

MPOD Mix Crate



Key Bullet Points — MPOD Mix Crate

- MPOD EC and LX models customizable with integrated Wiener or custom 3U to 6U bus backplanes (e.g., VME, VME64x, cPCI), delivering all voltages required by the backplane specs
- Compact solution that reduces the number of needed crates by combining power supply with DAQ, especially when no rear transition modules are needed
- 19" rack-mountable, ruggedized chassis available as 8U (bottom air intake) or 9U (front air intake) with optional dust filter
- Up to 10 freely pluggable LV or HV modules per crate, with flexible output connector location (front or rear) and modular, removable fan tray and power supply
- Supports up to 480 high voltage channels per chassis, ranging from 0.5 kV to 6 kV, with floating or common ground; high precision modules with 12-bit (LV) and 16/20-bit (HV) resolution
- Integrated LV/HV controller with combo interface: Ethernet 10/100, CAN bus, USB-2, interlock input, OPC TCP/IP server, plus optional graphic LCD display for local control and monitoring

Physical Dimensions & Weight	19" rack mountable bin, 460 mm depth Height: 8U (bottom air intake) or 9U (front air intake) Weight: approx. 20 kg (depends on options)
Module Configuration	Module cage for up to 10 LV or HV modules Module size: 6U height × 8PU width (Power Units), 220 mm depth LV and HV modules freely pluggable
High Voltage Channels	Modules with 8, 16, or 32 channels Voltage range: 0.5 kV to 6 kV Floating or common ground configurations Maximum 480 HV channels per MPOD mainframe
Resolution	LV modules: 12 bit HV modules: 16 or 20 bit
Control Interfaces	Ethernet 10/100, CAN bus, USB-2 Interlock input OPC server for TCP/IP communication
Display & Local Control	Optional graphic LCD display Single rotary/push-button operation
Bus Integration & Customization	Supports integrated Wiener or custom backplanes (VME, VME64x, cPCI, etc.) Provides all required voltages per backplane specifications
Output Connector Locations	Configurable outputs on front or rear side
Power Supply	Built-in primary power supply, 600 W to <3000 W (92 – 265 VAC) 300 W for MPOD micro
Input Voltage Range	106 – 230 VAC ± 15%, universal auto-range 90 – 265 VAC with power factor correction
Input Current	16 A sinusoidal for suffix H 32 A sinusoidal for suffix K
Inrush Current	Limited to rated input current (cold unit)
Input Fuse	External, internal fuse available upon request
Isolation Standards	CE EN 60950, ISO 380, VDE 0805, UL 1950, C22.2.950
DC Output Power	600 W up to <3000 W (92 – 265 VAC) 300 W for MPOD micro

EMC Compliance (Emission & Immunity)	RF Emission: EN 61000-6-3:2001 Conducted & Radiated Noise: EN 55022:1998 + Corr. Class B Harmonics: EN 61000-3-2:2001 Flicker: EN 61000-3-3:1995 + Corr:1997 + A1:2001 Immunity: EN 61000-6-2:2001 Injected HF Currents: EN 61000-4-6:1996 + A1:2001 Radiated HF Fields incl. 900 MHz: EN 61000-4-3:1996 + A1:1998 + A2:2001 Burst: EN 61000-4-4:1995 + A1:2001 Surge: EN 61000-4-5:1995 + A1:2001 Voltage Variations: EN 61000-4-11:1994 + A1:2000 ESD: EN 61000-4-2:1995 + A1:1998 + A2:2001
Operating Temperature	0 °C to 50 °C ambient without derating
Storage Temperature	-30 °C to +85 °C
Temperature Coefficient	< 0.2 % per 10 K
Voltage Stability (constant conditions)	10 mV or 0.1 % over 24 hours 25 mV or 0.3 % over 6 months
Current Limits	Adjustable to any lower level
Voltage Rise Characteristics	Monotonic rise over 50 ms, processor controlled
Overvoltage Protection	Crowbar protection trips at 125 % of nominal voltage per output
DC Trip-Off Conditions	Within 5 ms if >5 % deviation from nominal values Triggered by overload, overheating, overvoltage, undervoltage, fan failure, or heat sink temperature >125 °C Outputs discharged by crowbars when power supply trips or switched off
Efficiency	75 % to 85 %, depending on modules used
Maintenance-Free Operation Time (MFO)	Internal blowers: >65,000 hours at 40 °C, >100,000 hours at 25 °C Electronics: >100,000 hours at 40 °C
Cooling	8U chassis: bottom air intake 9U chassis: front air intake Optional dust filter
Mechanical Design	Ruggedized mechanics

Modular fan tray and primary power supply
removable for easy maintenance

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