LCR | EMBEDDED SYSTEMS, INC.

Chassis and Integrated Systems For Defense Applications

ADVANCED SOLUTIONS FOR TODAY AND TOMORROW

LCR's rugged ATR chassis and integrated systems represent a comprehensive line of VPX packaging solutions for applications requiring from 1-slot to 18-slots. Our rugged product lineup includes conduction cooled VPX, air cooled VPX and liquid cooled VPX ATR configurations. All chassis are designed for plug in cards in alignment with the Open Group Sensor Open Systems Architecture™ (SOSA) Technical Standard. These systems address C5ISR applications in demanding environments in airborne, land and sea–based defense assets.

OpenVPX™

SOSA™ Sensor Open Systems Architecture
MEMBER

Key Features and Benefits

- Rugged, VPX chassis aligned with the SOSA™ Technical Standard for rapid, cost-effective integration
- Passive conduction, conduction with air and conduction with liquid assist models

- Custom backplanes to meet your specific application requirements
- Backplane designs support VITA 66 and 67 RF and optical I/O
- Customizable I/O board and front panel

- SWaP optimized designs enable maximum functional performance in tight spaces
- Proven designs meeting the challenges of MIL-STD-810, MIL-STD-461, MIL-STD-167 and MIL-S-901D test methods

Mission Critical Applications

LCR's AoC chassis are designed for mission critical defense applications in the most extreme environments where size constraints and functional performance are key. Intended for EW / ISR, radar, mission computing, surveillance, weapons control and more in land, sea and air equipment.

AoC3U-x00 Air-over-Conduction Family of Chassis

VITA 48.2 CONDUCTION COOLED CHASSIS WITH AIR ASSIST FOR VPX AND SOSA ALIGNED PAYLOADS

From 1-slot to 18-slot systems, each chassis leverages a baseline modular concept that addresses key performance requirements for shock, vibration and thermal management while maintaining a sleek overall appearance.

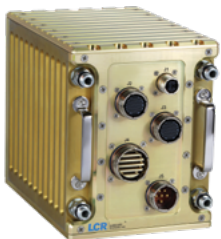|			
Single, dual and three slot payloads with options for VITA 62 or custom SFF power supplies	**100 Series**	**200 Series**	**300 Series**
The 400 and 600 Series provide cooling for up to 500W of aggregate power and 4 – 6 payload slots with space for up to 2 VITA 62 power supplies	**400 Series**	**600 Series**	
For extreme performance, the 800, 900 and 1000 Series support up to 10 payload slots plus 2 VITA 62 power supplies and cooling for up to 850W of aggregate power	**800 Series**	**900 Series**	**1000 Series**

LoC3U-x00 Liquid-over-Conduction Cooling

When liquid cooling is an option, the LoC3U-510 is a 5 payload slot rugged chassis with enhanced cooling for up to 500W of aggregate power.

AoC3U-1400 18-Slot Air-over-Conduction Cooling

1400 Series features a dual backplane design for up to 14 payload modules plus 2 each VITA 62 power supplies and power hold up modules.

1400 Series

Chassis Configurations At-a-Glance

Product Name	Payload Slots	VITA 62 PSU Slots	SSD Bays	Air / Liquid Assist	Approximate Dimensions Excluding Handles, Connectors and Mtg Feet	Weight (Payload Dependent)	SOSA Aligned
AoC3U-100	1	Custom PSU		Air	2.8" H x 5.7" W x 12.5" D	10 lbs	Yes
AoC3U-200	2	Custom PSU		Air	3.8" H x 5.7" W x 12.5" D	11 lbs	Yes
AoC3U-410	4	1		Air	7.7" H x 6.25" W x 9.8" D	26 lbs	Yes
AoC3U-412	4	1	2	Air	10.0" H x 5.9" W x 9.1" D	27 lbs	Yes
AoC3U-610	6	1		Air	7.7" H x 6.25" W x 11.8" D	29 lbs	Yes
AoC3U-821	8	2	1	Air	10.3" H x 7.5" W x 17" D	54 lbs	Yes
AoC3U-1440	14	4		Air	10.7" H x 11.9" W x 21.3" D	80 lbs	Yes
LoC3U-510	5	1		Liquid	8.2" H x 6.4" W x 9.1" D	30 lbs	Yes

- ARINC ATR and custom chassis form factors
- SFF or VITA 62 power supplies with MILSTD-1275 and 704 filtering
- Modular design for SSD bay, cabling space and thermal management
- Lower slot count versions available with passive, fanless conduction cooling
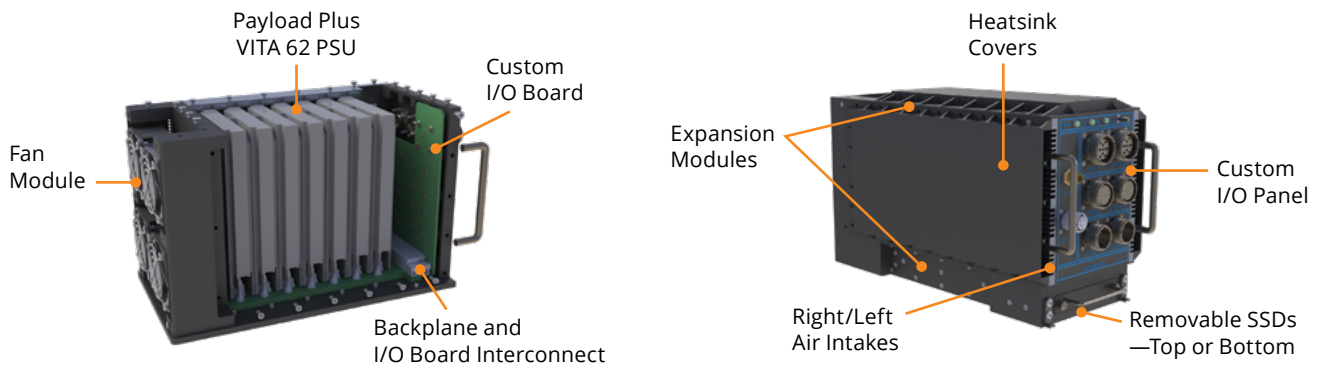
See LCR's line of chassis

PRODUCT LIFE CYCLE SUPPORT

Spares Support

Revision Control

Warranty Coverage

Product Service

End-of-Life Management

AoC Family of Chassis – Intelligent Modularity

DESIGNED FROM THE GROUND UP TO ADDRESS A WIDE RANGE OF APPLICATIONS AND FUNCTIONAL CAPACITY

Payload Plus VITA 62 PSU

Custom I/O Board

Fan Module

Backplane and I/O Board Interconnect

Heatsink Covers

Expansion Modules

Custom I/O Panel

Right/Left Air Intakes

Removable SSDs —Top or Bottom

Ensuring Success at Every Stage

System Integration

In addition to offering proven rugged chassis, LCR delivers complete integrated systems for mission critical defense programs. Our experienced and engaging staff can provide payload integration and testing that enables out-of-the-box installation of your application specific hardware and software.

Custom Backplanes for VPX and SOSA Aligned Payloads

New and emerging defense programs are driving demand for high speed VPX and SOSA aligned backplanes. LCR is at the forefront with over 45 new designs. Every LCR chassis includes custom backplanes with application specific profiles. Designs supporting 40Gbps and 100Gbps data rates and RF and Optical I/O.

Our Partner Ecosystem

LCR is partnered with leading technology suppliers in the embedded computing industry. In leveraging these best-in-class products, LCR will assist in board selection and system design as we help move your project forward to deployment.
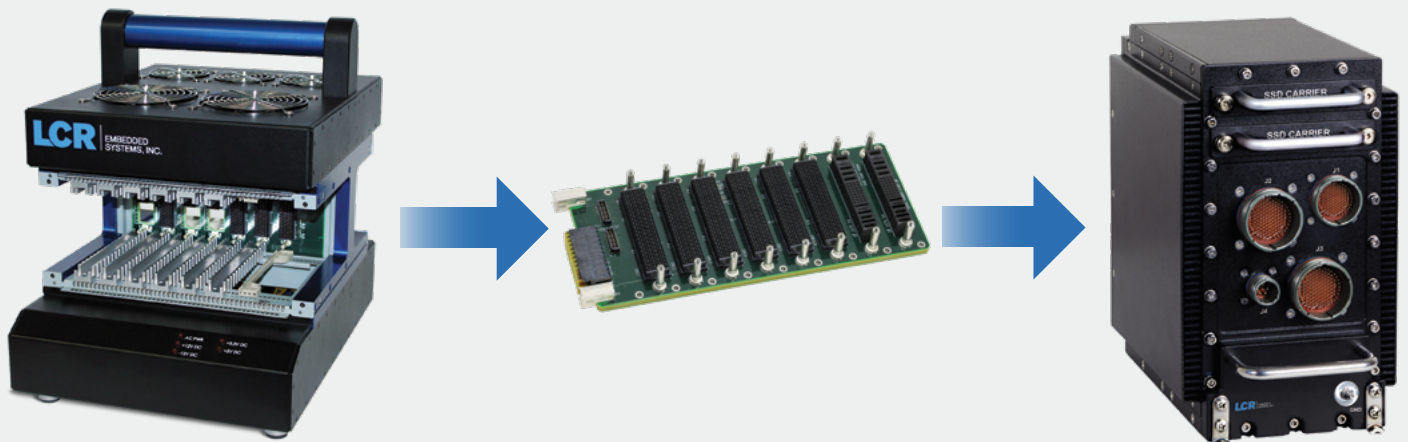
Defense Program Participation

For over 30 years, LCR has supported US Department of Defense agency programs with leading edge products and technologies. Advanced packaging solutions and fully integrated systems help to drive mission critical applications in the most demanding environments.

Streamlining Your Project Timeline Every Step of the Way

Starting with our popular DK line of development chassis, LCR can support successful project realization from initial concept and custom backplane profile design, all the way through to manufacture, integration and test of the final deployed chassis.

Images not to scale