



INDUSTRIAL CONTROL

APPLICATION EXAMPLE

Industrial PC for industrial x-ray technology

HEITEC supports a leading industrial x-ray technology company with testing equipment and with the design and integration of industrial computers for the customer's end application. The fully automated x-ray system x-rays aluminum wheel rims immediately after production to detect inclusions and other faults. Damaged rims can thus be identified and rejected. The rim production process can also be continuously monitored.

The x-ray system itself uses an industrial robot and a degradation-free detector in combination with state-of-the-art image evaluation software. The robot grips the rim and holds it in front of the sensor at defined angles, thus permitting almost pseudo error-free evaluation of the results with a stable image quality.

The industrial PC preconfigured by HEITEC according to customer specifications evaluates the individual x-ray images using an extremely powerful graphic card and other appropriately high-performance components. The evaluation of images can be performed practically in real time and considerably reduces cycle times during mass production.

Because the customer's system is subject to ongoing further development in terms of throughput times and

data quality, the demands on the industrial PC used are constantly growing as well. This means that each new generation of the computers to be supplied must always be designed with extremely powerful components to keep the cycle times low or to reduce them.

In terms of technology, a system solution was selected that includes a cost-optimized 19" industrial PC whose compact, robust structure is ideally suited to the sophisticated, high-availability, high-precision application as well as to complex software requirements. Nevertheless, some adaptations of the standard hardware were required in this case. For example, the customer wanted additional interface cards for communication with the system. Ventilation was improved by means of a special bracket for graphic cards and additional enclosure fans. The enclosure was also designed to be EMC-proof and thereby minimize risks during certification as well as during operation.

Innovative System Solution



Insight into the completely assembled and wired high-end industrial PC



Front view of the open chassis, on the left with special bracket for the filter mat

Technical Summary

- › Industrial PC ATX enclosure
- › Industrial mainboard
- › W x H: 19" x 4U
- › CPU: Intel® Core™ i7-7820X (8 x 3.6 GHz)
- › HDD: Raid 2 x 2 TB
- › 16 GB DDR4 RAM
- › Graphic card: Nvidia Quadro P2000 5GB
- › Integration of customer-specific interface cards

Customer Benefits

- › Individualized design and specification as per customer request
- › Assortment of powerful components
- › Support for customer's product lifecycle
- › Long-term availability and product stability
- › Use of reliable standard HEITEC 19-inch technology
- › Cost-optimized product design

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