

Industrial Computers Ltd

Custom Design Solution

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Industrial Computers Design and manufacture custom and COTS (Commercial off the Shelf) Industrial PC's

A recent request from a machine manufacturer, with specific requirements, necessitated the design of a custom Industrial PC as a controller / interface for its range of products. The requirement provided some unique challenges.

The brief was for a robust, high reliability (24/7 operational) small computer to be mounted inside each system. Operating Windows XP embedded with the customer's user interface software also installed. Critical factors required a reduction in size and an improvement in reliability. Additional requirements were for a long life product with minimal design changes throughout the product life cycle. A reduction in cost was also a goal!

The chassis was designed in house by our engineering staff to house and cool all of the computer components as well as meeting all of the regulatory approvals required. Following completion of the prototypes a complete suite of testing was embarked upon. This included High and low temperature testing, shock and vibration, thermal efficiency and air flow dynamics. In addition to the regulatory approvals testing which included CE, UL, RoHS etc.

The resulting product was reduced from a 4U Rack mount system to a 2U of reduced depth. The configuration incorporated a long life revision controlled "Dual Core" motherboard with a 5 year production life (for which Industrial Computers are a European distributor). Processors from the Intel Embedded Group were also used for long life. All other components are also controlled by Industrial Computers.

For Traceability all major components are serialised in each system. 100% inspection is carried out this includes both mechanical and software diagnostics testing of each system. A final soak test is carried out to minimise infant mortality.

The customer was issued with a single part number for ordering which included a revision number. This revision number also linked in with the detailed build guide to ensure the highest possible quality is maintained at all times. It also means no changes can take place without customer approval as the part number would need to be changed.

The level of detail and care Industrial Computers use has helped them win some of the largest supply contracts for Industrial PC's in Europe. However the same process and control is in place for its smaller customers, in some cases purchasing 2 or 3 systems per month often built from standard components taken from the Industrial Computers range. In fact many of our customers have outsourced the manufacture of computers to us and concentrate on there own products leaving us to deliver a fully configured and branded product ready for installation.

For further information or to discuss how we can help your business please call our sales department on +44 (0)1243 380780 or email sales@industrial-computers.com