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RCH9140VP

PACIFIC DEFENSE

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RCH9140VP

14-Slot CMOSS Chassis



Integrated Multi-Mission Comms/EW/C5ISR Solutions

The RCH9140VP front-loading chassis family is designed for high-performance multi-function processing and alignment with CMOSS, SOSA™, and OpenVPX™ technical standards. With a 14-slot configuration and enhanced processing features, the RCH9140VP supports secure enclave operations and efficient system integration for Cyber, EW, SIGINT, and Comms applications across diverse platforms.

Built to meet rigorous MIL-STD-810H and MIL-STD-461G standards, the RCH9140VP chassis incorporates a backplane with 100 Gbps capable Ethernet and provides robust performance in extreme conditions. The chassis accommodates up to eight mission specific payload plug-in cards, two Ethernet switch cards, a timing card, an I/O Intensive payload single board computer, and two power supply cards.

The RCH9140VP family of chassis are available in a variety of mounting configurations, including rackmount, vehicle-mount, and pod-mount. Pod-mount configurations offer reduced height, redirected air flow, and Agile Pod mounting brackets. Its front-loading design allows for convenient access and configuration, while compliance with VPX REDI conduction cooling standards ensures optimal thermal management. The RCH9140VP is ideal for aerospace, defense and commercial applications that require reliable, scalable processing in a rugged chassis.

KEY FEATURES

- Built to CMOSS, SOSA™, and OpenVPX™ standards
- 14 slot backplane configuration
- 3U VPX plug-in card (PIC) form factor
- Front-loading plug-in cards access
- Backplane Fat Pipes (FP) support up to 100 Gb/s for high data throughput and response time
- Backplane UTP support up to 25 Gb/s
- Two physically separated enclaves to facilitate security certification
- Integrated Chassis Manager module
- Low noise cooling fan solution
- Support for a removable storage device
- Integrated 28V EMI filter and ESD protection
- Low Mean Time to Repair (MTTR) design with unobstructed card access
- Available in 5U rackmount and optional pod-mount configurations
- Customizable rear panel for legacy I/O support

Front / Rear Panels

- Dual SOSA J8 connector with up to 38x RF inputs/outputs
- Dual SOSA J4 connector with up to 4x 100G ML2B and 2x 10G VDB ports
- Modular Open Radio Frequency Architecture (MORA)
- Vehicular Integration for C5ISR/EW Interoperability (VICTORY) Data Bus
- PNT 1PPS in/out, 100MHz in/out, GPS, AltNav
- Built-in cryptographic key fill, ignition key fill, and zeroize switch
- Removable storage access
- Backup battery access

Power Supply

- SOSA J1 28VDC chassis input voltage
- SOSA 12V-only power distribution to plug-in cards



Applications

- Electronic Warfare
- Electronic Intelligence
- Signal Intelligence
- Communication
- Networking
- Edge Computing
- Cyber Security Solutions
- Other low power embedded processing solutions

INNOVATIVE

DEFENSE & COMMERCIAL SOLUTIONS

Supported Slot Profiles

- SLT3-PAY-1F1U1S1S1U1U2F1H-14.6.11-4 mission specific payload slots (8) (other aperture options are supported)
- SLT3-SWH-6F1U7U-14.4.14* switch slots (2)
- SLT3x-TIM-2S1U22S1U2U1H-14.9.2-1 timing slot (1) (other aperture options are supported)
- SLT3-PAY-1F1F2U1TU1T1U1T-14.2.16 I/O intensive slot (1)
- SOSA-aligned, 12V-only power supply slots (2)

Environmental

- Hybrid cooling ruggedized to meet MIL-STD-810H
- EMI filtering and ESD protection to meet MIL-STD-461G
- Highly efficient VITA 48.2 thermal design for conduction cooled PICs in the air-cooled chassis

Mounting and Accessories

- Rackmount slide rails and pod-mount hardware available
- Breakout cables provided with each chassis

Description	14-slot Chassis
Size (W x D x H) (inches)	16.04 in x 17.02 in x 8.69 in *(includes connectors but no rackmount front panel handles)*
Weight (lbs)	53 lbs (approx. chassis only)
Max Power Consumption (W)	1200 W

** Configured as SLT3-SWH-5F4UG7U-14.4.14 topology*

CMOSS SOSA Sensor Open Systems Architecture MEMBER OpenVPX

Pacific Defense is designed to support the DoD's disciplined movement to modular open standards and to mirror the way military services address EMS warfare – holistic mission planning and execution. The company's approach inherently enables what it refers to as a rapid prototyping paradigm – embedding a commercial mentality into the defense industry. Products are designed from the outset for modern, AI-driven autonomy and CMOSS and SOSA-aligned hardware and software solutions. This includes state-of-the-art processing that can readily follow the evolution of commercial technology with complete data sharing across networks and platforms.

Headquartered in El Segundo, California, Pacific Defense takes an organic, commercial-minded approach to military-use electromagnetic spectrum technologies, and solutions. Focus areas include autonomous systems, command and control, communications, cyber operations, intelligence collection, and electronic warfare. Spectranetix, Perceptronics, and Spear Research are part of the Pacific Defense family, specializing in highly-advanced RF spectrum technologies, and engineering with innovative AI-backed algorithms.

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