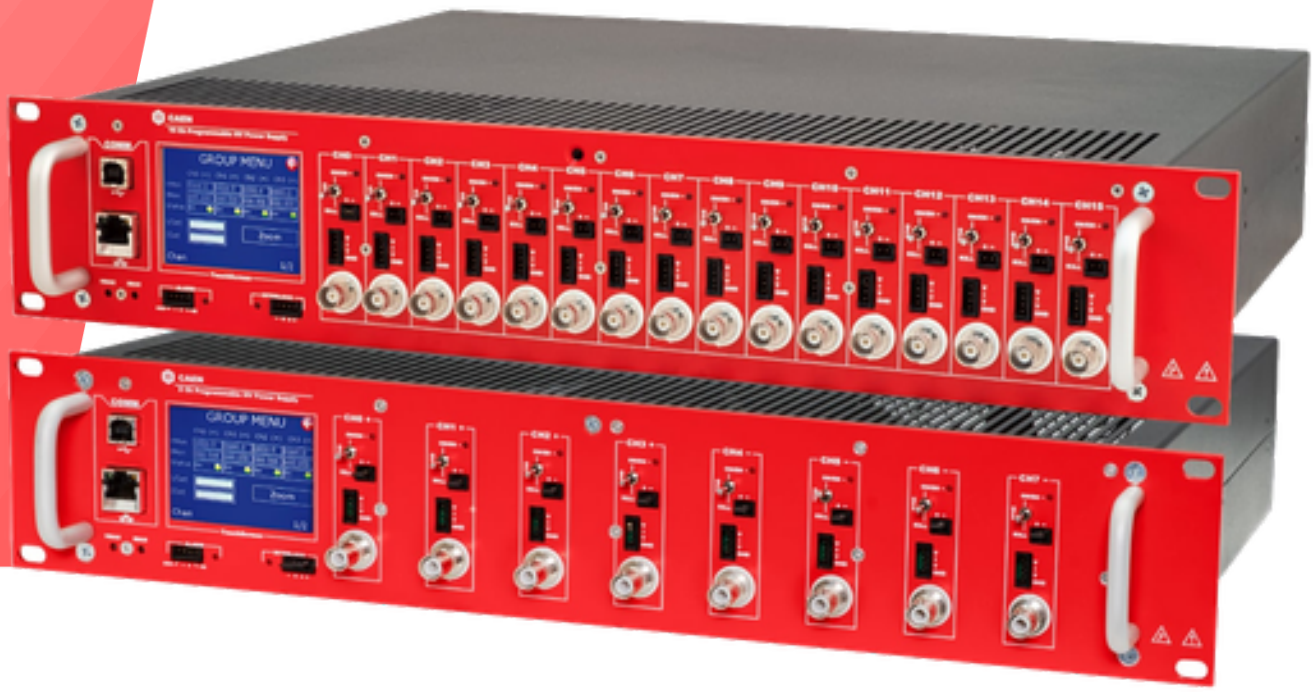
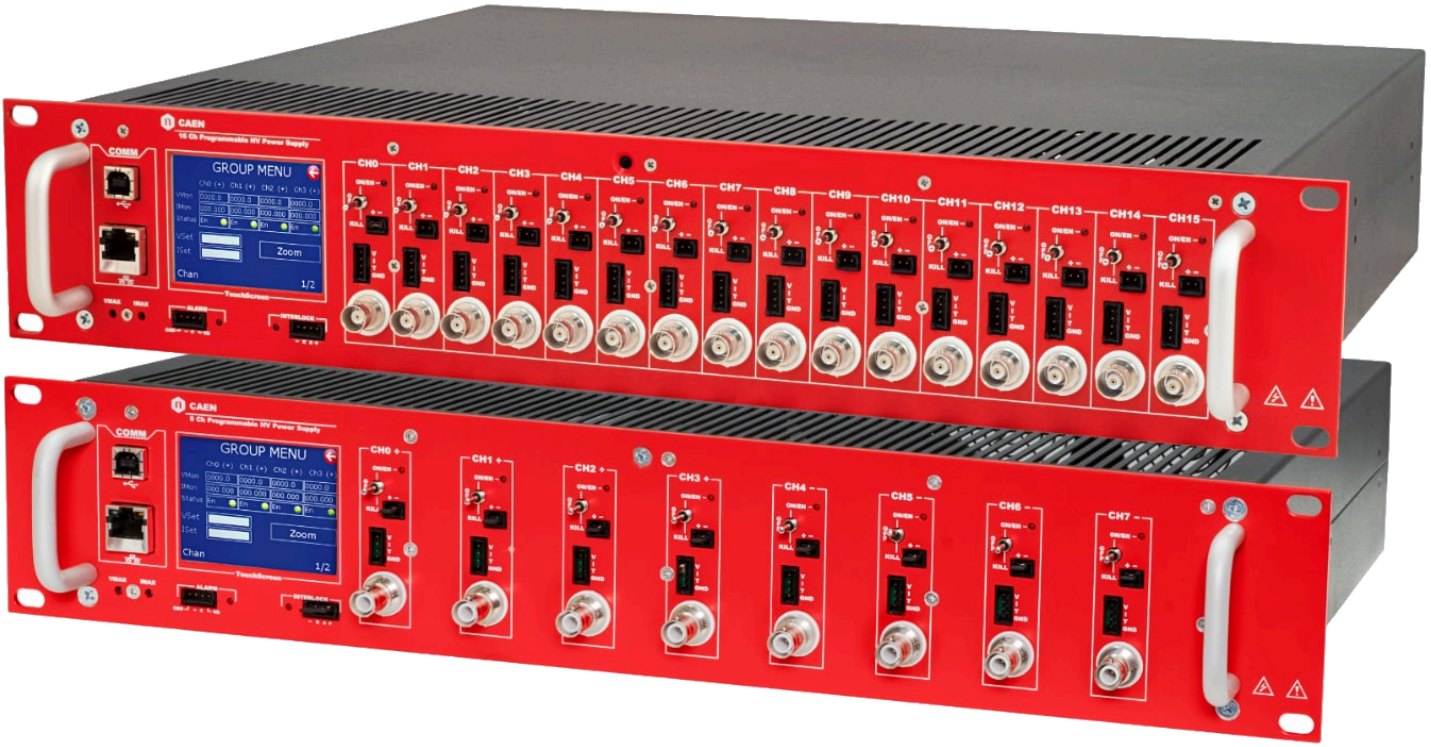
R8033

8-16 Channel 4 kV/ 3 mA (6W) 19'' Power Supply Module (USB/Ethernet/Touchscreen)



Features



- 8 or 16 independent channels in a 19" rack unit (110/220V AC Powered)
- 4 kV / 3 mA output range
- Channels with either positive or negative polarity
- SHV coaxial output connectors
- Low Ripple
- Under/over-voltage alert, overcurrent and max. voltage protection
- Interlock logic for board enable and Individual channel kill
- 5 nA Current monitor resolution (with x10 Imon-Zoom: 500 pA)
- 2.8" color touch screen display
- Local and Remote control (USB2.0/Ethernet)
- Software Tools for easy channel management

Description

The CAEN **Mod. R8033** provides **8 or 16** independent 4 kV / 3 mA (6W) channels in a 19" rack unit (110/220V AC Powered). Each channel can provide a **4 kV** max voltage and a **3 mA** max current (up to 6W). The unit is available with positive, negative and "mixed" (4-8 positive and 4-8 negative) channels. Channels outputs are delivered through SHV connectors. The HV output RAMP-UP and RAMP-DOWN rates may be selected independently for each channel in the range 1÷500 V/s in 1 V/s steps. The module features 10 nA Iset resolution.

SHV connector

19'' 2U, 8/16 channels for Mod. R8033

Consult our **connectors reference page** for technical information.

Module control can take place either **locally** thanks to a **2.8" Touchscreen Graphic color LCD display** with a completely redesigned user interface or **remotely**, via **USB 2.0** or **Ethernet**. A complete set of **Software Tools** is available to control these units; the user can freely download low level libraries, LabVIEW driver and Graphical application software.

Safety features allows the module to perform as a current generator and includes:

Overvoltage and Undervoltage warning	When the output voltage differs from the programmed value by more than 2% of set value (minimum 10V).
Overcurrent detection	When a channel attempts to exceed the programmed current limit, it signalled to be in “overcurrent” and enter in a TRIP status. The output voltage is varied to keep the current below the programmed limit for a programmable TRIP time, then the channel is switched off. If TRIP is set to “constant current mode”, the channel behaves like a current generator.
Hardware VMAX and IMAX	Maximum output voltage and maximum current value can be fixed, via front panel potentiometer, at the same common value for all the board channels. IMAX and VMAX values can be read out via software.
Safety Board Interlock	Common Interlock logic for channels enable/disable and individual inputs signal for channel Kill function.

Technical Specifications

Packaging

19” rack (h: 2U; d: 360 mm). 110/220V AC Powered

Output Channels

8-16 channels, SHV connector Positive, Negative or Mixed (4-8 positive and 4-8 negative) Polarity; common ground

Output Voltage

0÷4 kV

Max. Output Current

3 mA

Max. Ch. Output Power

6 W

Vset Resolution

10 mV

Vmon Resolution

10 mV

Iset Resolution

10 nA

Imon Resolution

10 nA (high range) / 1 nA (low range)

Vmax

0 ÷ 4 kV

Vmax resolution

1V

IMAX hardware

3 mA

IMAX hardware resolution

10 µA

Ramp Up/Down

1÷500 Volt/s, 1 Volt/s step Step = 0.1 s

Trip

Max. time an "overcurrent" can last (seconds). A channel in "overcurrent" works as a current generator; output voltage varies in order to keep the output current lower than the programmed value. "Overcurrent" lasting more than set value (1 to 9999) causes the channel to "trip". Output voltage will drop to zero either at the Ramp-down rate or at the fastest available rate, depending on Power Down setting; in both cases the channel is put in the off state. If trip= INFINITE, "overcurrent" lasts indefinitely. TRIP range: 0 ÷ 999.9s; 1000 s = Infinite.

Voltage Ripple

10 - 1000Hz: <4 mVpp typ; <8 mVpp max 1kHz - 20MHz: <2 mVpp typ; <5 mVpp max

Vmon vs. Vout Accuracy

± 0.02% ± 1V

Vset vs. Vout Accuracy

± 0.02% ± 1V

Imon vs. Iout Accuracy

± 0.2% ± 2µA

Iset vs. Iout Accuracy

± 0.2% ± 2µA

Humidity range

0 ÷ 80% non condensing

Operating Temperature

0 ÷ 45°C

Storage temperature

-10 ÷ 70°C

Vout / Temperature coefficient

±50 ppm/°C typ

Long Term stability (1 week after 1h warmup)

±0.02% / full scale

Local Control

LCD touchscreen

Remote Control

USB & Ethernet

Ordering Options

Code	Description	
WR8033DXAAAA	R8033DN - 16CH Rack-mount Programmable HV PowerSupply(-4KV 3mA) - SHV conn. - Common Gnd	RoHS
WR8033DXMAAA	R8033DM - 16CH Rack-mount Programmble HV P.S.(8ch-4KV 3mA,8ch +4KV 3mA) - SHV conn. - C. Gnd	RoHS
WR8033DXPAAA	R8033DP - 16CH Rack-mount Programmable HV PowerSupply(+4KV 3mA) - SHV conn. - Common Gnd	RoHS
WR8033XAAAAA	R8033N - 8CH Rack-mount Programmable HV PowerSupply(-4KV 3mA) - SHV conn. - Common Gnd	RoHS
WR8033XMAAAA	R8033M - 8CH Rack-mount Programmable HV P.S.(4ch -4KV 3mA,4ch +4KV 3mA) - SHV conn. - Common Gnd	RoHS
WR8033XPAAAA	R8033P - 8CH Rack-mount Programmable HV PowerSupply(+4KV 3mA) - SHV conn. - Common Gnd	RoHS

Accessories

A148x

Inhibit - Kill Signal BNC Adapter for HV Power Supply Modules

A1484

Inhibit - Kill Signal BNC Adapter for HV Power Supply Modules

HV CABLES

High Voltage Cable Assemblies

A1483

Inhibit - Kill Signal BNC Adapter for HV Power Supply Modules

Related Software

GECO2020

GEneral COntrol Software for CAEN HV Power Supplies

Related Products

R8031

8-16 Channel 100 V / 10 mA 19'' Power Supply Module (USB/Ethernet/Touchscreen)

LabVIEW Driver (PSM - Power Supply Modules)

LabVIEW Instrument Driver for Power Supply Modules

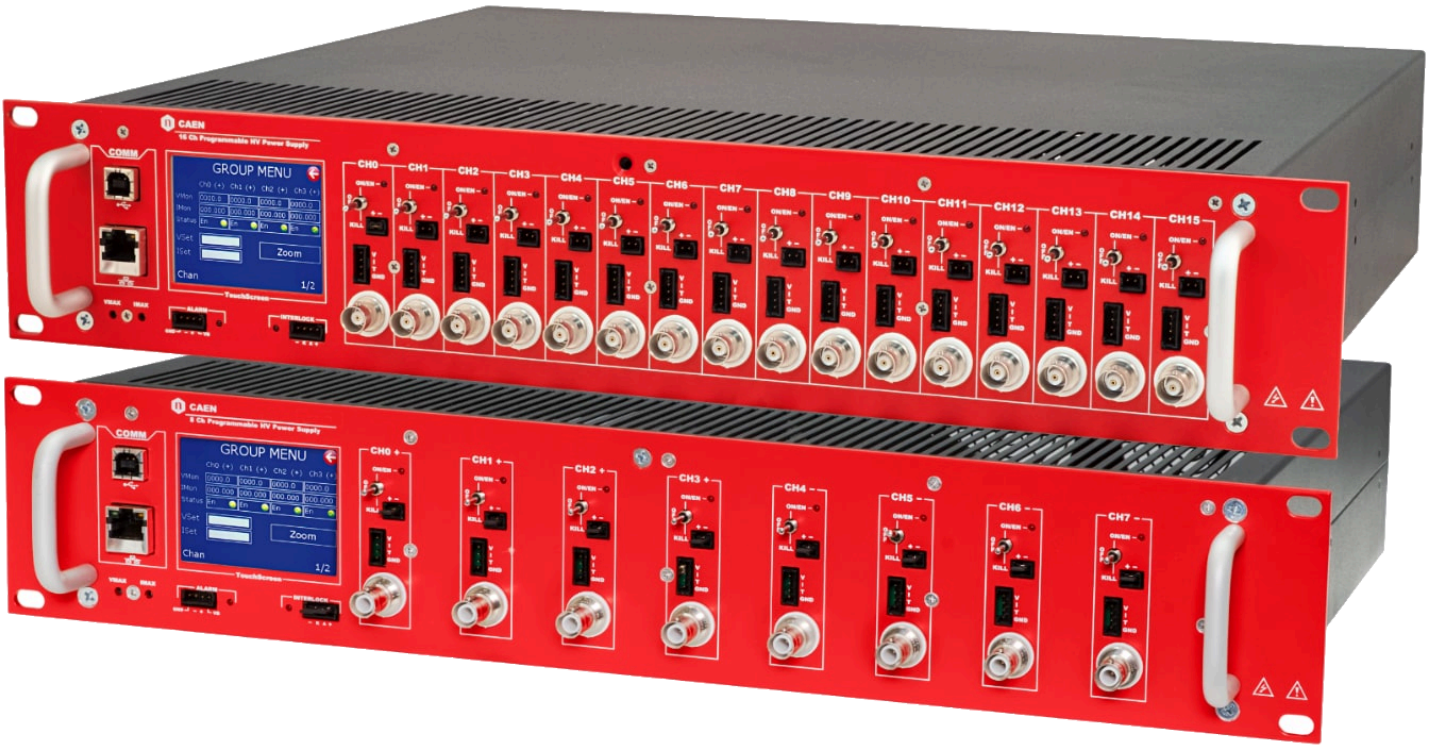
R8034

8-16 Channel 6 kV/1 mA Rack 19' HV Power Supply (USB/Ethernet/Touchscreen)

R8032

8-16 Channel 500 V/10 mA 19'' Power Supply Module (USB/Ethernet/Touchscreen)

Gallery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Zoom
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CH15

CAEN S.p.A.
Via Vetraia 11
55049 - Viareggio
Italy
Phone +39.0584.388.398
Fax +39.0584.388.959
info@caen.it
www.caen.it

CAEN GmbH
Brunnenweg 9
64331 Weiterstadt, Germany
Phone +49 (0)212.254.4077
Mobile +49 (0)151.16.548.484
info@caen-de.com
www.caen-de.com

CAEN Technologies, Inc.
1 Edgewater Street - Suite 101
Staten Island, NY 10305
USA
Phone +1.718.981.0401
Fax +1.718.556.9185
info@caentechnologies.com
www.caentechnologies.com

CAENspa India Private Limited
B205, BLDG42, B Wing,
Azad Nagar Sangam CHS,
Mhada Layout, Azad Nagar, Andheri West
Mumbai, Maharashtra 400053, India
info@caen-india.in
www.caen-india.in