

# Q-Pulse Case Study

**Company:** CTS Interconnect Systems  
**Industry Sector:** Manufacturing  
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## Summary

*As market leaders in the design and manufacture of communications and automotive components and the provision of electronic manufacturing services, CTS required secure storage and retrieval for documentation and records in order to satisfy several QMS, safety testing and product approval requirements, as well as customer assessments.*

*At CTS, the implementation of Q-Pulse as a company-wide electronic Quality Management System (eQMS) has increased employee efficiency and reduced both workload and storage requirements. In addition, assessors are able to retrieve documentation from any of the three CTS sites in Scotland, enabling external assessments to be performed more efficiently.*

## Background

Operating in the automotive, communications and computer equipment markets, CTS lead the market in the design and manufacture of communications components, automotive sensors and controls, and the provision of electronic manufacturing services (EMS).

With corporate headquarters in Elkhart, Indiana, and factories in Mexico, Canada, Taiwan, Singapore and China, CTS opened its UK facility in the early 1980s, after acquiring it from Fabri-Tek. CTS' Interconnect Systems Business Unit is based in Glasgow, Scotland.

Having obtained ISO 9001 certification in September 1990, CTS successfully demonstrated compliance to ISO 14001 in September 2002 and gained re-certification to ISO 9001:2000 through the transition process in October 2002. In addition, the company has obtained BABT PS 340 Production Quality Certification and its connectors, designed in-house, are both UL and CSA approved.

## The Challenge

To improve the overall efficiency of the Documentation and Data Control process, CTS required both to reduce the paper-based document control system and to eliminate inefficiencies in distribution and administration. CTS also required secure storage and retrieval for documentation and records, in order to satisfy several QMS, safety testing and product approval requirements, and to assist with continuous assessments of its Quality and Environmental Management Systems.

Prior to Q-Pulse's purchase, CTS managed several business processes, including audit control and equipment maintenance, using independent paper-based and software systems. Q-Pulse offered an integrated software solution, facilitating the management of several processes.

## The Solution

Since its initial implementation as a Document Control system, CTS have expanded use of Q-Pulse to include other modules as an integrated system. As well as facilitating the effective resolution of corrective and preventive actions, the Corrective Action module enables greater control over RMAs and DMRs, offering detailed and trend analyses of customer and supplier returns in the Analysis & Improvement module.

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With all changes to documentation revision-controlled, tracked and approved through Q-Pulse, document distribution lists ensure that relevant users receive automatic notification of changes and revisions. The Documents module also offers full histories for both product and system-related documentation, with a Master Record Index (MRI) system for all products linking product reference numbers to associated documentation.

### Conclusion

At CTS Interconnect Systems, Q-Pulse has facilitated the replacement of the paper-based document control system with a company-wide eQMS. Secure storage and retrieval facilities for documentation and records have improved communication and have increased the overall efficiency of the document process. The availability of online system and product documentation from a central repository has also increased employee efficiency and has reduced both workload and storage requirements.

In addition, assessors are able to retrieve documentation from any of the three CTS sites in Scotland, enabling external assessments to be performed more efficiently. CTS has structured its QMS and EMS in accordance with the ISO 9001:2000 and ISO14001 standards and is currently working towards the OHSAS 18001 standard.

Following its implementation within the Scottish CTS sites, Q-Pulse has also been installed at CTS facilities in Londonderry, New Hampshire and Tianjin, China.

*“Overall our documentation control system has been transformed from being mainly paper based to an electronic based system. This has led to a reduction in storage requirements and greater efficiency due to readily retrievable documents.”*

**Russell Thompson, Senior Quality Engineer, CTS Interconnect Systems**