LCR EMBEDDED SYSTEMS

OpenVPX™ SOSA™ Sensor Open Systems Architecture MEMBER

AoC3U-1440 Conduction Cooled Chassis with Air Assist

VPX VITA 48.2 Advanced Thermal Solutions

High speed VPX systems demand advanced solutions to manage hot, power hungry board payloads. Part of our AoC3U-1400 Series of conduction cooled enclosures with air assist, the AoC3U-1440 is designed to maintain safe operating temperatures for high slot count 3U VPX systems. The design includes dual 9 slot backplanes for up to 14 payload modules plus 2 each VITA 62 power modules and power hold up modules. The MIL-STD -1275 and 704 power supplies ensure continuous operation in demanding air, land and sea applications where power and environmental challenges exist. Backplane slots include VPX and SOSA aligned profiles supporting high speed signal processing applications. High cfm fan banks provide forced air cooling to widely available VITA 48.2 conduction cooled board sets with aggregate power demands approaching 850W, ambient environment dependent. This precision engineered packaging solution is intended for mission critical defense applications and is designed to meet a wide range of MIL-STD-810H requirements and test methods.

The AoC3U-1440 and derivatives are intended for use in high power, high speed C4ISR (Command, Control, Communications, Computers, Intelligence, Surveillance and Reconnaissance) systems in mission critical defense applications.

Features

- Forced air and conduction cooling for up to 850W of total power
- VPX and SOSA aligned module support
- Dual 9 slot backplanes for up to 14 payload modules plus 2 each VITA 62 power modules and power hold up modules.
- Meets the requirements for a 1-ATR-Long Tall, Type A ARINC 404A chassis
- Designed to meet MIL-STD-810H and MIL-STD-461 methods
- Rugged bolt together construction with full EMI shielding
- Side walls form enclosed air chambers isolated from the modules
- Fan fail, and module over temp sensing
- Choose custom backplanes with VPX and SOSA aligned slot profiles
- Custom I/O panel including MIL-STD 38999 options for high speed signals

Benefits

- Access to LCR System integration services available
- Air assist cooling stretches VITA 48.2 module usage
- Configurable, modular ATR base design enables multi-program portability

LCR Embedded Systems
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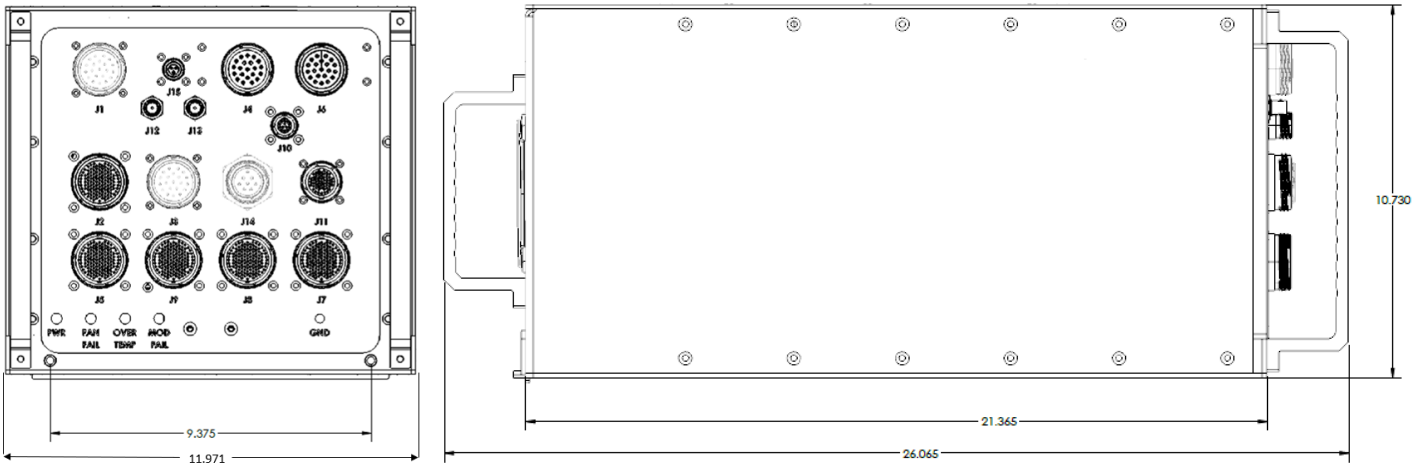
SPECIFICATIONS	
Physical	**Backplane options**
Dimensions: 10.73” (H) x 11.97" (W) x 26.06"(D) 272.5mm x 304mm x 662mm including connectors and handles Machined aluminum alloy 6061-T6, bolt together construction Chemically treated surfaces per MIL-C-5541 for corrosion resistance Weight: Approximately 60lbs including typical payload	Custom and standard profiles for VPX and SOSA-aligned modules including payload + power supply slots 10, 40 and 100GBase KR4 capable VITA 66 and 67 optical and RF apertures
Thermal	**I/O Capabilities**
Operating: -40°C to +55°C Flight rated high cfm temperature controlled fans Max altitude 15Kft or higher, cooling requirements dependent Thermal load: up to 850W, ambient environment dependent	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 BNC locking connectors for SD-HDI video
Environmental	**Payload Compatibility**
The AoC3U-1440 and derivatives are designed to meet a range of mil standards including MIL-STD-810H and MIL-STD-461 methods	3U VPX and SOSA-aligned multi-core single board computers, high speed GPGPU and FPGA modules, video processing, Ethernet switching and other payload modules
Power Supply	**Applications**
MIL-STD-704E, MIL-STD-1275 , MIL-STD-461 options Multiple input voltage: 115VAC, 28VDC Multiple VITA 62 power modules supporting 12 and 5V centric board payloads for high power requirenents	Mission computing, weapons control systems, software radio, digital recording systems, digital signal processing, high speed data acquisition, video displays in defense assets operating in demanding environments

Chassis Dimensions



Example I/O Panel Shown

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 to discuss configurations optons	AoC3U-1440 derivative configuration, conduction cooled chassis with air assist for high power 3UVPX module payloads.

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