

# 8 Slot Conduction Cooled VPX Chassis with Air Assist

## Removable Drive Bay

## VITA 48.2 Advanced Thermal Solutions

## 800 Series AoC3U-821

Part of our AoC3U-800 Series of conduction cooled enclosures with air assist, the AoC3U-821 is an ATR chassis designed to maintain safe operating temperatures for high power 3U VPX conduction cooled systems. The 821 includes a removable drive bay for mission recording and portability. The extensible chassis design provides forced air cooling to widely available VITA 48.2 conduction cooled board sets with aggregate power demands of up to 575W. Custom and standard 10 slot backplanes (8 payload slots and 2 power supply slots) 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.



The AoC3U-821 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.



*Up to 575W of cooling power, removable drive bay plus RF and optical cable routing accommodation*

## Features

- Cooling for up to 575W of total power
- 8 payload slots and 2 VITA 62 power supply slots
- Removable SSD bay
- Modular design, top and bottom chambers allow space for RF and optical cable bend radii
- Custom backplanes with VPX and SOSA aligned slot profiles
- Custom I/O panel with MIL-STD 38999
- options for high speed copper, optical or RF signals
- Designed to meet MIL-STD-810, MIL-STD-461, and MIL-S-901D
- Rugged bolt together construction
- Designed to meet 55C ambient temperature requirements
- Extensible design can be sized to accept a range of slot counts
- Side walls form enclosed air chambers isolated from the VPX modules
- High cfm fan bank provides concentrated air flow running coplanar to heat sink fins

## Benefits

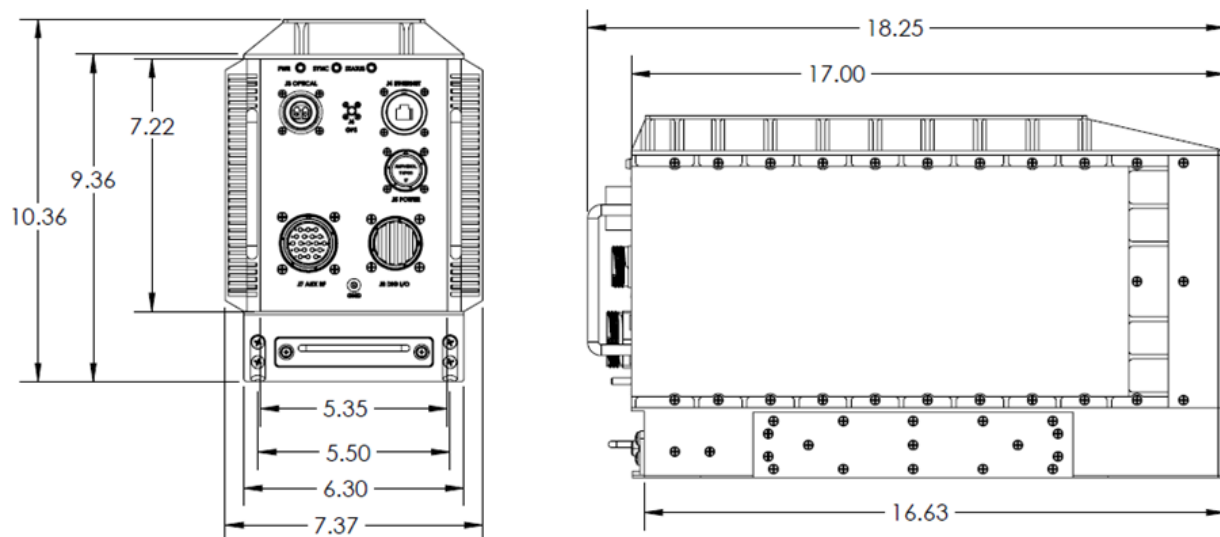
- System integration services available
- Air assist cooling stretches VITA 48.2 module usage
- Compact lightweight design for SWaP sensitive applications

**LCR Embedded Systems**

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SPECIFICATIONS	
<b>Physical</b>	<b>Backplane options</b>
Dimensions: 10.35" (H), 7.5 (W) x 18.25" (D) incl. handles and connectors 191mm x 263mm x 464mm including connectors and mounting plate Machined aluminum alloy 6061-T6, bolt together construction Weight: Approximately 38lbs, no payload boards	Custom 8 +2 payload to power supply slot backplane VPX and SOSA aligned slot profiles 10, 40 and 100GBase KR4 capable VITA 66 and 67 optical and RF apertures
<b>Thermal</b>	<b>I/O Capabilities</b>
Operating: -40°C to 55°C 4 x high cfm fans Max altitude 15Kft at 575W and 30Kft for sub 575W payloads	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
<b>Environmental</b>	<b>Payload Compatibility</b>
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	3U VPX multi-core single board computers, high speed GPGPU and FPGA modules, video processing and Ethernet switching
<b>Power Supply</b>	<b>Applications</b>
2 VITA 62 pluggable power supply supporting 12 and 5V modules MIL-STD-704E, MIL-STD-1275 Input voltage: 18 to 36 VDC Output: up to 1400W total	Mission computing, systems command and control digital recording systems, digital signal processing, high speed data acquisition, video displays in defense assets operating in demanding environments

## Chassis Dimensions



**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	AoC3U-821 conduction cooled chassis with air assist for high power 3UVPX module payloads. Includes dual front removable drive bays. Part number and description based on final order configuration