



4 Slot VPX Conduction Cooled Chassis with Air Assist

VITA 48.2 Advanced Thermal Solutions
AoC3U-400

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 AoC3U-400 is an ATR chassis designed to maintain safe operating temperatures for high power 3U VPX conduction cooled systems. 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 400W. Custom and standard 4 slot backplanes (4 payload slots and 1 power supply slot) 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-400 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 400W of cooling power across 4 payload slots

Features

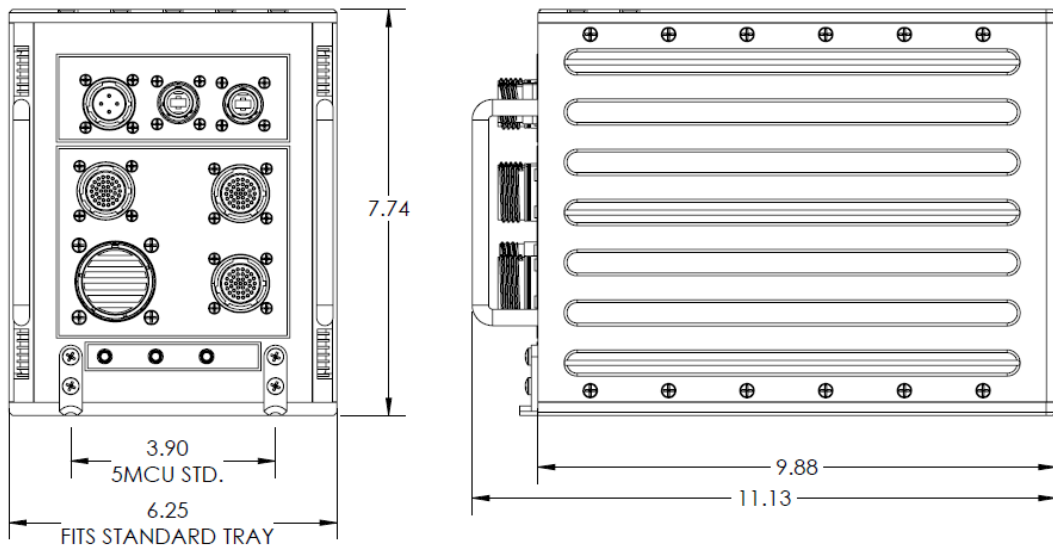
- Cooling for up to 400W of total power
- 4 payload slots and 1 power supply slot
- Custom backplanes with VPX and SOSA-aligned slot profiles
- Custom I/O panel with MIL-STD 38999 options for high speed copper, optical or RF signals
- VITA 62 pluggable power supply
- Designed to meet MIL-STD-810, MIL-STD-461, 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
- Chassis side walls contain cooling heat sink fins
- Side walls form enclosed air chambers isolated from the VPX modules
- Concentrated air flow runs co-planar 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

SPECIFICATIONS	
Physical	Backplane options
Dimensions: 7.75" H (w/ optional .25" mounting feet) 6.25" (W) x 9.875" (D) (11.13 w/ Handle) Machined aluminum alloy 6061-T6, bolt together construction Weight: Approximately 26lbs payload dependent	Custom 4 +1 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
Thermal	I/O Capabilities
Operating: -40°C to 55°C 4 x high cfm fans Max altitude 15Kft, 30Kft for sub 400W payloads Thermal load: Up to 400W	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	Payload Compatibility
Shock: 30 Gs @ 11ms half sine Vibration: 20 to 2000Hz at 5Gs Designed to meet MIL-STD-810, 461, 167 and MIL-S-901D methods	3U VPX multi-core single board computers, high speed GPGPU and FPGA modules, video processing and Ethernet switching
Power Supply	Applications
1 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 700W total	Mission computing, software radio, 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-400 conduction cooled chassis with air assist for high power 3UVPX module payloads. Part number and description based on final order configuration