

## MODEL 4103

### MILITARY GRADE 19" RACKMOUNT 3U SERVER CHASSIS



Model 4103 is a versatile rackmount chassis that has been tested to MIL-STD-810 shock and vibration, and designed to meet EMC/EMI per MIL-STD-461 EMC.

Its taller sibling — Model 4107 — is used by the U.S. Navy on long-standing programs such as the OASIS LRS Radar System installed aboard the P-3 Orion, and Los Angeles-class submarines. The 4103, installed on Naval submarines world wide, features superior torsional strength due to NOVA's specially designed, heavy-duty wrought aluminum extrusions that form the outer chassis. Moreover, the extrusions are partially overlapped for superior EMC.

An internal chassis accommodates the customer's selected hardware platform, drives, and optional hot swap power supplies. Made from aluminum 5052-H32, the chassis is mechanically suspended inside the main chassis using multi-axis mounts that attenuate externally transmitted shock and vibration energy.

Forced-air convective cooling via high-CFM fans in a push-pull configuration provide laminar airflow across system boards at all times, and can be monitored and controlled by NOVA's System Environmental Monitor (SEM). The intake fan tray is also an LRU design, with a 5 minute MTTR. Air filters located behind EMC compliant mesh inserts are easily accessible and quick to service or replace. The 4103 chassis is highly resistant to airborne dust and sand. Available in customer definable depths, Model 4103 is configurable to accommodate a variety of passive backplane types or motherboards. And rear panel MIL circular connectors may replace COTS connectors.

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

- › **NOVA's proprietary, overlapping extrusion design results in zero torsional flex**
- › **Mechanically suspended internal chassis**
- › **MIL-STD-810F Shock, Method 516.5**
- › **MIL-STD-810F Vibration, Method 514.5**
- › **MIL-STD-810F Rain, Method 506.4, Proc. II**
- › **MIL-STD-810F Fungus, Method 508.4, Proc. I**
- › **MIL-STD-461E EMC**
- › **Supports VME64x, VXS, VPX/OpenVPX, and CompactPCI Eurocard backplanes**
- › **Supports ATX, Server, and PICMG style embedded motherboard platforms**
- › **Standard 85-264 VAC @ 47-63 Hz input**
- › **System Environmental Monitor (SEM) available as an option**



### ENVIRONMENTAL CHARACTERISTICS

Temperature, operating	-20°C to +55°C
Temperature, non-operating	-40°C to +70°C
Humidity	0% to 95%, non-condensing
Altitude, operating	-1,000 ft. to 15,000 ft.
Altitude, non-operating	-1,000 ft. to 40,000 ft.
Vibration	MIL-STD-810F, Method 514.5, Procedure I
Shock	MIL-STD-810F, Method 516.5, Procedures I & VI
EMI/EMC	MIL-STD-461E, CE101, CE102, CS101, CS114, RE101, RE102, RS102, & RS103
ESD	MIL-STD-1686A
Explosive Atmosphere	MIL-STD-810F, Method 506.4
Sand and Dust	Highly Resilient

### PHYSICAL CHARACTERISTICS

Dimensions	3U (5.23") H x 19" W x 22" D (typical)
Weight	45 lbs. (typical for 22" model)
Mounting	Rackmount (standard) Tabletop (optional)

### ELECTRICAL CHARACTERISTICS

Input Power (standard)	85-264 VAC @ 47-63 Hz
Input Power (optional)	18-36 VDC 110VAC / 220VAC @ 47-440 Hz
AC Current, 650W output	6.7A @ 115VAC 3.4A @ 230VAC
AC Inrush Current, 650W output	30A @ 115VAC 50A @ 230VAC
EMI Filtering	MIL-STD-461 compliant, military grade input power EMI Filter standard

### HARDWARE PLATFORMS

Eurocard Backplane	Up to 5-slot, front loading subrack
PCIe Backplane	PICMG 1.3 passive backplane, up to 14slot
Motherboard	ATX, Server class, Mini-ATX, ITX or custom
Peripherals Bay	Up to 4ea 5.25" HD, SSD, or DVD drive(s)
Customization	Customer definable rear I/O panel. Customer definable peripheral bay. Power system defined per configuration.

### COMMON SPECIFICATIONS

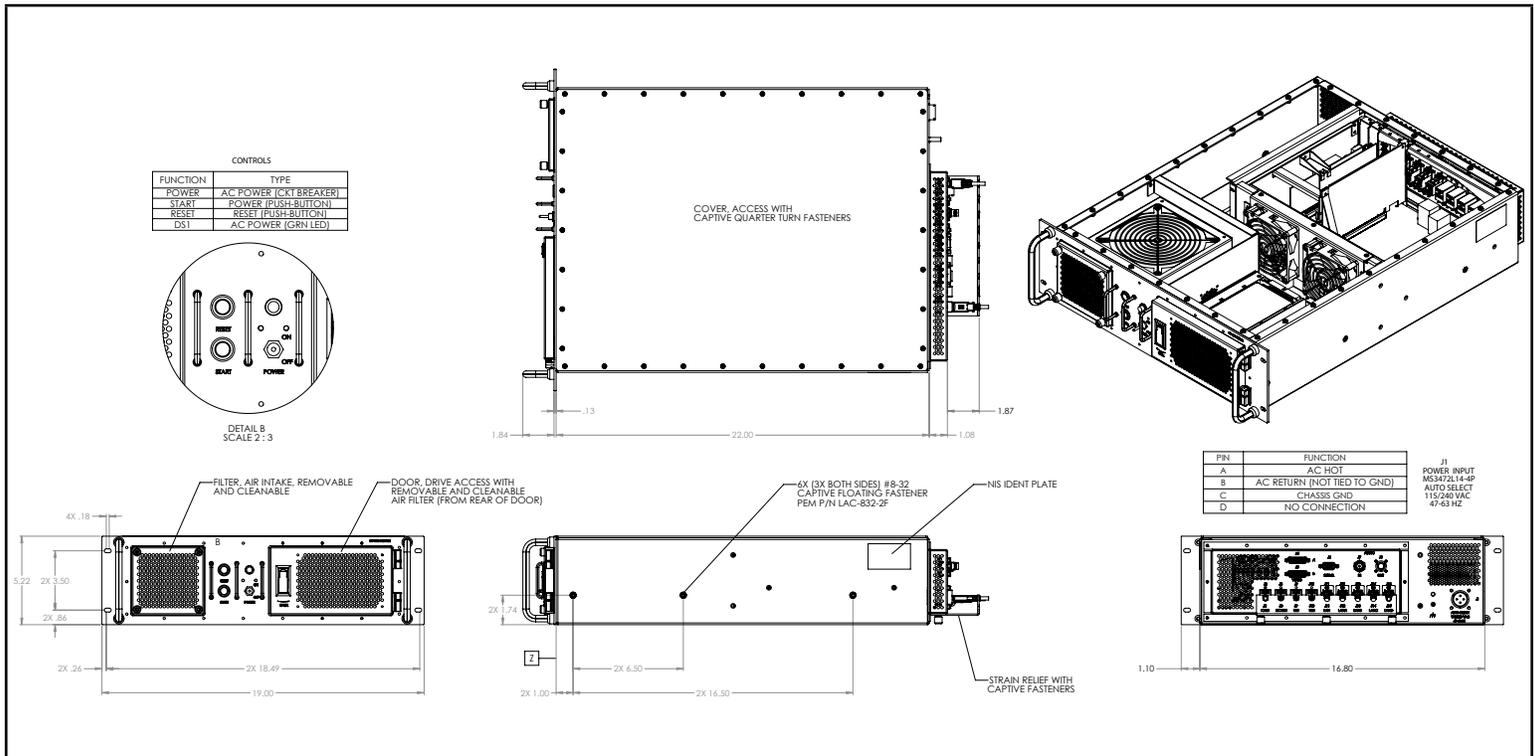
Front/Rear Bezel	Machined aluminum alloy #6061-T6
Chassis Side Panel Extrusion	Aluminum alloy #6061-T6
Internal Chassis	Aluminum alloy #5052-H32
Isolation Mounts	Suspends inner chassis from outer chassis (configuration dependant)
Rackmount	Designed to meet EIA-310-D
User Controls	Circuit Breaker (MIL grade) Start & Reset (push button) Customer definable and configuration dependant

### ORDERING TABLE

95-4103-00225-00x	Rackmount, ATX motherboard, 85-264VAC @ 47-63Hz, customized rear panel
95-4103-04427-00x	Rackmount, 4 slot 6U VME64x backplane, no RTM, 85-264VAC @ 47-440Hz, customized rear panel
95-4103-06727-00x	Rackmount, 6slot PICMG backplane, 85-264VAC @ 47-440Hz, customized rear panel

Contact factory for additional configurations and options

### OUTLINE DRAWING



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