



„Escape route signage that is dynamic and failsafe? That’s when I called Elektrosil.“

Reliably showing the fastest escape route: Elektrosil developed a dynamic display solution with a long service life, emergency power capability and quiet operation that reliably showed the safest way out in an emergency.

THE CHALLENGE

For dynamic escape route signage that would indicate safe escape routes in an emergency, long-lasting and quiet display units were to be developed that could be supplied with power via a UPS and an emergency power supply and that would have increased network connectivity.

THE SOLUTION

Elektrosil defined the system architecture, selected a tried and tested “Raspberry Pi Compute” module as the processing unit and expanded it with an in-house developed carrier board. A battery management system (LiPo cell) and a brightness sensor were integrated on the board, which adjusted the display brightness to the ambient light and led to a longer service life. Four LAN ports eliminated the need for network switches and enabled redundancies through a ring-type structure.

Elektrosil took on the construction of the housing and – together with one of our partners – the development of a DC and emergency power-capable power supply.

A natural frequency analysis was carried out for the acoustic requirements of the cooling solution needed,

which allowed the use of a powerful and quiet blower without additional decoupling. This made it possible to utilise the full performance potential of the CPU over a longer period of time, even at full system load.

The result: a reliable solution in which a tried-and-tested product such as Raspberry Pi has been innovatively enhanced with new functions without losing its compatibility.

OUR STRENGTHS

- Trusting and fast collaboration with customers and partners
- Great expertise in the product area of cooling solutions
- In-house development of hardware
- Expertise in enclosure construction and system integration
- Comprehensive know-how in printed circuit board development and design
- Implementation of device assembly

Are you also looking for a custom-fit solution for your system and a competent partner? Then give us a call: +49 40 840001-0.

Project information

- Client: Startup in the field of building security
- Product area: System solutions, displays, cooling solutions, power supplies
- Industries: Building security
- Project size: 1,500 units
- Services: Development, hardware integration, project management, assembly

Elektrosil's services

- Application consultation, development assistance, design-in support
- Quality assurance
- Engineering and production
- Completely customised applications