

Project Insights

Resonate Systems partner with clients to design and build measurement and test systems tailored to their project and application needs.

When project demands are not met by off-the-shelf systems, customers are often left to compromise on project outcomes.

Our integrated turn-key systems aim to bridge that gap and deliver exactly what the client requires.

Supported by a team of mechanical, electrical, and computer systems engineers, we guide our clients from initial requirements gathering, concept designs and prototypes, through to deployment and testing.

With an ever-growing list of deployed systems, our development team are able to leverage hardware and software designs from past projects to rapidly deliver systems built on tried and tested architectures.

Thanks to our philosophy and approach, every project we take on board results in a highly flexible, tailored and cost-effective system.

MICRO-X X-ray Bake Out Automation

Resonate Systems developed a new production process control software for **MICRO-X** whom design, develop and manufacture a range of innovative, ultra-lightweight, mobile X-ray imaging systems for medical and security applications.

By controlling and monitoring the bake out process in real-time, the software contributes to improving X-ray tube production throughput, increase the overall process safety, and support quality assurance.

As part of the manufacturing process, an X-ray tube is subjected to a high temperature treatment under vacuum. This process, referred to as bake out, is necessary to remove unwanted gasses and contaminants that can affect the tube performance.

MICRO-X developed a dedicated bake out rig and required a precise and simple to use process control software.

The **Resonate Systems** developed software provides:

- Process automation
- Control of bakeout parameters
- Supervision and verification
- Safety via real-time monitoring

The software controls and monitors two temperature and two pressure channels via PID controllers, while interfacing with rig control equipment and visual status indicators.

The software also monitors the process performance to automatically alert the operator if an invalid bake out occurs.

The system incorporates safety protocols to interrupt the process and alert the operators should unsafe conditions develop.

The complete process dataset and metadata are captured for traceability and quality assurance.



Resonate Systems

178 Wright Street e : info@resonatesystems.com.au
Adelaide SA 5000 t : +61 8 7200 5700
Australia w : www.resonatesystems.com.au

