

The background of the entire page is a semi-transparent illustration of a human torso with a visible skeletal structure. Overlaid on this are two white robotic arms, typical of a surgical robot, positioned as if they are about to perform a procedure. The arms have blue glowing circles at their joints. The overall color palette is a mix of light blues, greys, and a teal accent color.

**BizLink**

*Cable & systems for  
endoscopy and surgical robots*

**elocab**

Healthcare



# We connect your Endoscope Application

## Hand devices and surgical robots

elocab cables and systems for endoscopic applications are not only very thin but also highly flexible and designed to have extremely long service lives. Our endoscopic technology especially excels in its image transmission and hygienic properties >

You get interference-free, pin-sharp images in ground-breaking quality for any camera concept up to 4K resolution. Sealing at critical points and a durable sheath gives the product reliability and minimises the risk of infection.

Our products

- > Hybrid cable
- > Miniature solutions
- > Helix systems



### Endoscope imaging for hand devices and surgical robots >

- Superior bulk cable (hybrid or helix design, patented silicone jacket)
- Illumination bundle (cabled into hybrid design or separate component, sealed ferrule)
- Overmoulding (thermoplastic or silicone, autoclavable)
- Connector (standard, custom)
- Video signal transmission (high speed copper pairs, coaxes, optical data fibres, optocoupler)
- Sealing, potting (silicone, hotmelt, epoxy)
- Biocompatible acc. USP Class VI and ISO 10993



### Surgeon bridge connection >

- Steel helix armor for superior mechanical resistance (protection against crush damage, very flexible supporting manual movements)
- Jacket materials acc. environmental conditions
- Components tailored to application (copper, fibres)
- Strain relief of components
- Connector (standard, custom)

BizLink is technology leader for high demand video signal transmission (4K, 3D) and has realised a broad variety of elocab solutions for medical endoscopes.

BizLink offers ready to install solutions for manually moved and mechanically stressed elocab cables, e.g. placed on operation room floor.



### Robot cabling & arm joints >

- Maximum flex-life (up to 150 million cycles, very tight bend radii)
- Incorporation of any individual conductor
- Extreme flat design for restricted installation space
- Light weight solution for extreme point to point accuracy
- No friction and virtually no abrasion due to high-performance fluoropolymer materials
- Clean room ready (rated Class 1)
- Design optimization for maximum rotational degrees of freedom or linear travel
- Available as a full "turn-key" assembly with connectors and mounts for easy integration into any application



### Instruments & Accessories >

- Cable for mono- & bipolar electrosurgery
- Si-tec jacket (patented technology, anti slip stick jacket, variety of colours for customer branding)
- Sterilizable systems (STERRAD®, STERIS, autoclave)
- Miniaturization striving smallest cables and coaxes (stapler, coagulation and cautery applications)
- Medical standards, e.g. cleanroom manufacturing
- Short development cycles

elocab High-Performance-Flex (HPF) cables are the ideal solution for repeated movements in robot joints or in patient beds.

BizLink is able to develop and deliver turn-key solutions for robot guided instruments and is trusted partner of world leading surgery equipment providers.



# Endoscopic applications

## CLEANING – DISINFECTING – STERILISING

Avoiding infection using complete elocab systems from BizLink >

- Autoclavable
- STERRAD NX® sterilisable
- Gas sterilisable (ETO)
- Radiation sterilisable

as well as resistant to >

- Cleaning agents
- Disinfection agents
- Acids/alkalis
- Chemicals
- Oils
- Ozone
- UV radiation

» Minimised risk of infection  
» Long service life



## MOULDING

Develop the optimal design with BizLink as your engineering partner >

- Optimised contours
- Minimised biofilm adhesion
- Sealing at critical points through the extrusion of connectors, ferrules and branch connections
- Extra sealing of connectors with appropriate materials, e.g. epoxy resin, adhesives and silicones.
- Mechanical barriers from seals and sealants

» Maximum sealing

## FIBER-OPTIC CONDUCTORS

Fiber bundles with several thousands of separate fibers bringing lightness to the dark >

- Externally routed fiber-optic bundles
- Parallel routed fiber-optic bundles
- Integrated fiber-optic bundles
- Gluing, fusing and crimping fiber-optic conductors within the ferrules

» Intensive illumination  
» Uniform light distribution

## CABLE SURFACES

Exceptional sheath material which has proven itself in practice >

- Silicone-based material
- Special haptic properties (no stick-slip phenomena)
- Autoclavable without negatively impacting haptic properties

» Ergonomic and secure handling

## IMAGE QUALITY

Clear and interference-free image transmission due to optimal elocab design >

- Individual cable assembly
- Fiber-optic and copper-based signal transmission
- Matched to electronic system components
- Integrated cable-plug concepts

» Clear image quality





# Our solutions

## Tailored to your needs

### Requirements >

Quality assurance in the provision of medical products is set down in laws, directives, standards, guidelines and recommendations. The prevention of potential risks to patients has top priority.

Our products are biocompatible according to USP Class 6 and DIN EN ISO 10993. BizLink's facility in Georgensmünd, Germany, has been certified according to DIN EN 13485 thereby ensuring document traceability and risk management. We are familiar with the increasingly stringent requirements being imposed by the authorities, and we are your development partner for sustainable and durable products.

*BizLink equips your endoscopes with validated, tried and tested technology.*

### Services >

- Development and qualification of cables and cable systems for endoscopic applications
- Miniaturised cables and system solutions for minimally-invasive applications
- Endoscopic round and planar cables
- Integration of fiber-optic bundles in cable assemblies for light transmission
- Extrusion of fiber-optic bundles with fluorothermoplasts
- Assembly and manufacturing of cable systems, e.g. in clean rooms
- Adhesion and grinding of fiber-optic bundles
- Development of specific contacting solutions
- Moulding and curing techniques
- Silicone extrusion of plugs and branches
- Extrusion of ferrules with silicone or thermoplastics
- Soldering according to IPC 610
- Copper-based and fiber-optic transmission of video signals
- Technology for measuring and testing signal integrity in optical and electrical image transmission
- Supply of complete assemblies

### Advantages >

- Engineering and design from a single source
- No stick-slip phenomena
- Unique haptic properties
- Durable surface characteristics
- Antimicrobial equipment possible
- Very good mechanical resistance
- Optimum flexing properties
- Halogen-free
- REACH (SVHC) compliant
- Latex free
- BSE/TSE compliant (non-animal origin)
- Phthalates, bisphenol A free
- No pre-treatment (talcuming) of outer sheath required for further operation
- **Biocompatible according to USP Class 6 or DIN ISO 10993**
- Full system sterilisation possible
- **Certified according to DIN EN ISO 13485**

Certified acc. to  
**DIN EN ISO  
13485**

# Healthcare

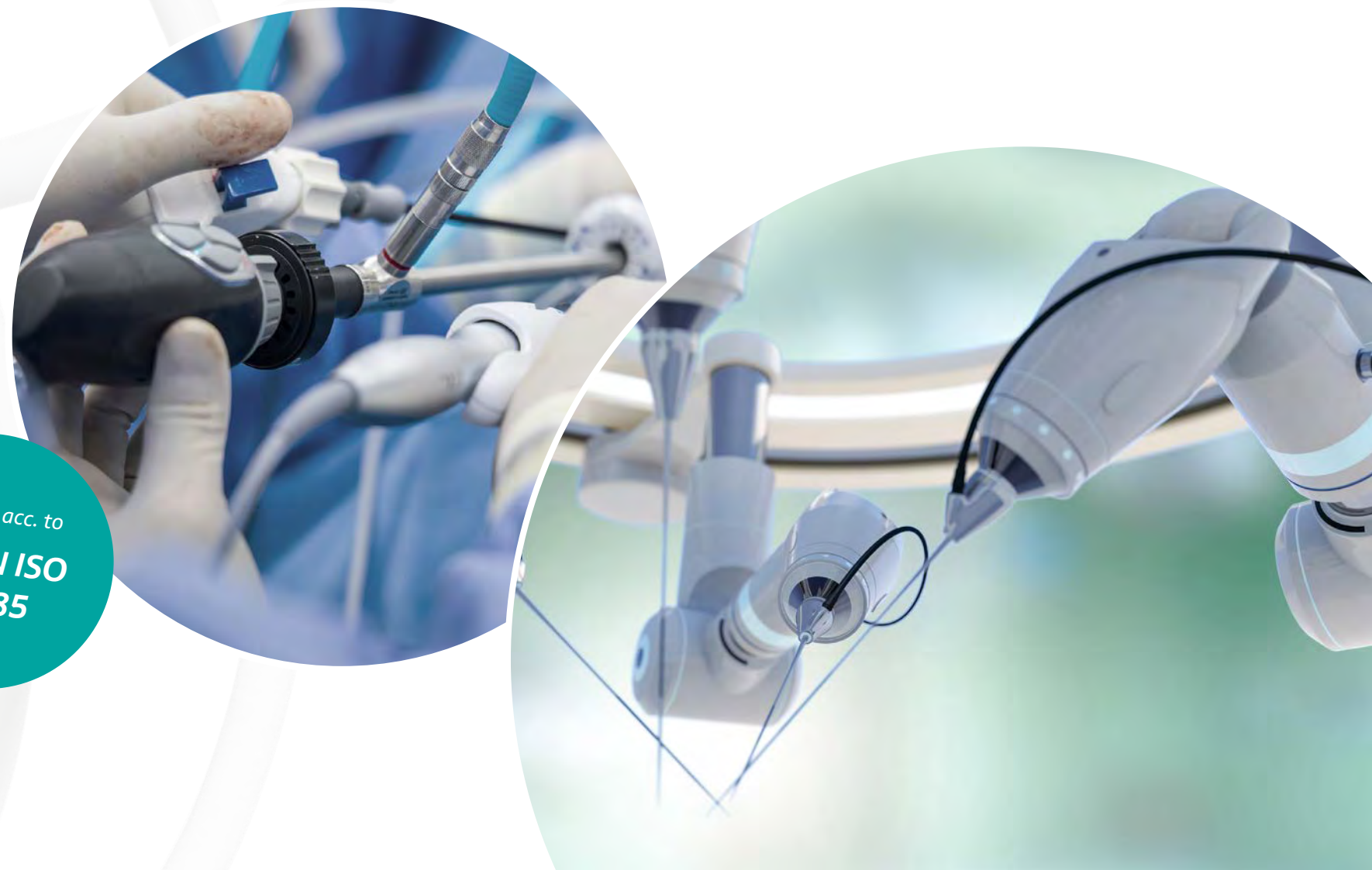
## The specialist for a demanding market

*Are you looking for reliability, long-term flexibility, easy to use and the highest levels of patient safety for your medical systems and devices?*

*Then intelligent cabling is one of the main factors in making your products succeed.*

BizLink offers its customers an integrated range of products and services that extends from system engineering and cable manufacture through to complex cable systems with integrated mechanical and electronic components.

As a system provider, we work to support development and rise to the challenge of meeting your specific requirements. BizLink has many years of experience in developing and manufacturing special cables, modules and intelligence systems to be your competent partner.



## Healthcare


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