



INDUSTRIAL CONTROL

APPLICATION EXAMPLE

Customized system for Laser Direct Imaging application

The direct exposure of PCBs via laser requires extremely high precision and very good image results. This is where Laser Direct Imaging (LDI) systems come into play: their laser beams focus on a painted PCB to expose it. These systems involve very high demands in terms of clean room requirements. They also have to function with maximum precision and be extremely failure-safe. Key aspects therefore include temperature management in terms of high electrical currents, ventilation and electromagnetic compatibility (EMC).

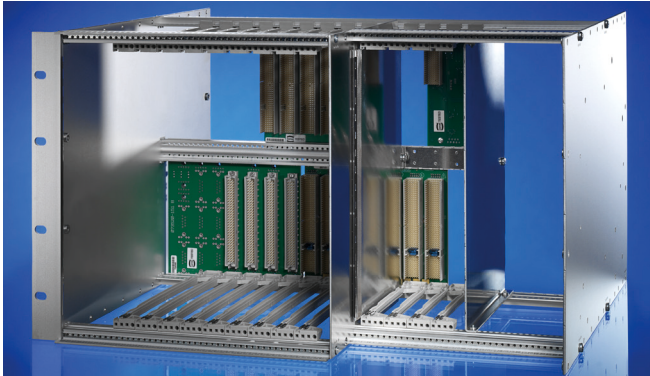
For this project, HEITEC had to accommodate highly complex electronics with a range of architectures, bus systems, interfaces and adaptation to high-resolution optics with a complicated lens system, all in a customized HeiPac Vario rack.

To ensure the most precise coordination between all the inner workings, HEITEC also took care of procuring the power supplies and fans. Having a single source for the entire system ensured the solution was as cost-efficient as possible. An extensive range of standardized chas-

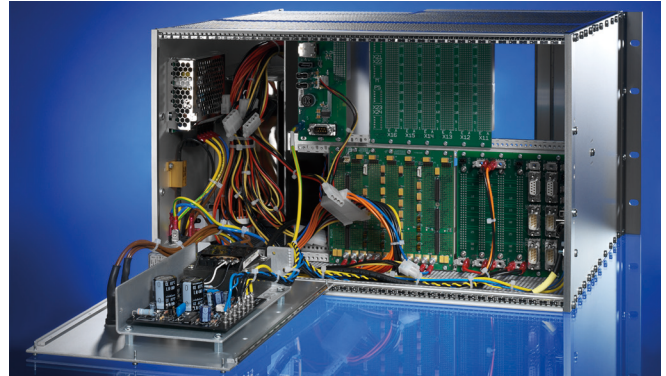
sis models and decades of development experience in the field of electronics make it possible to develop and manufacture a tailor-made system solution for the customer that will still satisfy the customer's commercial requirements. This includes the fact that a special ventilation design was needed because of the stated requirement to fit the LDI system in the target application and use it in a clean room technology environment. This redirects the cool air to achieve better temperature values despite the high packing density and accumulated power losses, resulting in a significant improvement in reliability and service life.

The integration level was gradually increased from Level 1 (chassis components) to Level 4 (pre-integrated system) and all electronic sub-assemblies were integrated into the chassis, which also included bundling with the software. Close and trusting collaboration with the customer resulted in a cost-effective, customer-specific system solution in a very short time.

Innovative System Solution



Customer-specific HeiPac Vario rack with card guides and a 7-slot CompactPCI ® backplane



Rear view of the CompactPCI® system in the HeiPac Vario rack

Technical Summary

- › Customer-specific system solution
- › HeiPac Vario rack
- › L x W x H: 370 mm x 84HP x 6U
- › 7-slot CompactPCI ® backplane
- › Windows XP operating system
- › CPU board
- › ATX 12 V power supply, 300 W
- › 12 V DC axial ventilation

Customer Benefits

- › Customized rack for a customer-specific system
- › Very high failure safety
- › Innovative ventilation concept for optimal cooling of the electronics
- › High EMC protection
- › Cost-optimized solution for the customer

HEITEC AG

Dr.-Otto-Leich-Str. 16
90542 Eckental, Germany

Phone: +49 9126 2934 0

Fax: +49 9126 2934 199

e-mail: electronics@heitec.de

Web: www.heitec-electronics.com