CAEN Nuclear
Tools for Discovery

Powered Crates - VME8100

8U 21 Slot VME64/64X Enhanced Crate Series

- **19” x 8U (6+2) enclosure**
- **21 slot for 6U x 160mm VME modules**
- **Pluggable Power Supplies with different configurations up to 2500 W**
- **Available with VME64, VME64X compliant monolithic backplane**
- **Pluggable 2U Fan Unit**
- **Short circuit protection**
- **Over / Undervoltage protection**
- **Over temperature protection**
- **CAN bus, Ethernet, USB, RS232 interface for remote monitoring and control**
- **SBC controlled with graphic OLED Display**
- **Automatic Daisy Chain, CBLT compliant**
- **Easy firmware upgrading**
- **Libraries, Demos (C and LabView) and Software tools for Windows and Linux**

The VME 8100 crates are based on a modularity concept and consist of three detachable parts easily to exchange:

- The Subrack (Bin + Backplane): Mod V8100XX 8U Bin, with 21 slot monolithic backplane, (VME64/ VME64X)
- The Pluggable Power Supply: Models V81XX, VME Power supply with different configurations, allows up to 2500 W output
- The Pluggable ventilation and control unit (2U Fan Tray): Mod A8160 Smart VME Fan Unit, with OLED display and various interfaces

Safety features include: short circuit protection, Over / Undervoltage protection, Over temperature protection. Remote monitoring and control take place through CAN bus, Ethernet, USB and RS232 interfaces. The crates are also SBC controlled via graphic OLED Display, provides Automatic Daisy Chain and supports Chained Block Transfers (CBLT). User-friendly control software completes the VME 8100 features. The Unit is powered by 92 ÷264 Vac, 50 ÷ 60 Hz, power factor 0.98% (230VAC).

Model VME8100 versions

Ordering Code	Backplane	+5V	+12V	-12V	+3.3V
WV8100VME000	VME64	110 A	20 A	20 A	
WV8100VME001	VME64	220 A	20 A	20 A	
WV8100VME002	VME64	110 A	40 A	40 A	
WV8100VME003	VME64	220 A	40 A	40 A	
WV8100VME004	VME64X J1/J2	110 A	20 A	20 A	110 A
WV8100VME005	VME64X J1/J2	220 A	20 A	20 A	110 A

WV8100VME006	VME64X J1/J2	110 A	20 A	20 A	220 A
WV8100VME007	VME64X J1/J2	220 A	20 A	20 A	220 A
WV8100VME008	VME64X J1/J2	110 A	40 A	40 A	110 A
WV8100VME009	VME64X J1/J2	220 A	40 A	40 A	110 A
WV8100VME010	VME64X J1/J2	110 A	40 A	40 A	220 A
WV8100VME011	VME64X J1/J0/J2	110 A	20 A	20 A	110 A
WV8100VME012	VME64X J1/J0/J2	220 A	20 A	20 A	110 A
WV8100VME013	VME64X J1/J0/J2	110 A	20 A	20 A	220 A
WV8100VME014	VME64X J1/J0/J2	220 A	20 A	20 A	220 A
WV8100VME015	VME64X J1/J0/J2	110 A	40 A	40 A	110 A
WV8100VME016	VME64X J1/J0/J2	220 A	40 A	40 A	110 A
WV8100VME017	VME64X J1/J0/J2	110 A	40 A	40 A	220 A

Software

YES

Included with VME8100.

Available Packages:

- Control Software

For more information, please visit our website:

www.caen.it/nuclear/software_download.php

(Login required)

Ordering code

WV8100VME017

VME8100/17 VME64X 8U crate, 21 slot J1/J0/J2, smart fan unit, (5V 110A, +/-12V 40A, 3.3V 220A)

WV8100VME016

VME8100/16 VME64X 8U crate, 21 slot J1/J0/J2, smart fan unit, (5V 220A, +/-12V 40A, 3.3V 110A)

WV8100VME015

VME8100/15 VME64X 8U crate, 21 slot J1/J0/J2, smart fan unit, (5V 110A, +/-12V 40A, 3.3V 110A)

WV8100VME014

VME8100/14 VME64X 8U crate, 21 slot J1/J0/J2, smart fan unit, (5V 220A, +/-12V 20A, 3.3V 220A)

WV8100VME013

Technical Specifications Table

Mechanics	8U bin for 6U x 160 mm VME cards, 21 slots, 2U space for fan tray
Backplane	VME64 J1/J2, VME64X J1/J2 – J1/J0/J2 Automatic daisy chain, CBLT compliant
Mains input	Auto range: 92 ÷264 Vac, 50÷60 Hz, inrush current: <16 A @ 230 Vac power. fact. > 0.98 @ Output Power > 1 kW
Maximum Total Output Power	1200 W @ 100 Vac 2530 W @ 211 Vac
Fuse	External 16 A, type B/C
Output power	110/220 A @ +5 V 20/40A @ +/-12 V 110/220 A @ +3.3 V
Isolation	CE acc. to EN 61010
Load Regulation	< 10 mV for 0-100% load change @ +5 V < 10 mV for 0-100% load change @ +3.3 V < 15 mV for 0-100% load change @ +/-12 V
Efficiency	75% ÷ 85% @ 230 Vac configuration dependent
Noise and ripple (backplane connector)	+5 V < 10 mVpp, <1 mVrms Typ: 4.0 mVpp, 0.5 mVrms +3.3 V < 10 mVpp, <1 mVrms Typ: 6.0 mVpp, 1.0 mVrms +/-12 V < 10 mVpp, <2 mVrms Typ: 8.0 mVpp, 1.5 mVrms
Interface	RS 232, USB (2.0), CAN bus, Ethernet
Temperature sensors	Power Supply Control: nr. 1 FAN Unit: nr. 1 Backplane: nr. 8 (optional)
Over Voltage Protection	Trip Off when the output voltage > 103% ÷ 120% (programmable) of set voltage
Under Voltage Protection	Trip Off when the output voltage < 80% ÷ 97% (programmable) of set voltage
Over Current Protection	Trip Off when the current > programmable Iset value

VME8100/13 VME64X 8U crate, 21 slot J1/J0/J2, smart fan unit, (5V 110A, +/-12V 20A, 3.3V 220A)

WV8100VME012

VME8100/12 VME64X 8U crate, 21 slot J1/J0/J2, smart fan unit, (5V 220A, +/-12V 20A, 3.3V 110A)

WV8100VME011

VME8100/11 VME64X 8U crate, 21 slot J1/J0/J2, smart fan unit, (5V 110A, +/-12V 20A, 3.3V 110A)

WV8100VME010

VME8100/10 VME64X 8U crate, 21 slot J1/J2, smart fan unit, (5V 110A, +/-12V 40A, 3.3V 220A)

WV8100VME009

VME8100/09 VME64X 8U crate, 21 slot J1/J2, smart fan unit, (5V 220A, +/-12V 40A, 3.3V 110A)

WV8100VME008

VME8100/08 VME64X 8U crate, 21 slot J1/J2, smart fan unit, (5V 110A, +/-12V 40A, 3.3V 110A)

WV8100VME007

VME8100/07 VME64X 8U crate, 21 slot J1/J2, smart fan unit, (5V 220A, +/-12V 20A, 3.3V 220A)

WV8100VME006

VME8100/06 VME64X 8U crate, 21 slot J1/J2, smart fan unit, (5V 110A, +/-12V 20A, 3.3V 220A)

WV8100VME005

VME8100/05 VME64X 8U crate, 21 slot J1/J2, smart fan unit, (5V 220A, +/-12V 20A, 3.3V 110A)

WV8100VME004

VME8100/04 VME64X 8U crate, 21 slot J1/J2, smart fan unit, (5V 110A, +/-12V 20A, 3.3V 110A)

WV8100VME003

VME8100/03 VME64 8U crate, 21 slot J1/J2, smart fan unit, (5V 220A, +/-12V

Over Temperature Protection	Trip Off when temperature of a single Power Supply block > 90° C Signaled: - temperature FAN Unit > 50°C - temperature Power Supply Control > 65° C
Operation	0÷50°C without derating,
Cooling Airflow:	540 m³/h (at maximum fan speed)
Firmware	VME8100 firmware can be upgraded via Ethernet

40A)

WV8100VME002

VME8100/02 VME64 8U crate, 21 slot J1/J2, smart fan unit, (5V 110A, +/-12V 40A)

WV8100VME001

VME8100/01 VME64 8U crate, 21 slot J1/J2, smart fan unit, (5V 220A, +/-12V 20A)

WV8100VME000

VME8100/00 VME64 8U crate, 21 slot J1/J2, smart fan unit, (5V 110A, +/-12V 20A)

Compare with other Products

Compare with other Powered Crates

Model	Package	Function	Description
NIM8301	Powered Crates	Powered Crates	7U 12 slot smart fan unit 300/600 W Crate
NIM8302	Powered Crates	Powered Crates	5U 10 slot 150 W Compact Crate
NIM8303	Powered Crates	Powered Crates	5U 12 slot 300/600 W Crate
VME8002	Powered Crates	Powered Crates	5U 9 Slot VME64 Mini Crate
VME8010	Powered Crates	Powered Crates	7U 21 Slot VME64 Low Cost Crate
VME8011	Powered Crates	Powered Crates	7U 21 Slot VME64 Low Cost Crate
VME8100	Powered Crates	Powered Crates	8U 21 Slot VME64/64X Enhanced Crate Series

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