

JOYSTEER INSIDE!

The best drive-by-wire steering system

IT IS THE INVISIBLE YET SAFE AND RELIABLE STEERING SYSTEM OF THE MICROSAP. SIT BACK, FORGET THE STEERING COLUMN AND PLACE YOUR TRUST IN AUTONOMOUS DRIVING THANKS TO THE JOYSTEER DRIVE-BY-WIRE STEERING SYSTEM. BOZZIO AG PROVIDES A NEW DRIVING EXPERIENCE WITH ITS JOYSTEER PRODUCT.

100% SWISS MADE!

joysteer convinces on the world market

Headquartered in the Switzerland Innovation Park Biel/Bienne, Bozzio AG is surrounded by state-of-the-art technologies, in particular in the area of additive manufacturing. joysteer is 100% Swiss made and is produced with the highest quality standard. All the technological knowledge is in-house. The core competence of Bozzio AG lies in the development and marketing of safety-critical applications.

As the patent owner, Bozzio AG markets the drive-by-wire technology internationally. Thanks to its approval for road use, joysteer is sold in Europe, USA, Canada, Israel and New Zealand.

Bozzio AG is active in two lines of business:

1. Drive-by-wire steering systems for people with physical disabilities.
2. Drive-by-wire steering systems for industrial applications in the after-market segment.

A LITTLE PIECE OF FREEDOM!

The steering system for people with disabilities

joysteer can - thanks to its modular and parameterizable design - individually adapt the operation of steering, brake and throttle to the customer needs. An extensive range of input devices (e.g. joysticks) makes versatile and individual solutions possible in mobility for the disabled.

Thanks to the integrated dynamic force feedback, driving is safe and enjoyable - especially at high speeds.

LET GO OFF THE WHEEL!

The drive-by-wire system for automated driving

The drive-by-wire technology also is the basis for autonomous driving. The signals are transmitted to the wheel fully electronically ("by-wire" technology) without a mechanical backup. This means there is no steering column. joysteer transfers the GPS and sensor data to the wheels with minimum latencies and maximum dynamics.

joysteer is the basis for a finely tuned control loop and the key to the success of a good autonomous system. joysteer is installed as an after-market product in the area of agriculture, forestry, special-purpose machines and defense.

In the microSNAP, joysteer is the integral steering system of the "intelligent chassis."

BE SAFE. BE SURE!

Now you can sit back and relax

We are not there yet on a daily basis. Autonomous driving requires the driver to intervene in case of doubt. The driver is the backup. Sitting back and safely turning your attention to other things is therefore not (yet) possible. Why not? Because the redundancy is lacking!

Not so with joysteer. Two redundant strands are designed to monitor each other. In the event of a fault, the affected strand shuts down safely. The healthy strand is dimensioned to be able to provide the full functionality on its own. As a result, steering is always ensured - so-called "fail-operational" safety.

TO THE POINT!

Key features of joysteer

- Drive-by-wire technology without mechanical backup
- Redundant system for "steering and braking function" at the ASIL D level
- Integrated electrical throttle system at the ASIL C level
- Driving with joysticks
- Integrated dynamic force feedback
- Driving with digital interfaces (autonomous or remote-controlled)
- Functional safety in line with ISO 26262
- Approved for the vehicle categories: M1, M2, M3, N1, N2, N3
- Approval for road use as per ECE R79 (steering) and ECE R13H (brake)
- "Swiss made" with the highest quality standard

SNAP-in joysteer and enjoy a new driving experience.



Steering actuator



Drive-by-wire module



Driving with joysticks



Brake actuator



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