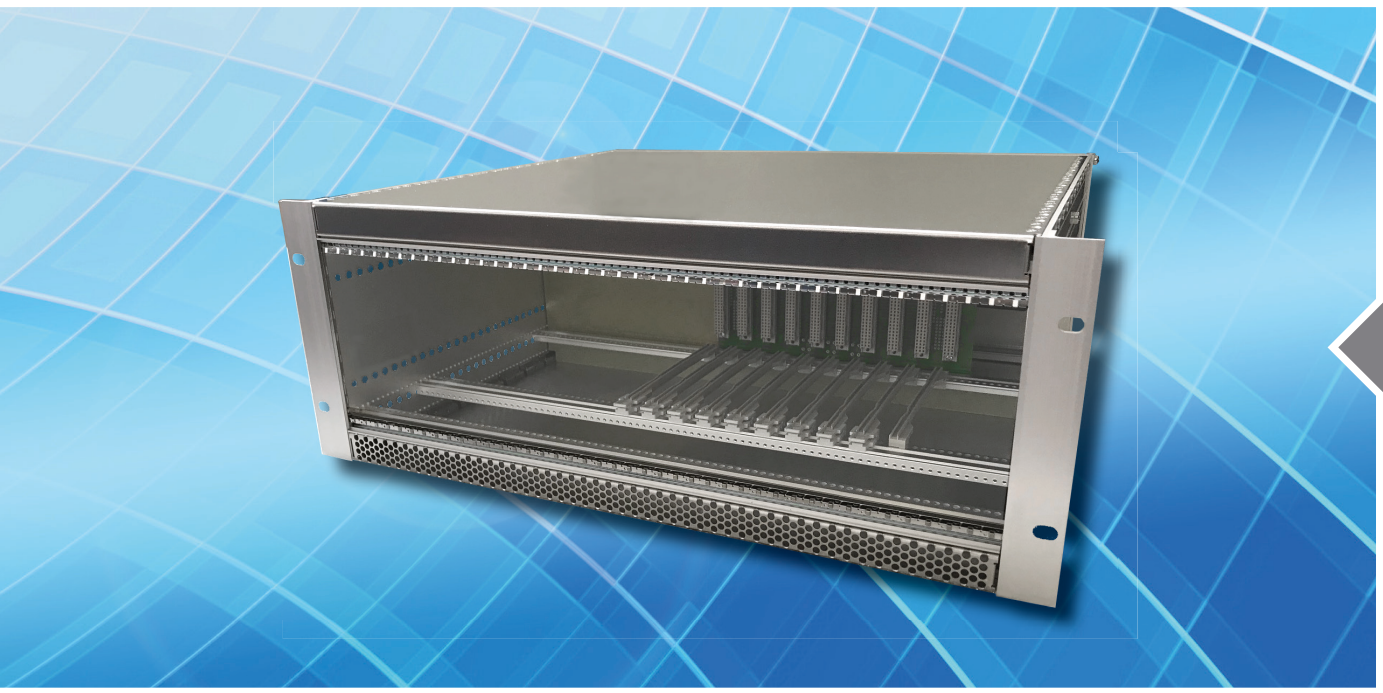
HEITEC
engineering solutions



Standard and customer-specific housing components optimally combined

HEITEC developed an economical housing for a manufacturer of measurement and test engineering solutions for aerospace and automotive engineering. It's comprised primarily of standard components and was adapted to meet the customer's requirements using customer-specific parts.

In many areas of aircraft construction, there's a basic need for flexible measurement and test systems that can cover a wide variety of tasks. The populated enclosure integrated into the customer's test cabinet serves as the basis for an expandable, multichannel test system for the high-precision control of hydraulic and electrical components. With customer-specific modules installed, it's possible to operate equipment like the movable platforms in aircraft test beds and flight simulators.

Complex and specialized test electronics enable highly available, extremely reliable operating solutions. High packaging density for electronics and a design for the intended application define the "frame" for the device housing. The result is a 4U, 19-inch subrack that can be seamlessly integrated into the test system. The basic housing structure is designed in 19-inch technology in such a way that the side panels and mounting rails are implemented using standard parts. This allowed a fast and economical provision of installation space for the desired arrangement. The customers' backplane is installed in the enclosure along with an appropriate PSU and is completely wired by HEITEC.

Because the installation location made ventilation from bottom to top impossible, a 4U HeiPac Vario subrack was selected that provides ½U of space above and below the card cage. The bottom cover has perforations at the front where cool air can be drawn in and blown out by the fan integrated into the rear panel. To direct the flow of air through the enclosure, customer-specific air partitions were installed in the system to ensure effective ventilation of the electronics.

In addition to the housing layout and integration of the backplane and power supply, HEITEC is also responsible for quality assurance. Each system undergoes a function, high-voltage, and insulation test.

Innovative Chassis Solution

Rear view - with fan installation to the left and input for ATX power supply to the right

Side view of the customized subrack based on the HeiPac Vario family

Technical Summary

- HeiPac Vario enclosure
- D x W x H: 405 mm x 84HP x 4U
- ATX PSU 350 W
- Active ventilation from front to rear
- AT96 bus backplane with 10 slots (40HP, 3U)

Customer Benefits

- Custom-made housing for customer-specific system
- Complete enclosure solution with integrated backplane and cable harness, quality assurance, and function tests from a single source
- Special customizations for effective ventilation
- Maximum installation space for complex test electronics
- Cost-optimized enclosure solution

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