Atrenne
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CHASSIS SOLUTION 26-151

AIRBORNE FORCED AIR CONDUCTION-COOLED 3U/6U OPENVPX 1+ ATR CHASSIS SOLUTION FOR ISR APPLICATION

FEATURES

- Custom side-load forced air conduction deployable 1+ ATR chassis
- Hybrid 11-slot 3U/6U OpenVPX backplane with mixed pitch
  - (7) 6U OpenVPX 0.85" pitch slots
  - (2) 3U OpenVPX 1.0" pitch slots
  - (2) 6U 0.8" pitch power supply slots
- Ethernet/SNMP Chassis Monitoring
- Cabled I/O including RF cabling
- -40 to +55°C
- 0 to 50 kft
- 28VDC MIL-STD-704F input
- 625W power supply
- Shock: 20 Gs, 11ms
- Vibration: 4.74 Gs RMS
- EMI/EMC: MIL-STD-461E

MARKET

Military

APPLICATION

Airborne ISR Application

CHALLENGE

Design and manufacture an airborne forced air conduction-cooled ATR chassis with high power 6U OpenVPX slots, hybrid 3U/6U card cage and backplane, and 625W MIL-STD-704F power supply.

CONCERNS

Program required hybrid 3U/6U OpenVPX card cage and backplane, with quick-turn delivery requirements.

This custom OpenVPX ATR enclosure was designed based on a customer's requirements for an airborne ISR application. The enclosure is 1+ ATR in size with dimensions of 10.65" x 12" x 16.9" (HxWxL). This deployable ATR chassis is side-loaded, forced air conduction-cooled. It includes a hybrid OpenVPX backplane with 11 slots of 3U/6U mixed pitch. The chassis supports 28VDC input with a MIL-STD-704F 625W power supply. The ATR enclosure includes Ethernet/SNMP chassis monitoring.

It operates from -40 to 55°C, with an altitude of 50,000 ft MSL, withstands shock up to 20 Gs, 11ms, Vibration up to 4.74 Gs RMS, and EMI/EMC per MIL-STD-461E.

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SPECIFICATIONS

PHYSICAL	
Width	12.00"
Height	10.65"
Depth	16.90"
Weight	39 lbs. including power supply
Construction	Brazed aluminum
ENVIRONMENTAL	
Operating Temperature	-40 to +55°C per MIL-STD-810F, Method 520.2, Procedure I
Storage Temperature	-55 to +85°C per MIL-STD-810F, Method 520.2, Procedure I
Altitude	0 to 50,000 ft MSL
Humidity	90% RH per IAW MIL-STD-810F, Method 520.2, Procedure I
Cooling	• Air-cooled sidewalls utilizing built-in MIL grade high performance fans • +55°C ambient at SL • -37.8°C at 50,000 ft
Shock	20g, 11ms per MIL-STD-810F, Method 516.5, Procedure I
Vibration	MIL-STD-810F Figure 514.5C-9 with F0 set to 80 Hz and L0 set to $0.1g^2/Hz$
Crash Hazard	20g, 11ms per MIL-STD-810F, Method 516.5, Procedure V
Salt Fog	MIL-STD-810F, Method 509.4
Dust Intrusion	MIL-STD-810F, Method 510.4, Procedure I
Explosive Atmosphere	MIL-STD-810F, Method 511.4, Procedure I
EMC	MIL-STD-461E: CE102, CS101, CS114, CS115, CS116, RE102, and RS103
POWER/ELECTRICAL	
DC Input	28VDC per MIL-STD-704F
Backplane Connectors	• 3U OpenVPX connectors • 6U OpenVPX connectors • Positronics Power Supply Connectors
Monitoring Solution	Atrenne rugged Power & Control Module (PCM) supporting Ethernet/SNMP
Connector Pitch	1.0"
Transmission Rate	5 Gbaud
CONSTRUCTION	
Top & Bottom	Aluminum 6061
Card Cage Brazement	Dip Brazed Aluminum 6061
Power Supply	• (2) 6U Conduction-cooled Power Supplies • DC Outputs total 625W

WARRANTY

This product has a one year warranty.

CONTACT INFORMATION

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