

# AoC3U-1440 Conduction Cooled Chassis with Air Assist

## Supporting Deployment or Development Needs

Useful as a deployment or development chassis, the AoC3U-1440 features dual 9 slot backplanes including PSU slots. Backplanes are 100% configurable using Meritec cabling allowing the system to serve as a test platform or a deployable system using cable locking rails. Backplane profiles can support VPX and SOSA aligned module profiles for high speed signal processing applications. Custom I/O panels support any application. Part of our 1400 Series of conduction cooled enclosures with air assist, the 1440 is designed to maintain safe operating temperatures for high slot count 3U VPX systems. The MIL-STD -1275 and 704 power supplies ensure continuous operation in demanding air, land and sea applications where power and environmental challenges exist. 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.



## Features

- Deployment or development ready platform
- Configurable backplane allows fast mission update for deployment
- Backplane cabling enable application development
- Custom I/O panels including MIL-STD 38999 options for high speed signals
- VPX and SOSA aligned module support
- Forced air and conduction cooling for up to 850W of total power
- Dual 9 slot backplanes for up to 14 payload modules plus 2 each VITA 62 power 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
- Fan fail, and module over temp sensing
- Choose custom backplanes with VPX and SOSA aligned slot profiles
- Configurable, modular ATR base design enables multi-program portability
- VITA 48.2 conduction cooled



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.

## SPECIFICATIONS

### Physical

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

### Backplane options

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

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

### 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  
 BNC locking connectors for SD-HDI video

### Environmental

The AoC3U-1440 and derivatives are designed to meet a range of mil standards including MIL-STD-810H and MIL-STD-461 methods

### Payload Compatibility

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

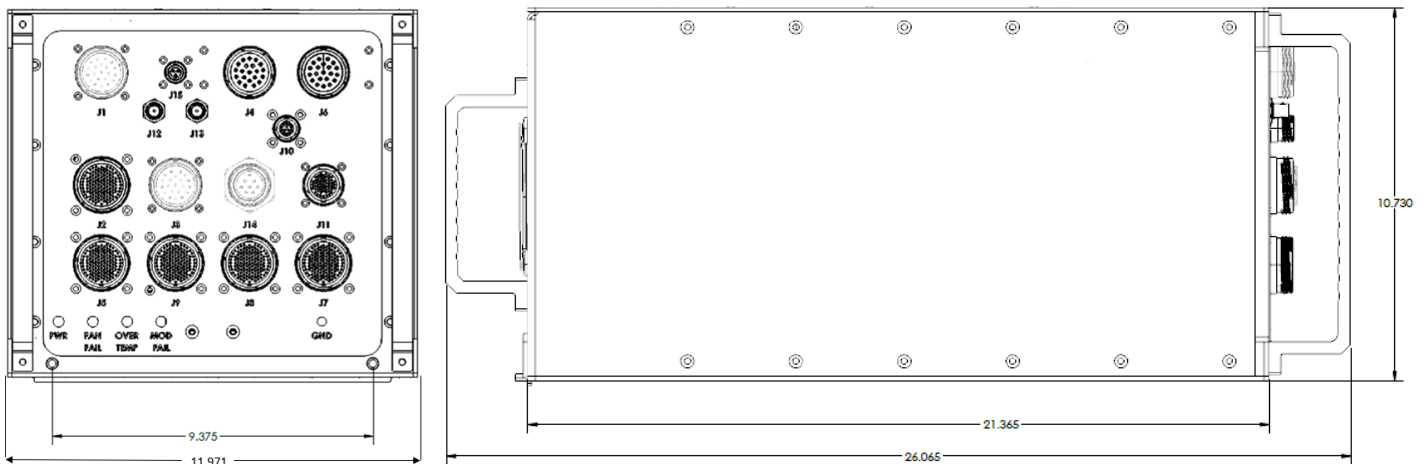
### Power Supply

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 requirements

### Applications

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 options

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