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ML-1900 Series Puma 18/10-Slot Convection Cooled Electronic Equipment Enclosure

- Rugged 19" Rackmount COTS Enclosure
- Brazed 6061/T6 Aluminum For Extreme Environments
- Shock Isolated Card Cage & Peripheral Bay
- 10 to 18 6U VME or cPCI Slots
- Universal AC or 28/48 DC Input 750 to 1000 Watt Power Supply
- Rapid Access To Peripherals
- 1 to 5 Fixed/Removable Peripherals
- High-Volume Filtered, Forced-Air Cooling
- Designed In Accordance To MIL-E-5400T
- Meets JASA EMI/EMC Shielding Requirements



The Macrolink Puma is a superior quality rugged chassis designed to meet the extreme environmental demands of field-fixed and severe mobile applications. Drawing on decades of design and field deployment

experience, the Puma is crafted to provide maximum configuration flexibility, long life, and dependable service with minimal maintenance.

A precise blend of machined, formed and extruded members impart an exceptional degree of structural integrity, while significantly reducing the number of mechanical fasteners for increased reliability and ease of access to Field Replaceable Units (FRUs). Both the card cage and the peripheral bay are shock isolated to meet the rigors of harsh deployment environments.



System boards are easily accessed through the main hinged chassis door, while the peripherals can be rapidly accessed through a hinged sub-door via a pair of finger operated, quarter-turn latches. Maximum peripheral door protrusion into operator space is a mere 7.25 inches. All internal and external surfaces are chromate conversion coated with a powder-coated exterior finish providing maximum protection against corrosion. All materials and finishes meet fungus and salt atmosphere resistance per MIL-STD-810E.

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The Puma's all metal card cage assembly accepts 18 6U VME or cPCI boards into a monolithic backplane, and 10 boards with the peripheral bay installed. The peripheral bay houses up to five fixed or removable half-height SCSI/EIDE devices. The peripheral bay can also be configured with up to 4 high-cycle, shock isolated, removable SCSI drive modules for more rigorous deployments.

Ample, unrestricted, free space is provided to the rear of the backplane for paddle cards, sub-racks and discreet backplane to I/O bulkhead cabling. Over 70 square inches of I/O panel space accommodates the densest of I/O configurations.

An oversized filtered air intake and precise baffling, combined with high-efficiency fans, insures generous airflow through the card cage and peripheral bay. A sophisticated thermal management option extends the Panther's deployment capability to operating environments reaching -20°C ambient.



Complete EMI/RFI integrity is maintained via conductive interior surfaces, braided gasketing on all moveable panels and front doors, conductive gasket on all mating joints and honeycomb-shielded vent screens front & rear.

Macrolink's Puma is an ideal chassis to meet the stringent demands of most airborne, field fixed, naval surface and ground mobile deployments at an affordable price — with maximum configurability — and the reduced delivery times expected of COTS enclosures ■

Specifications

Construction & Finish	<ul style="list-style-type: none"> • Heavy gauge brazed 6061/T6 aluminum per MIL-B-7883 • All internal/external surfaces chromate conversion coated per MIL-C-5541 Grade A Class 3 • All external surfaces gray powder coat per FED-STD-595B26081 • Other color/finishes available
Card Cage Assembly	<ul style="list-style-type: none"> • All metal, shock/vibration isolated, card cage assembly IEEE 1101.10 compliant • Card access via hinged front door • 2 to 18 slot monolithic VME, VME64, VME64X (with or without J0) or cPCI (J1-J5) back plane • 80mm mid-plane card cage option • Auto Bus Grant • Accepts 6U x 160mm cards • 3.54" (90mm) card cage set-back • Split, multiple or custom VME/cPCI backplanes • H.110 option
Switches & Indicators	<ul style="list-style-type: none"> • Power mains with circuit breaker on rear bulkhead • Protected DC "Power Enable" switch on front panel "Power OK" indicator - Green • "Fan Fail" indicator - Red • Optional Elapsed Time Indicator (reads to minimum 9,999hrs) • "Heaters On" indicator (for thermal management option) • "Battle Short" switch and indicator option
Power Supply	<ul style="list-style-type: none"> • 250 watt to 1000 watt • Heavy duty, high efficiency supplies • Universal AC input; 50/60/400Hz; .99PFC • +5/+12/-12/+3.3 VDC outputs • 1 to 4 additional VDC output options • N+1 load-sharing option • 28VDC or 48 VDC input options

External Power Connector	<ul style="list-style-type: none"> • MS3470L12-3P on rear bulkhead for AC IN • MS27505E21F-11P on rear bulkhead for DC IN • Other MS power connector options • IEC 321 or custom connectors
Chassis I/O	<ul style="list-style-type: none"> • 4.85"H (123mm) x 13.83" W (351mm) rear I/O panel space • 10" of unimpeded clearance between backplane and rear chassis bulkhead • Blank I/O panel with textured powder coat finish standard • Custom I/O panels with cutouts, silkscreen, connectors and/or cable assemblies available
Peripheral Support	<ul style="list-style-type: none"> • Shock/vibration isolated peripheral housing • 1 to 5 fixed/removable SCSI/IDE/EIDE/FC half-height drives • 1 to 4 shock isolated removable High-Cycle (HC) SCSI disk drives • Single, split or multiple peripheral buses • SCSI bus isolation option • Differential/Single-Ended SCSI converter option • Peripherals rapidly accessible via hinged, front panel door
EMI/RFI Integrity	<ul style="list-style-type: none"> • Braided gasket on all moveable surfaces • Conductive gasket on all mating joints • Honeycomb vent screens front & rear • EMI/EMC shielding meets JASA standards
Dimensions	<ul style="list-style-type: none"> • 15.72"H (399mm) x 19.00"W (483mm) x 24.87"D (631mm) including front & rear handles • 19" rackmount per EIA-310D
Weight	<ul style="list-style-type: none"> • 45lbs to 97lbs; configuration dependent
Cooling	<ul style="list-style-type: none"> • Evacuative, filtered forced-air with rear discharge • 340cfm (free air) • >300lfm per slot • High-pressure/high-altitude fan option • Washable/replaceable particulate filters
Ambient Temperature	<ul style="list-style-type: none"> • Operating: 0°C to 50°C • Operating: -20°C to 50°C with thermal management option • Storage: -40°C to +75°C
Humidity	<ul style="list-style-type: none"> • 0%-95% noncondensing
MTBF (MIL-HDBK-217E) MTTR	<ul style="list-style-type: none"> • >80,000 P.O.H. • <.5 hours for any Field Replaceable Unit (FRU)
Environmental Qualifications	<p>Designed to meet:</p> <ul style="list-style-type: none"> • MIL-STD-167 • MIL-STD-810E • MIL-STD-901D • MIL-STD-704 • MIL-STD-461D