



AoC-550 Conduction Cooled Chassis with Air Assist

VPX VITA 48.2 Advanced Thermal Solutions

High speed VPX systems demand leading edge solutions to manage hot, power hungry board payloads. Part of our line of conduction cooled enclosures with air assist, the AoC-550 is an ATR chassis designed to maintain safe operating temperatures for high power 3U VPX conduction cooled systems.

The chassis provides forced air cooling to widely available VITA 48.2 conduction cooled board sets with aggregate power demands of up to 550W. Custom and standard 6 slot backplanes may include VPX and SOSA-aligned slot profiles in combinations supporting high speed signal processing applications.

The lightweight aluminum alloy chassis is sealed to provide ingress and EMI protection. Direct connect backplane and I/O panel ensures optimal signal integrity, eliminates cabling, improves shock and vibration performance and simplifies maintenance procedures.

Features

- Cooling for up to 550W of total power
- 6 slot backplanes, including up to 2 power supply slots
- Chassis side walls contain cooling heat sinks and fans
- Side walls form enclosed air chambers isolated from the VPX modules
- Concentrated air flow runs co-planar to heat sink fins
- Designed to meet MIL-STD-810, MIL-STD-461, and MIL-S-901D
- Rugged bolt together construction
- Tested at 55C ambient temperatures

- Custom backplanes with VPX and SOSA-aligned slot profiles
- Custom I/O panel with MIL-STD 38999 options for high speed signals
- Single or dual VITA 62 pluggable power supply modules

Benefits

- System integration services available
- Air assist cooling stretches VITA 48.2 module usage
- Compact lightweight design for SWaP sensitive applications



The AoC-550 is intended for use in high power, high speed C4ISR (Command, Control, Communications, Computers, Intelligence, Surveillance and Reconnaissance) systems operating in mission critical defense applications.

SPECIFICATIONS

Physical

Dimensions: 7.96" H (w/ optional .25" mounting feet) 7.7" (W) x 11.65" (D) (12.75 w/ Handle)
 Machined aluminum alloy 6061-T6, bolt together construction
 Weight: Approximately 28lbs

Backplane options

Custom 5+1 or 4+2 payload + power supply slot backplanes
 VPX and SOSA-aligned slot profiles
 10, 40 and 100GBase KR4 capable
 VITA 66 and 67 optical and RF apertures

Thermal

Operating: -40°C to 55°C
 4 x high cfm fans
 Max altitude 15Kft, 30Kft for sub 550W payloads
 Thermal load: 400W to 550W

I/O Capabilities

Custom I/O panel supporting high speed connectivity
 High density MIL-STD 38999 circular connectors
 High speed 10GbE 38999 Hercules connectors
 Rugged SMA connectors for RF and optical I/O

Environmental

Shock: 30 Gs @ 11ms half sine
 Vibration: 20 to 2000Hz at 5Gs
 Designed to meet MIL-STD-810, MIL-STD-461, and MIL-S-901D

Payload Compatibility

3U VPX multi-core single board computers, high speed GPGPU and FPGA modules, video processing and Ethernet switching

Power Supply

Dual VITA 62 pluggable power supplies supporting 12 and 5V centric board payloads
 MIL-STD-704E, MIL-STD-1275
 Input voltage: 18 to 36 VDC
 Output: up to 750W total

Applications

Mission computing, software radio, digital recording systems, digital signal processing, high speed data acquisition, video displays in defense assets operating in demanding environments

Related Products



CONDUCTION AND HYBRID LIQUID / CONDUCTION COOLED CHASSIS



CUSTOM 3U VPX BACKPLANES



VPX DEVELOPMENT CHASSIS

LCR provides a full line of VPX products and services - everything you need from development to deployment including; COTS rugged application ready chassis solutions as well as custom designs, custom 3U VPX backplanes supporting the latest slot profiles plus development tools including load boards and test fixtures.

ORDER NUMBER

DESCRIPTION

Consult LCR Sales

AoC-550 conduction cooled chassis with air assist for high power 3UVPX module payloads