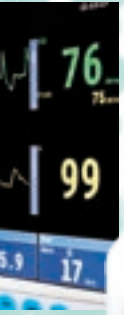
## Connector overmoulding

- Miniaturised solutions with plastics technology.
- Low or high pressure overmoulding

## Miniature connectors

Axon' Cable designs and develops standard and custom designed micro-D connectors. The micro-D connector system rises to the most demanding of challenges in terms of mechanical, electrical and environmental constraints. Axon' micro-miniature connectors are suited to systems where weight, miniaturisation or quality of signal is paramount.

- Large range of pin arrangements available
- Shape : circular or rectangular.
- Specific shells or mounting hardware : plastic or metal bodies (snap versions)
- Integration of different transmission types (e.g. signal and power transmission in the same connector).
- Filtered connectors
- Metal or plastic circular connectors





## Overmoulding

- Expertise in mould design
- Connector overmoulding : strain relief for the cable/connector interface : Silicon (guaranteed bonding), Thermoplastic Elastomer (TPE), PVC, PUR.
- Overmoulding of branches for the mechanical protection of the harness - Sleeves and plastic parts



## Industrial assemblies

- Design and manufacture of industrial assemblies for medical equipment (including SCSI assemblies)
- From Prototypes to high volume manufacturing in dedicated factories (Europe, America and Asia).
- Expertise in interconnect technologies, EMI protection and high pressure overmoulding.



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