MAGE CONTROL SYSTEMS

CAPABILITY OVERVIEW

Core Competencies

Experts in...

- Embedded control system design: hardware, software and algorithm development delivering end to end solutions
- Algorithm development, code generation to safety critical standards and simulation using hardware in the loop testing utilising modeling packages such as MATLAB and Simulink
- Analogue, digital and power electronics, including inverter, servo and power supply system design to 500 kW and above
- Digital signal, image processing and optoelectronics design - expert users in Mathworks Matlab / Simulink automatic code generation tools
- iOS & Android app development working in conjunction with a range of technologies that allow for Wi-Fi, Bluetooth and mesh network compatibility in various industry sectors

Differentiators

Leading the way...

- Delivering the full package: from blue sky feasibility studies through to electronic, software, mechanical design, production of manufacturing data packs and product manufacturing where required
- Our unique expertise in designing bespoke embedded electronic harsh environment control systems for a range of applications defines how we tailor our specialist engineering solutions. We are robust, reliable and versatile, applying our core services and technologies across a range of industries
- The company is lead by 2 Chief Engineers with rich expertise and experience in senior technical and management roles in companies such as Lockheed Martin UK, Thales Optronics, Ultra Electronics and Selex

Company Information

Established in 2016, Mage Control Systems is growing rapidly and has since developed into a multi-disciplinary team of 23 staff.

Based in East Kilbride near Glasgow, we are well placed to serve local, national and international clients.

Company No. - SC 48109

VAT - GB 120 9283 34

Standards

In our bespoke work across a range of industries including Aerospace, Oil & Gas, Medical and Renewable Energy, we rigorously apply sector specific standards in all of our design and manufacture. These include:

- **Aerospace**
  - DO-178C, DO-254, DO-160G, STANAG, DEF-STAN, MIL-SPEC
- **Oil & Gas**
  - ATEX, IEC 61-508
- **Medical Standards**
  - IEC 62304, IEC 60601-1, IEC 61508

Contact Information

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Past Projects

Quality in our design and development of...

- **Downhole well intervention servo drive:** working at high temperatures up to 210°C at 5kW - designed for two international Oil and Gas customers
- **Prototype gyro compass:** with high speed precision servo control and DSP algorithms including the production of electronic hardware, software and processing algorithms for a UK Defence customer
- **High altitude UAV thruster drive invertor:** being designed for EASA approval against DO-178C, DO-160G and DO-254 - to be delivered to a European aviation customer
- **Glacial ice drill motor controller:** featuring inertial attitude estimation to support drilling 3km deep and with an operating temperature as low as - 86°C — designed for an American Antarctic survey project
- **Robotic stroke rehabilitation device:** using 8-axis actuation for retraining post-stroke patients in standing and walking actions as part of a UK medical research programme
- **Non-invasive buried HV cable analyser:** using bespoke, innovative magnetometers coupled with inertial technology, the device non-invasively measures the energised state and load of the cable - designed for a leading UK electricity DNO
- **Erythrocyte sedimentation rate analyser:** designed for improved accuracy and power performance, lower unit production cost and higher reliability. Modern interface options – USB and Ethernet while maintaining legacy adapters. Advanced algorithmic control – increased speed, accuracy and sample rate testing per cycle, for a local client feeding into the US hospital network
- **iOT enabled environment sensor:** measuring various environment parameters including CO2, air pressure, humidity, temperature and more by utilising smart sensing techniques with Bluetooth capabilities
- **Personal skin health analyser:** dispensing product using precise stepper motor control based on the viscosity of the fluid, featuring bespoke designed RFID circuitry, battery management system, wireless charging and Bluetooth Low Energy developed for the cosmetics industry

Memberships

CeeD Centre for Engineering Education & Development

Scottish Business Pledge

Proud Member of technology SCOTLAND

We are a Living Wage Employer

25th Lanarkshire Business Excellence AWARDS WINNER

Mage Control Systems was awarded 'Best New Product or Service' at the Lanarkshire Business Excellence Awards.