Atrenne
A Celestica Company

CHASSIS SOLUTION 87-187

AIRBORNE 3U OPENVPX ½-ATR FORCED-AIR CONDUCTION ATR SOLUTION FOR MISSION COMPUTER APPLICATION

FEATURES

- Modified ½-ATR per specific legacy form factor
- 8.25" x 5.24" x 16.31" (H x W x D)
- Application-specific 3U OpenVPX backplane
  - (10) 3U OpenVPX 1.0" pitch slots
  - (1) 3U MIL-STD-704F ANSI/VITA 62 power supply slot
  - (1) 3U AC/DC input / holdup power supply slot
- Application-specific I/O panel CCA
- Modified COTS MIL-STD-704F 3-PHASE 400 Hz AC-input 233W Power Supply with 50msec holdup
- -40 to +49°C

MARKET

Military

APPLICATION

Airborne Mission Computer Application

CHALLENGE

Design and manufacture a forced-air conduction-cooled modified ½-ATR chassis for an airborne mission computer tech refresh with 3U OpenVPX™ card cage and backplane, and modified COTS MIL-STD-704F 3-phase AC-input power supply.

CONCERNS

Program required adaptation to a specific legacy form factor to allow drop-in replacement for a tech refresh.

HOW CAN WE HELP REDUCE YOUR RISK?

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

The solutions that you see on our website are just a small sample of what we have done. Please browse our solutions and contact us for a consultation.

Designed for an airborne mission computer tech refresh application, this Atrenne ruggedized ATR solution (Solution 87-187) is a modified ½-ATR chassis that supports an application-specific 12-slot 3U OpenVPX backplane and a modified COTS MIL-STD-704F3-phase AC input 233W power supply with 50msec holdup. Operating at 0 - 40kft and -40 to +49°C, the chassis is part of Atrenne Integrated Solutions' industry-leading Atrenne line of high performance chassis and backplane solutions that feature innovative design for dependable operation in today's data-intensive, rugged aerospace and military applications.

CHASSIS SOLUTION 87-187

AIRBORNE 3U OPENVPX ½-ATR FORCED-AIR CONDUCTION ATR SOLUTION FOR MISSION COMPUTER APPLICATION

SPECIFICATIONS

PHYSICAL	
Width	5.24”
Height	8.25”
Depth	16.31”
Weight	21 lbs. including power supply
Construction	Brazed aluminum
ENVIRONMENTAL	
Operating Temperature	-40 to +71°C ambient
Altitude	0 ft MSL to 40,000 ft MSL
Cooling	• Air-cooled sidewalls utilizing platform cooling: - -40 to +49°C at MSL, - -40 to -15.4°C at 40,000 ft. • Rear air intake, side air exhaust ports - 11 lb./min KW @ +49C at MSL; - 1.8 lb./min KW @ -15.4C at 40kft
Vibration	MIL-STD810 Method 514.6 Procedure 1 - General Vibration
EMC	MIL-STD-461E: CE102,CS101, CS114, CS115, CS116, RE102, RS103
POWER/ELECTRICAL	
AC Input	3-phase 115VAC 400 Hz per MIL-STD-704F
Power Supply	• (1) Modified COTS 3U MIL-STD-704F DC/DC power supply, DC Outputs total 233W: - 3.3V @ 0.25A - 3.3V @ 10A - 5V @ 39A - +12V @ 0.16A - -12V @ 0.16A • (1) Modified COTS 3U AC/DC input/holdup power supply with 50msec holdup
Backplane	• 3U OpenVPX connectors • DC/DC power supply: ANSI/VITA 62 power supply connector • AC/DC input card: Positronic connector • 2MM HM I/O panel connectors
Connector Pitch	• VPX slots: 1.0” pitch • VITA 62 slot: 0.8” pitch • AC/DC input slot: 1.2” pitch
CONSTRUCTION	
Top & Bottom	Aluminum 5052
Card Cage Brazement	Dip brazed aluminum 6061

WARRANTY

This product has a one year warranty.

CONTACT INFORMATION

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