

CCA system platform for VPX and Open VPX

The compact VPX box in 1/2 ATR (Air Transport Rack) format is designed for advanced designs and use in harsh environments such as military, aerospace, oil and gas exploration and provides capacity for up to six 3U-CCA assemblies with 5HP width. This extends the existing VPX portfolio. The robust chassis made of solid aluminium components is particularly resistant to vibration, humidity and contamination, thus offering customers a platform for system solutions in the harshest environments.

The system platform consists of a 1/2 ATR CCA enclosure. Due to its modular design, the ATR enclosure is also available in the „long“ formats 1/4, 1/2, 3/4, 1 and 1 1/2 ATR with a greater height according to ARINC 404A / 600 and offers significant customization options.

The concept of the ATR's is to reduce weight as much as possible while guaranteeing the best possible cooling performance without the use of fans - which significantly increases reliability. The cooling connectivity and mounting of the boards by CCA (Conduction Cooling Assembly) ensures optimum heat dissipation. The boards are connected to the CCA housing by HEITEC's Wedgelocks, which guarantee optimum heat transfer and a secure fixation in the system. The configuration dependent thermal behaviour is simulated in the concept phase with professional

tools and the input of decades of know-how to provide the system requirements.

The system solutions based on the platform are completely closed chassis, also gas- and watertight on request, in order to protect and provide optimum heat dissipation for the sometimes very sensitive electronic components inside. The compact and extremely robust design ensures that the requirements regarding shock according to MIL-STD810F and vibration according to MIL-STD167 are fulfilled.

In order to also transmit high-frequency signals from the outside to the corresponding modules inside, the ATR chassis are manufactured with honeycomb EMI filters and EMI sealing techniques to ensure compliance with the EMC requirements of MIL-STD-461E.

Due to the compliance with standards, backplanes of the topologies VPX (VITA 46) / OpenVPX (VITA 65) / VPX REDI (VITA 48), VME / VME64x (ANSI/VITA 1.1-1997) and CPCI / CPCI Serial can be installed in the ATR platform, providing the customer with a fast, robust and yet customized application solution.

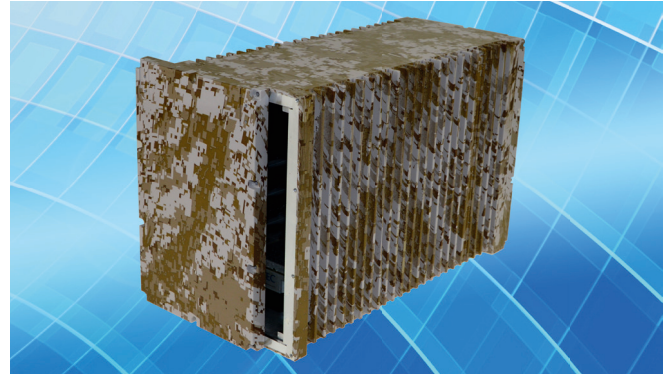
½ ATR System Platform

Conduction Cooling solution for toughest requirements

CCA system platform for VPX and OpenVPX solutions



This picture shows the open ½ ATR VPX system platform with view of the inner life.



In this application the system platform is coated with a special painting (camouflage).

Article	Description	Height	Width	Depth	Material
9924.846	½ ATR-Box VPX assembled	7,625 inch	4,875 inch	12,563 inch	Aluminum

Technical Summary

- › Material: aluminium
- › Surface: passivated / powder coated / spray finished
- › Monolithic backplane
- › Up to 6 cards with 3U Conduction cooling solution for CCA cards via wedgelocks
- › Top-loaded, sealed conduction
- › Conformity to ANSI/VITA 46.0, 46.10, 48.0, 48.1 65-2010 and 62.0
- › MIL-STD-810F, MIL-STD-167, MIL-STD-461E, MIL-STD-704E, MIL-STD-1275A: 28VDC, MIL-STD-5400, IEEE 1101.12
- › Delivery assembled

Customer Benefits

- › Suitable for applications in the harshest environments
- › Compliance with backplane topologies of VPX (VITA 46) / OpenVPX (VITA 65) / VPX REDI (VITA 48), VME / VME64x (ANSI/VITA 1.1-1997) and CPCI / CPCI Serial
- › Gas and liquid sealing
- › COTS (commercial off-the-shelf)
- › Convection, Conduction or liquid-cooled versions according to ARINC 404A
- › Capacity for 5, 7, 12 or 15 slots 3U/6U x 160mm
- › Optionally available in ¼, ½, ¾, 1, 1 ½ and in the „long“ versions

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