

FEATURES

- 8U top load rackmount
- Application-specific hybrid 3U/6U OpenVPX backplane
 - 4 slots 6U OpenVPX
 - 6 slots 3U OpenVPX with VITA 67.1 and VITA 67.2 RF feedthrough
- Finned carriers for 3U conduction-cooled OpenVPX modules to support chassis air cooling
- 220VAC input
- >1600W power supply
- Application-specific I/O cabled to front and rear I/O panels, including RF coax inputs and Ethernet
- Can power and cool >150W per slot with >20 CFM per slot airflow
- Contact factory for specific power and cooling requirements
- Ethernet/SNMP system monitoring utilizing Atrenne Computing Solutions rugged PCM and rugged fan controller



AIR-COOLED 8U RACKMOUNT HIGH POWER HYBRID 3U-6U OPENVPX VITA 67 RF CHASSIS SOLUTION



OVERVIEW

Signal Processing Chassis Solution for ground based Signal Intelligence (SIGINT) system. This Chassis solution was based on a similar high power existing chassis design with forced air cooling. It required hybrid 3U/6U, hybrid air and conduction cooled payload, a new application-specific high performance Hybrid 3U/6U OpenVPX™ backplane and even higher power in a constrained space envelope.

MARKET

Military

CHALLENGE

Design and manufacture high power hybrid air and conduction cooled rackmount chassis supporting four high power air cooled 6U OpenVPX modules and six 3U OpenVPX VITA 67 RF feedthrough conduction cooled modules.

CONCERNS

Support challenging hybrid air/conduction cooling and hybrid 3U/6U module requirements in a constrained size envelope on a short project timescale. We were able to provide a solution that maximized re-use of existing IP to meet the budget and timeframe requirements, while supporting extensive I/O including RF Coax Inputs and Ethernet.

HOW CAN WE HELP REDUCE YOUR RISK?

Atrenne can help you with all of your application-specific backplane and chassis requirements.

APPLICATIONS

Ground based SIGINT

CHASSIS SOLUTION 100-192

AIR-COOLED 8U RACKMOUNT HIGH
POWER HYBRID 3U-6U OPENVPX
VITA 67 RF CHASSIS SOLUTION

SPECIFICATIONS

PHYSICAL

- Dimensions: (H x W x D)
 - 13.93 x 19.0 x 20.27" (353.8 x 482.6 x 527.1mm)
- Weight: 75lb (34.1kg)

POWER/ELECTRICAL

- DC input: 200VAC, 50/60 Hz

CONSTRUCTION

- Extrusions: 6063-T6 aluminum
- Top and bottom: 0.08" thick aluminum 5052-H32
- Card cage: side panels 0.125" thick aluminum 5052-H32
- Power supply: 1683W
 - +12V @ 1200W
 - +5V @ 50W
 - +3.3V @ 33W
 - +12V @ 400W (fans)
- Card guides: molded plastic, Noryl N190X black, UL94-V0
- Tapped strips: carbon steel bar stock with zinc plating and supplementary chromate treatment
- ESD ground clips: beryllium copper, alloy C17400, 1/2 HT, with bright tin plating/MIL-T-10727
- Fan tray: cooling via four 12 VDC tube axial fans

ENVIRONMENTAL

- Temperature
 - Operating: 0 to +50°C
 - Non-operating: -40 to +85°C
- Altitude
 - Operating: 0 to 10,000 ft
 - Storage: 0 to 50,000 ft
- Humidity: 95%, non-condensing
- Cooling
 - Provides extreme cooling of 20 CFM per slot air flow with high pressure drop 6U OpenVPX payload
 - Maintains conduction-cooled 3U card edge temperature <70°C at 43°C ambient at 10,000 ft
- Shock: designed to meet MIL-STD-810G, Method 516.6, Procedure VI
- Vibration: designed to meet 0.01 g²/Hz, 1.5 to 2 KHz
- Safety: designed to meet UL 60950; CSA 22.2 #234; TUV EN60950
- EMC: designed to meet US CFR 47, FCC part 15, paragraphs 15.109(a), 15.107(a), and 15.209(a). (Note: MIL-STD-461 EMI can be supported with modifications to power inlet, line voltage filter, and power supply; contact factory.)

WARRANTY

This product has a one year warranty.

CONTACT INFORMATION

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