



Dual Slot 3U VPX Packaging

Supporting RF EW and SIGINT operations deployed in harsh environments

The AoC3U-210 is a rugged packaging solution designed for 3U VPX and SOSA aligned payload cards supporting high speed connectivity with GbE, 10GbE, RF and optical interfaces. The compact and lightweight design addresses a wide range of EW / ISR and radar uses in ground and airborne assets where size constraints and functional performance in demanding environments are key. The chassis is ideally suited for software defined radio / RF tuner content as well as new RFSoC board designs for 3U VPX. It is intended for sensor systems in C5ISR applications where programs mandate SOSA aligned plug in payload cards in accordance with the DoD hardware and software convergence initiative. Secure internal interconnections ensure the signal integrity and signal speed requirements of these sensitive and critical applications. Custom and standard 3 slot backplanes include 2 payload slots and 1 power supply slot. The AoC3U-210 is a VITA 48.2 conduction cooled chassis with air assist and incorporates a dual high cfm fan bank for optimal heat dissipation. The customizable I/O panel enables variations of connectors for application specific signal requirements.







The AoC3U-210 is a robust packaging solution for use in sensor applications where high speed RF and optical processing payload modules are deployed in EW / ISR operations and a range of radar applications. It is also designed to enable airborne, dismounted, mounted usage for many critical defense applications.







AoC3U-210

Features

- Thermal load cooling up to 200W
- Custom backplane supporting SOSA aligned and VPX slot profiles and VITA 66 and 67 apertures
- Custom I/O panel with options for high speed RF, copper and optical signals
- Gasketing for protection against EMI and environmental ingress
- Front panel space for I/O complements and connectors types including 38999, SMA ports and others
- VITA 62 pluggable power supply
- Secure internal connections ensure the signal integrity and signal speed requirements
- Designed for VITA 48.2 conduction cooled boards.
- AoC design provides high cfm air flow
- Single uni-body chassis
- Designed to meet 55C ambient temperature requirements

Benefits

- Compact light weight design for SWaP sensitive applications
- Enhanced cooling for high TDP operation
- Rugged construction for optimal performance in demanding environments

LCR Embedded Systems 9 South Forrest Ave. Jeffersonville, PA 19403 Aoc3U-210 Rev 3-2022

SPECIFICATIONS	
Physical	Backplane options
Dimensions: 4.31" (H) x 6.5" (W) x 14.125 "(D) 109mm x 165mm x 343mm including connectors and mounting plate Machined aluminum alloy 6061-T6, bolt together construction Weight: Approximately 13lbs including payload	Custom dual slot backplanes for 3U VPX, SOSA aligned module profiles including VITA 67.1 RF and VITA 66.4 optical apertures
Thermal	I/O Capabilities
Operating: -40°C to 55°C 2 x high cfm fans Thermal load: Up to 200W	Custom I/O panel supporting high speed connectivity High density MIL-STD 38999 circular connectors High speed 10GbE 38999 connectors, rugged SMA and Mighty Mouse connectors for RF and optical I/O
Environmental	Payload Compatibility
Shock:30Gs @ 11ms half sine Vibration: 20 to 2000Hz at 5Gs Designed to meet MIL-STD-810 test methods 516.8 and 514.8 Designed to meet MIL-STD-461 CE102, CS101, CS114, CS115, CS116	3U VPX and SOSA aligned payload boards supporting high speed RF, optical, GbE and 10GbE I/O requirements in defense programs that mandate SOSA aligned plug in cards
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 400W total	The AoC3U-210 is an advanced packaging solution intended for demanding environments. It enables deployment of counter ISR systems, multi-mission EW, navigational systems, air and ground surveillance radar, fire control radar, on the move radar, multi-mission radar systems at the tactical edge.

Chassis Dimensions





Sample 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 Sales	AoC3U- 21 0 conduction cooled chassis with air assist for 3UVPX module payloads. Part number and description based on final order configuration
Consult LCR Sales	CC3U- 21 0 passive conduction cooled chassis for 3UVPX module payloads. Part number and description based on final order configuration

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