

# MODEL 4102

## MILITARY GRADE 19" RACKMOUNT 2U SERVER CHASSIS



Model 4102 is a versatile convection cooled 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 — the Model 4107 — is used by the U.S. Navy on a long-standing program known as the OASIS LSR5 Radar System installed aboard the P-3 Orion and on our fleet of Los Angeles-class submarines. The systems feature 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. This chassis reference design is capable of housing commercial motherboard form factors such as ATX, passive PICMG backplanes as well as Eurocard backplanes such as cPCI, VME64x and VPX.

Forced-air convection cooling via high-CFM fans in a push-pull configuration provides laminar airflow across system boards at all times, and can be monitored and controlled by NOVA's System Environmental Monitor (SEM). The intake fan trays utilize 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 4102 chassis is highly resistant to airborne dust and sand. Available in customer definable depths, the Model 4102 can be configured to accommodate a variety of passive backplane types or motherboards. The modular rear I/O panel is customer definable and can contain MIL-circular or COTS connectors.

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

- › **A proprietary, overlapping extrusion design results in zero torsional flex**
- › **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 EMI/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**
- › **Hot swap/N+1 and 18-36 VDC power supply options are available**
- › **Optional System Environmental Monitor**



### 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	2U (3.47") H x 19" W x 19" D (typical)
Weight	35 lbs. (typical for 19" 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	Configuration specific
EMI Filtering	MIL-STD-461 compliant, military grade input power EMI Filter standard

### HARDWARE PLATFORMS

Eurocard Backplane	Up to 3-slot, front loading subrack
PCIe Backplane	PICMG 1.3 passive backplane, vertical orientation up to 4slot
Motherboard	ATX, Server class, Mini-ATX, ITX or custom
Peripherals Bay	Up to 2ea 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

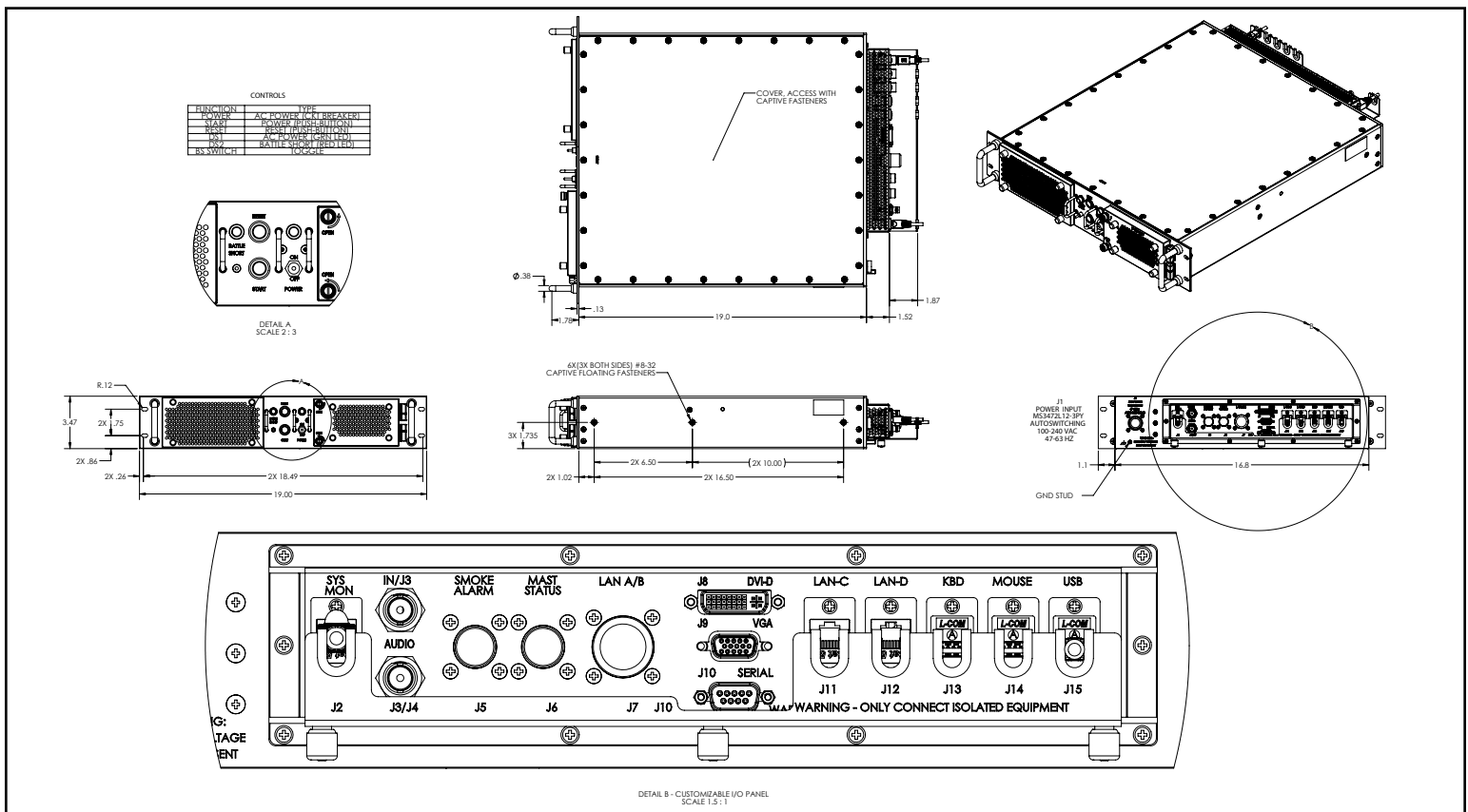
Front/Rear Bezel	Machined aluminum alloy #6061-T6
Chassis Side Panel Extrusion	Aluminum alloy #6061-T6
Internal Chassis	Aluminum alloy #5052-H32
Isolation Mounts	Suspended inner chassis from outer chassis or subassembly specific isolation (configuration dependant)
Rackmount	Designed to meet EIA-310-D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

### ORDERING TABLE

95-4102-00225-00x	Rackmount, ATX motherboard, 85-264VAC @ 47-63Hz, customized rear panel
95-4102-03427-00x	Rackmount, 3 slot 6U VME64x backplane, no RTM, 85-264VAC @ 47-440Hz, customized rear panel
95-4102-04727-00x	Rackmount, 4 slot PICMG backplane, 85-264VAC @ 47-440Hz, customized rear panel

Contact factory for additional configurations and options

### OUTLINE DRAWING



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