

MODEL 3155

MILITARY GRADE

3/4 LONG ATR CHASSIS

6U/6SLOT BACKPLANE



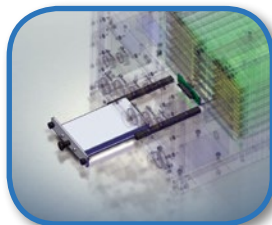
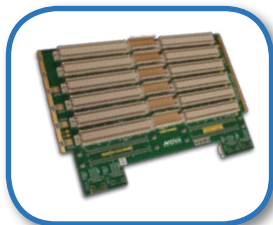
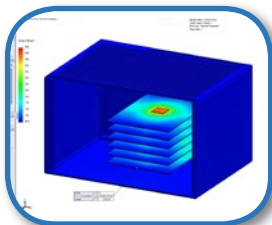
The 3000 Series consists of a family of standard products and custom ATR reference designs also referred to as a chassis or enclosure. They support highly rugged and MIL-spec applications utilized by the defense and aerospace markets. The Series provides a full set of packaging features ideally suited to meet the high performance demands of ground-based applications or flight vehicles that operate at high altitudes.

The 3100 Class is a family of conduction cooled enclosures ideally suited for applications requiring a sealed chassis without the use of forced air convection. Hybrid cooled chassis are provided in the 3200 Class for in support of more challenging thermal applications.

The Model 3155 is a full military grade 3/4 Long ATR chassis which utilizes a 6-slot custom VME64x backplane (or similar eurocard based 6U backplane), MIL-STD-461 compliant EMI filter, hard mounted 1kW power system, a sealed 2.5" hard drive enclosure and an optional System Environmental Monitor (SEM).

NIS is a vertically integrated advanced packaging company and is well suited to handle ATR design challenges required by UAVs, Fighter Jets, and similar aircraft applications. All facets of the ATRs design, simulation, manufacturing and testing including mechanical/electrical design, thermal/structural simulation, EMI filter design, PSU design, backplane design, I/O panel design, system monitoring, shock isolation, metal fabrication, and more are well within our capabilities.

- **NOVA's proprietary, overlapping machined panel design results in zero torsional flex and superior sealing for FOD and EMI**
- **Conduction cooled plug-in modules**
- **Designed and simulated to survive high altitude and temperature applications**
- **RTCA/DO-160E temperature, altitude, humidity, shock, vibration, explosive atmosphere, salt spray and sand / dust**
- **MIL-STD-461E EMI/EMC**
- **Supports 6U VPX/OpenVPX, VME64x and CompactPCI eurocard backplanes on 0.8", 1.0" or mixed pitch**
- **Standard 110 VAC @ 47-440 Hz input**
- **Thermal and structural simulations have been completed validating all designs**
- **System Environmental Monitor (SEM) available as an option**
- **Sealed 2.5" hard drive enclosure available as an option**



ENVIRONMENTAL CHARACTERISTICS

Temperature, operating	0°C to +55°C
Temperature, non-operating	-25°C to +70°C
Temperature Variation	RTCA/DO-160E, Paragraph 5.3.1, Category A
Humidity	0% to 95%, non-condensing MIL-STD-810D, Method 507.2, Fig 507.2-3
Altitude, operating	-1,000 ft. to 15,000 ft. RTCA/DO-160E, Paragraph 4.6.1, Category A
Altitude, non-operating	-1,000 ft. to 60,000 ft. RTCA/DO-160E, Paragraph 4.6.1
Decompression	65,000 ft. tested per RTCA/DO-160E, Paragraph 4.6.2
Vibration, random	0.04g ² /Hz from 15-1000Hz falling off at 6db/octave from 1000-2000Hz
Acceleration	15G, any axis per MIL-STD-810D method 513.3
Shock	20 G, 11ms saw-tooth MIL-STD-810F, Method 516.5, Procedures I & VI
EMI/EMC	MIL-STD-461C (Cat A 1b) CE03, CE07, CS02, CS06, CS09, RE02, RS02 Part II, RS03
Electrical Bonding	MIL-HDBK-1857
ESD	MIL-STD-1686A

Explosive Atmosphere

RTCA/DO-160E, Paragraph 9.7.2, Category E

Salt Spray

RTCA/DO-160E, Paragraph 14.2, Category S

Sand and Dust

RTCA/DO-160E, Paragraph 12.3, Category D

Fungus Resistance

MIL-STD-454N, Requirement 4

Fluid Contamination

Jet fuel DERD 2494, hydraulic fluid MIL-H-5606E, lube oil mixtures to DERD 2497/MIL-L-7808 & soap water

PHYSICAL CHARACTERISTICS

Dimensions	3/4 Long ARINC Size (custom) 11" H x 5.7" W x 17.3"
Weight	35 lbs.
Mounting	Tabletop or Shock Tray

ELECTRICAL CHARACTERISTICS

Input Power (standard)	28VDC (nominal)
Input Power (optional)	110VAC @ 47-440 Hz Custom options available
Power Supply	Hard Mounted 1kW PSU or Up to 1kW Plug In
EMI Filtering	MIL-STD-461 compliant, military grade input
Voltage Hold Up	MIL-STD-704A (optional)

HARDWARE PLATFORM

Backplane	Standard or custom 6-8 Slot on 1.0" & 0.8" pitch
Customization	Customer definable front I/O panel. Customer definable backplane. Power system defined per configuration.
System Monitor	Optional

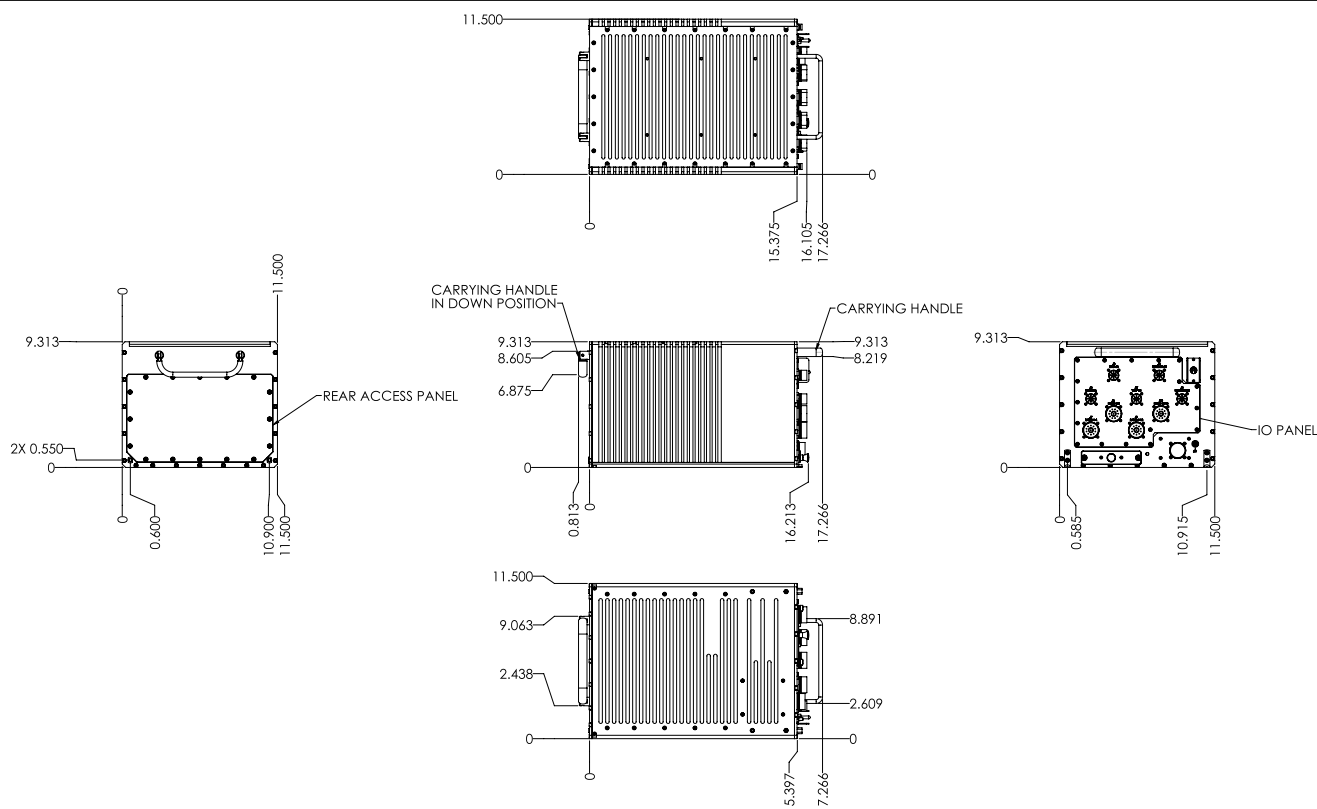
COMMON SPECIFICATIONS

Chassis body	Machined aluminum alloy #6061-T6
Cooling	600W at 15,000 ft. altitude at +50°C ambient temperature
User Controls	Circuit breaker (MIL grade) Customer definable and configuration dependant

ORDERING TABLE

95-3155-04061-00x	Model 3155, 6U VME64x, 6 Slot, 28VDC power input
95-3155-01061-00x	Model 3155, 6U VPX, 6 Slot, 28VDC power input
Contact factory for additional configurations and options	

OUTLINE DRAWING



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