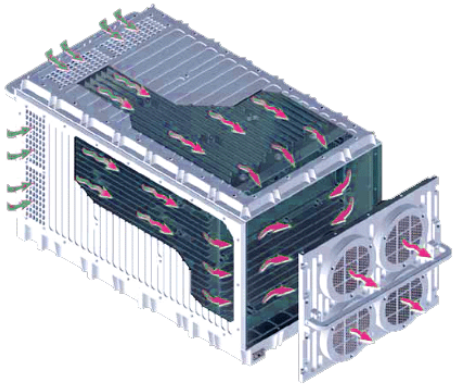
DATASHEET

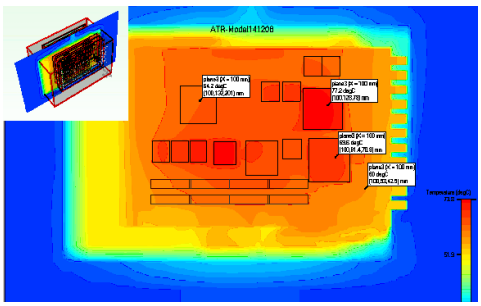
4HX SERIES

8 Slot 6Ux160mm Conduction Cooled ATR

- **4 Internal Heat Exchangers 4HX**
- **Sealed contaminant free dry-air COTS enclosure**
- **Accepts standard 6U Conduction Cooled Modules**
- **Patented Flexible I/O Wiring Systems**
- **VPX & cPCI architecture performance of up to 50+ Watt**
- **Exclusive designed and manufactured to meet MIL 810F and MIL 461E**

The 3HX Series, pushes the limits of sealed air-cooled ATR design to meet the demand of true high power COTS solutions that require greater speed of boards and components for the latest, most advanced military electronic systems. VPX & cPCI architecture performance of up to 50+ Watt per slot and 300W per system can be cooled to 85C (at card edge) using a complex combination of cross-flow forced air convection and conduction that goes beyond any previous .





4HX Series ATR combines four internal heat exchangers to deliver unprecedented levels of cooling. The design also allows users to improve the dissipation by providing a conduction cold plate and thus facilitating optimum operation under extreme environmental conditions. It also accommodates fans on the rear to allow operations without resorting to external conditioned air supply.

4HX Series successfully combines various cooling techniques to establish maximum number of thermal paths to outside world, achieving a higher power

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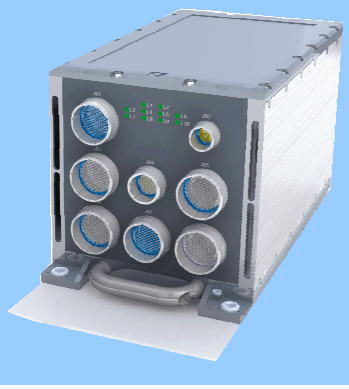


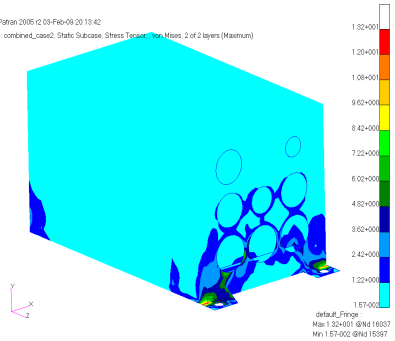
VPX

MECHANICAL	
Mechanical Dimensions	190.5(W)x318(L)x193.5(H) MM Standard 6U X160MM – 8 Slots
Cooling	Conduction
Weight	7.2Kg
Maximum operating Ambient Temperature	85 deg C

COMPLIANCE	
Operating Temperature	-55°C to +65°C
Storage Temperature	-55°C to +125°C
Altitude	Up to 70,000 feet
Humidity	MIL-STD-810F, Meth 507 (5cycles/48 hrs, 60°C, 95% RH)
Vibration	MIL-STD-810F, Meth 514.5, Proc.1, Cat. 12 modified: acceleration PSD .04 G2/Hz from 20 to 2000 Hz
Shock	MIL-STD-810C, Meth 516.2, Proc.1, Figure 516.2-2 modified; 18 half-sine 40g. impact shocks (3 shocks each direction/axis)
EMI	MIL-STD-461E; CE102; CS101; CS114; CS115; CS116; RE102; RS103

Stress Summary

Excitation Direction	Sigma Level	Maximum Displacement along excitation Direction (mm)	Max. Stress (MPa)		
			σx	σy	σxy
X-Direction	1 σ	0.508998	34.37	26.77	11.02
	2 σ	1.017996	68.74	53.54	22.04
	3 σ	1.526994	103.11	80.31	33.06
Y-Direction	1 σ	0.507508	48.28	41.88	10.19
	2 σ	1.015016	96.56	83.76	20.38
	3 σ	1.522524	**144.84**	125.64	30.57
Z-Direction	1 σ	0.556257	41.69	41.84	15.21
	2 σ	1.112514	83.38	83.68	30.42
	3 σ	1.668771	125.07	125.52	45.63



Von-Mises Stress

Ordering Information
Part Number 2010-0002-00

TACTICAL SYSTEMS

1503 CONSTANTO CT.
SAN JOSE,
CA 95129

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GANGANAGAR,
BANGALORE 560 032