

# MODEL 3140

## MILITARY GRADE

## 1/2 SHORT ATR CHASSIS

## 3U/4SLOT BACKPLANE



Model 3140 is a conduction-cooled, top-loading ATR chassis. Manufactured from aluminum alloy #6061-T651, this chassis provides effective thermal conduction management via thick walls and an FEA modeled outboard finsink design. The result of this advanced cooling technology is the ability to handle over 100W @ 70°C ambient operating temperature at 30,000 ft. (~4.37psi). Engineered heatsinks are utilized which can be further customized and analysis is performed validating the increased level of thermal performance.

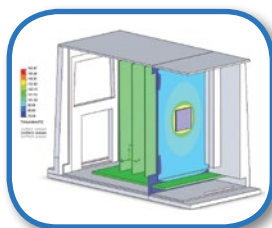
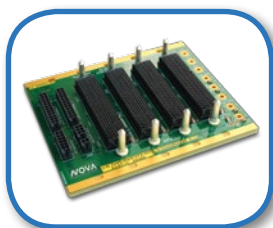
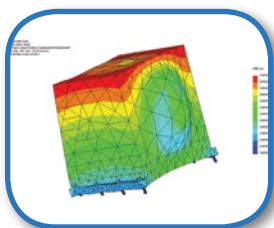
A 3U, 4 or 5-slot VITA compliant VPX-style backplane may be installed. The Model 3140 is designed to accommodate Eurocard passive backplanes and 3U x 160mm IEEE 1101.1/10 plug-in boards. The internal cold plate is built with added material to improve thermal conductivity in support of highly sophisticated wedgelocks.

The 3140's VITA compliant power supply has a 21-30 VDC input (115VAC @ 400Hz optional), with 100W output supporting +3.3VDC, +5VDC, +12VDC and -12VDC voltages with a custom EMI filter. The power supply can be further customized as needed.

Customers may select from numerous D38999 Series-III copper or fiber optic, MIL-STD-26482 or other bulkhead circular types available in the marketplace for use with a customizable removable I/O panel. Where needed, NIS will design a cost effective I/O printed circuit board to reduce cabling between the face plate and the backplane.

For more information visit our web site at: [www.novaintegration.com](http://www.novaintegration.com)

- **A proprietary, overlapping machined panel design results in zero torsional flex and superior sealing for FOD and EMI**
- **1/2-Short VPX Conduction-cooled ATR chassis**
- **3U x 160mm Top loading system**
- **4-slot on 1" pitch or 5-slot on 0.8" pitch VPX, VME64x, cPCI or custom backplane**
- **AC or DC input with multiple power options**
- **Input transients and voltage hold up per MIL-STD-1275/704E**
- **Shock & vibration as per MIL-STD-810F; EMC per MIL-STD-461F**
- **MIL-C-5541E chemfilm with a black hard anodized or painted exterior surface**
- **Hard mounting configuration shown**
- **Thermal and structural simulations have been completed validating all designs**
- **Custom options or modifications available**



**Metromatics**



### ENVIRONMENTAL CHARACTERISTICS

High temperature, operating	+70°C per MIL-STD-810F, Method 501.4, Procedure I & II
Low temperature, operating	-40°C per MIL-STD-810F, Method 502.4, Procedure I & II
High temperature, non-operating	+85°C per MIL-STD-810F, Method 501.4, Procedure I & II
Low temperature, non-operating	-40°C per MIL-STD-810F, Method 502.4, Procedure I & II
Thermal shock	Designed to meet MIL-STD-810F, Method 503.4, Procedure I
Humidity	0% to 95%, non-condensing per MIL-STD-810F, Method 507.4, Procedure III
Altitude, operating	-1,500 ft. to 30,000 ft. per MIL-STD-810F, Method 500.4, Procedure I, II & III
Altitude, non-operating	-1,500 ft. to 65,000 ft.
Vibration	Designed to meet MIL-STD-810F, Method 514.5, Procedure I & II
Shock (acceleration)	13.5G, 22ms per MIL-STD-810F, Method 513.5, Procedure I & II
Shock	20G, 11ms per MIL-STD-810F, Method 516.5, Procedure I & IV
EMI/EMC	Designed to meet MIL-STD-461F, Method CE106, CS103, CS104, CS105

Electromagnetic environment	Designed to meet MIL-STD-464A
ESD	MIL-STD-1686A
Rain	Designed to meet MIL-STD-810F, Method 506.4, Procedure II
Salt fog	Designed to meet MIL-STD-810F, Method 509.4, Procedure I
Sand & dust	Designed to meet MIL-STD-810F, Method 510.4, Procedure I & II

### PHYSICAL CHARACTERISTICS

Dimensions	1/2 Short ARINC Size (custom) 11.25" L x 5.5" W x 7.62" H
Weight	15.5 lbs. without plug-in boards installed
Mounting	Hard mount tabletop and shock tray

### ELECTRICAL CHARACTERISTICS

Input power (standard)	21-30 VDC
Input power (optional)	110VAC @ 47-440 Hz Custom options available
Voltage hold up	50ms per MIL-STD-704A

### COMMON SPECIFICATIONS

Chassis body	Machined aluminum alloy #6061-T6
Cooling	600W at 15,000 ft. altitude at +55°C ambient temperature
User controls	Circuit breaker (MIL-grade) Customer definable and configuration dependant

### ORDERING TABLE

95-3140-02041-00x	Model 3140, 3U VPX, 4 Slot, 28VDC power input
95-3140-02046-00x	Model 3140, 3U VPX, 4 slot, 110VAC @ 47-440Hz
95-3155-06051-00x	Model 3140, 3U cPCI, 5 Slot, 28VDC power input
95-3155-06056-00x	Model 3140, 3U cPCI, 5 slot, 110VAC @ 47-440Hz

Contact factory for additional configurations and options

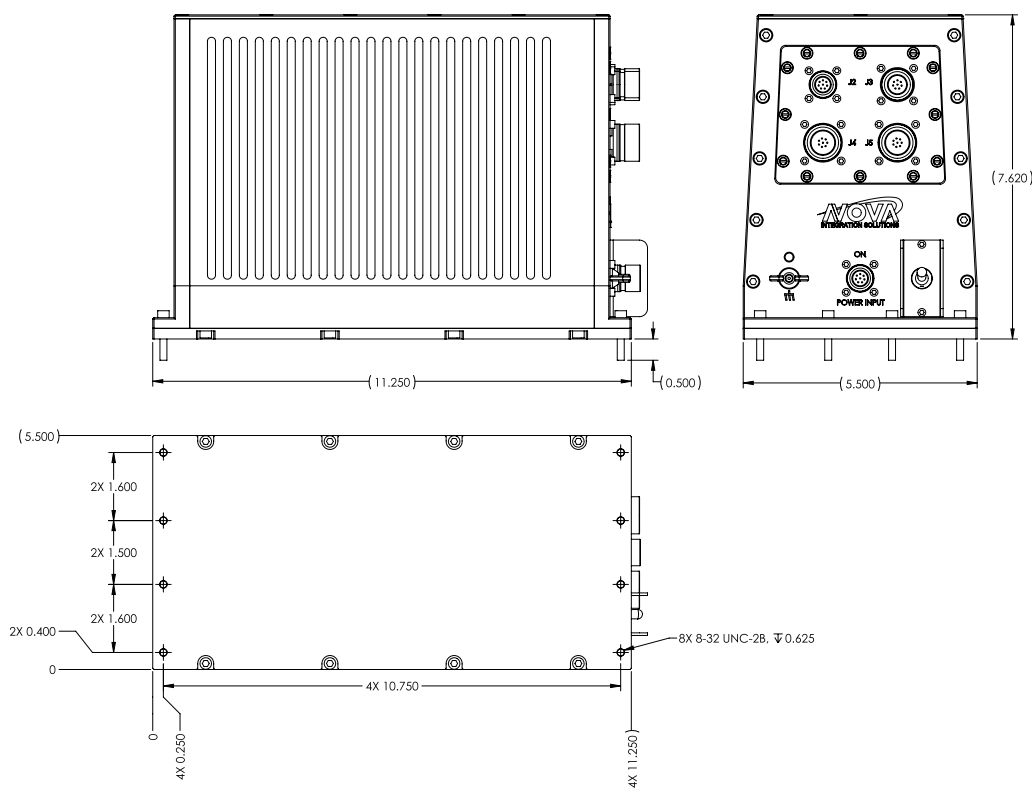


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### OUTLINE DRAWING



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