

## Obsolete Control and Instrumentation System Support

## Introduction

Key infrastructure sites have numerous Control and Instrumentation Systems installed across the plant. Over time, these systems can become obsolete or, for various reasons, are no longer supported by the original equipment manufacturers.

Beran Instruments has expertise in supporting ageing and obsolete electronic systems to enable key infrastructure sites to continue operation. Providing a lower cost solution rather than replacing entire systems.

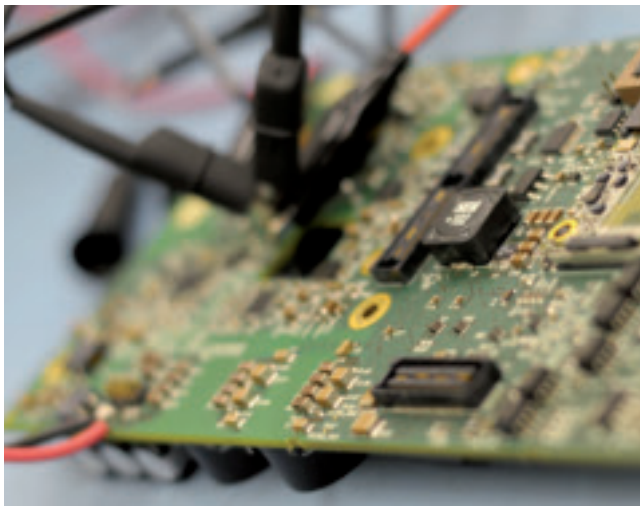
Beran Instruments is one of the UK's leading manufacturers of Vibration and Condition Monitoring Equipment and has also supported other customers by developing numerous Control and Instrumentation Systems to automate historically manual processes in research and development environments.

Safety, quality and innovation are at the forefront of our minds during the project lifecycle.

Solutions range from replacement of simple analogue electronic boards to entire multi-channel measurement systems.



In-House Assembly & Test Capability



Electronic PCB Design and Verification



System Design and Assembly

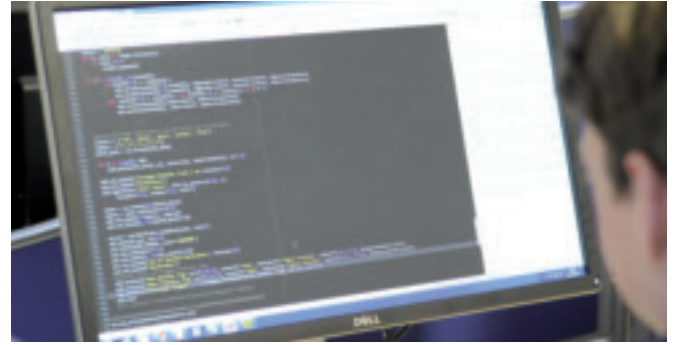
## Our Expertise

- Engineering support
- Project management
- Form, fit & function replacement systems
- Analogue electronic modules
- Digital electronic modules
- FPGA design
- Software development
- Mathematical algorithm development
- Component supply & replacement
- FMEA analysis
- MTBF calculations
- Long lifetime systems design & support
- Safety integrity solutions
- High integrity solutions
- Long term system reliability for harsh environments
- EMC & environmental testing
- Design for IEC 61508 compliance
- Design to meet CE regulations
- System analysis
- Profiling of existing systems
- Supply of obsolete components

## Providing Solutions

To achieve the right solution and a successful project outcome, our engineers work closely with customers' specialist engineers to develop a comprehensive system requirements package.

During the project lifecycle, Beran will continue to work closely with the customer's engineers to ensure that the solution which is being developed fully meets their requirements.



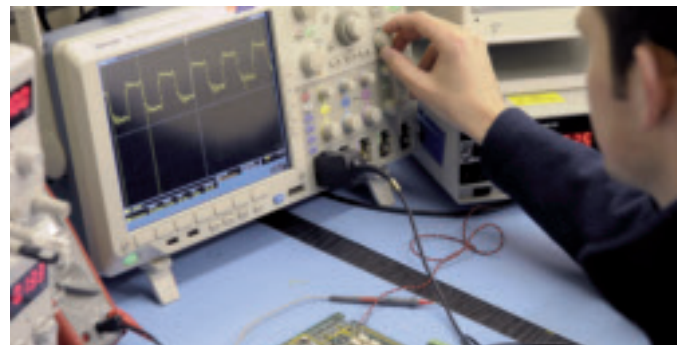
Software Coding & Development

## In-House Competencies

- Analogue & digital electronic design
- Firmware & FPGA design
- 2D & 3D mechanical / system design
- Artwork & graphic design
- Prototyping & verification
- Signal processing
- High speed digital solutions
- Software solution design
- Project management
- Qualification & environmental testing
- Assembly & test
- Customer-witnessed testing
- Installation support
- Technical authoring
- Long-term support agreements



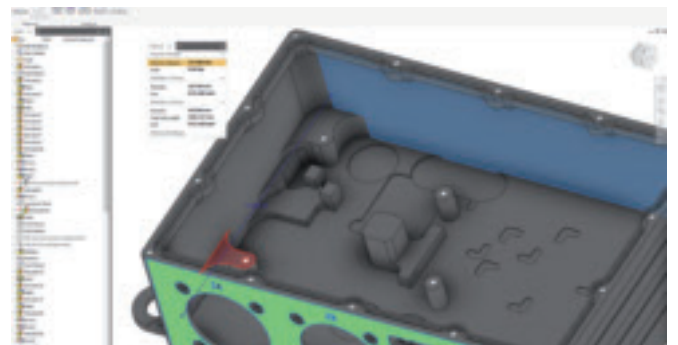
Testing & Verification of System Design



Research & Development to IEC61508 Compliance



Multi-channel monitoring developed from initial concept, through detailed design, to full lifecycle support



2D & 3D Electronic & Mechanical Design



Documentation to Support Long Lifecycles



Credit: NASA

## Beran Instruments

Maintain plant operation by managing ageing and obsolescence of Control and Instrumentation in key infrastructure sites. Utilising our skills from a wide range of industries, including Power, Utilities and Aerospace, Beran is able to assist on a wide range of electronic Control and Monitoring Systems.

Beran is part of CMG Ltd. - As a group, our expertise is in the design of monitoring systems for use within Aviation and Industrial Utilities. For over 3 decades, Beran has been supplying Vibration and Condition Monitoring Systems to Power Generation Utilities around the world.

In house expertise includes:-

- Electronic hardware design
- Mechanical design (2D & 3D)
- Software design
- High integrity reliable systems
- Long life support
- Design to IEC 61508 standards
- Qualification testing
- EMC analysis
- FMEA analysis
- MTBF calculations

Our engineers will work with you to develop the system requirements, through detailed design and evaluation, to meet all qualification requirements and ensure a successful project outcome.



Beran Instruments is registered to BS EN ISO 9001:2015 / AS9100D

This document is not contractual. Beran maintains a policy of continuous product development and improvement. This specification may change without notice.

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