

# Elreg

Embedded System Design & Consulting Services



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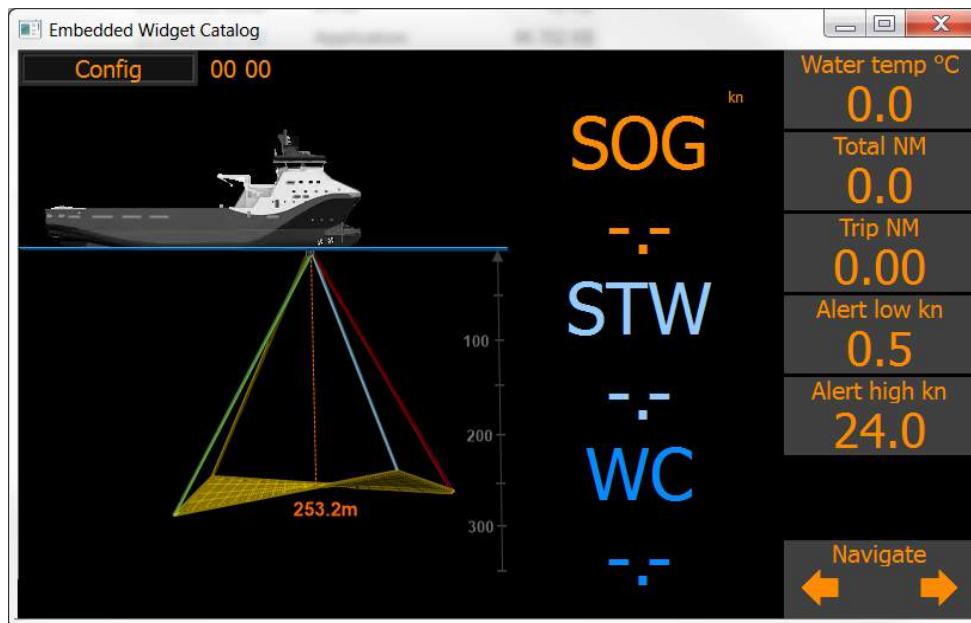


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# About Company

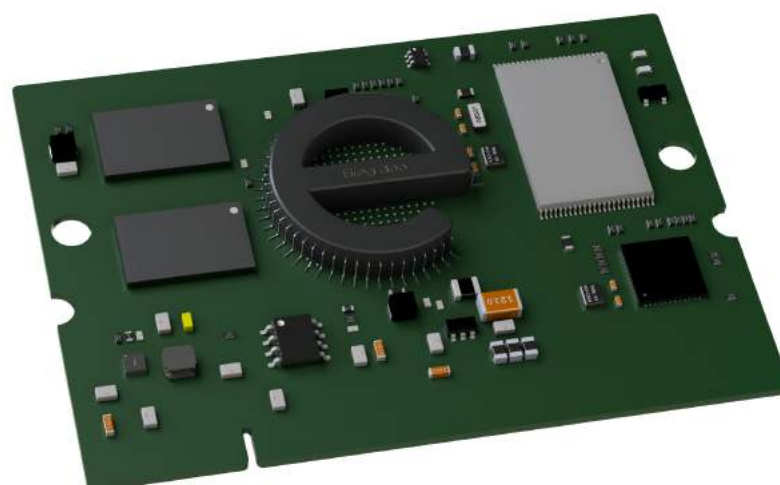
ELREG d.o.o. is an embedded software and hardware development and prototyping company based in Sarajevo, Bosnia and Herzegovina.

Company consists of a development department and a small production unit.



Elreg d.o.o. has a core staff of fully qualified engineers and computer programmers, covering all the required disciplines, who provide experience and also use a network of experienced engineers both in Bosnia and Norway to give the ultimate solutions.

Services Elreg d.o.o. offers include hardware and software development for embedded systems and encompass all from schematic and PCB design, prototyping and prototype testing, full firm-ware development, to system documentation creation.



# Range of Skills

## Operating Systems:

- Bare metal design
- FreeRTOS (Real time OS)
- Linux
- Windows

## Embedded Software:

- Buildroot, Root Filesystem and Kernel compilation
- U-boot
- C/C++
- Bootloader (via Ethernet, USB)
- Signal acquisition
- Cross-compilation for ARM/Cortex
- Various sensors interfaces
- CSAC synchronization
- Fiber optic Ethernet
- DMA
- Flash memory interface
- Smart battery management
- Linux drivers
- Real time processing
- UI design
- Touch interface

## Application (tools, languages and frameworks):

- QT4/5 (Linux, ARM, Windows)
- C/C++
- C#/Visual studio
- .NET
- Eclipse

## Hardware (tools):

- Altium designer
- Orcad
- CAM 360
- MultiSim
- Eagle

## Technologies:

- Json
- TCP/IP (UDP)
- XML
- Linux services
- HTTP
- SSH
- SFTP
- Socket
- Communication SQL
- SEGMENT/SEGMENT
- NMEA

## Electronic design:

- Schematic design
- PCB design
- DFM (Design for Manufacturing)
- Electronic power design
- EMI, EC compliance design
- Microcontroller based design
- Microprocessor based design (ARM, Cortex)
- Sensor design
- Communications (RS422, RS232, Ethernet, SPI, I2C, CAN, USB, etc.)

## Maritime

*Experience in software development with compliance of the following protocols and regulations:*

- Maritime protocols (such as IEC-61162-1/2 (NMEA) and IEC-61162-450 (UDP))
- Preparation for certification of navigational instruments (such as Echo Sounders, Speed Logs, EMLs and GPS devices)
- Systems calibration procedure
- Alarm display control
- Alert handling based on the sentences ALR and ACK
- Ethernet bandwidth test
- NMEA format message handling
- UDP multicast
- Display visibility parameters

# Cooperation

We prefer long term cooperation with our clients, based on high quality products and mutual trust. Allowing the project owner full overview of project development stages, we tend to offer full insight in time and resources usage. Therefore, project owner has the ability to steer the project development in desired direction. Project tracking is done via Atlasian's Jira, while GIT is used as version control system.

# Why choose Elreg d.o.o.

Elreg's core staff is comprised of experienced and highly motivated professionals who are very passionate about their work and take personal pride in being the best at what they do. Their goal and mission is to help transform your dreams and ideas into realistic, fully approved, mass producible products.

Elreg d.o.o. has built up a reputation in Sarajevo district as a dynamic, exciting company with real life projects and as such has little problem in expanding to meet customer requirements both short and long term.

Bosnia's geographical location provides for good communication and transport connections with the rest of Europe, and comparatively lower cost of living enables very competitive pricing.

## Contact

Should you have any queries or require any further information, please do not hesitate to contact us. We will be happy to arrange an introduction meeting at your convenience.

*"Elreg d.o.o. has become an integrated part of our development team, providing extra manpower at half the cost, using them is no different to having our own engineer working from home. As our needs have changed we have added extra capacity, but kept full control of our projects, time line and IP."*

**Paul Connelly,**

Technical Director of SKIPPER Electronics AS

## References

Skipper Electronics AS (Norway)

Elreg AS (Norway)

InApril (Norway)