

## DT5534E

### 4 Channel 6 kV/1 mA (4 W) Desktop HV Power Supply Module (USB/Ethernet)



## Features



- 4 channels in a compact desktop case
- 6 kV / 1 mA output range (4W max)
- Available with positive, negative or mixed polarity
- SHV coaxial output connectors
- Low Ripple
- 5 nA Current monitor resolution (with x10 Imon-Zoom: 500 pA)
- Remote control (USB 2.0 and Ethernet)
- Software Tools for easy channel management

## Description

The CAEN **Mod. DT5534E** is a compact desktop module housing **4** independent High Voltage Power Supply Channels **6 kV, 1 mA (4 W max)**. The unit is available with either positive or negative output polarity; mixed version with 2 positive and 2 negative channels is also available. HV outputs are delivered through **SHV** connectors.

### SHV connector

Radiall R317580 HV coaxial connector for Mod.DT5534E

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

The HV output RAMP-UP and RAMP-DOWN rates may be selected independently for each channel in the **1 ÷ 500 V/s** range with **1 V/s** steps. The module features 5 nA Imon resolution. Features include current monitor resolution extended by 10x in a Lower range (selectable via software). Functional parameters can be programmed and monitored via **USB 2.0** or **Ethernet**.

A complete set of software tools is available to control these units, from low level libraries to graphical application software.

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

<b>Channels</b>	can be enabled or disabled through the Global Interlock logic.
<b>Overvoltage and Undervoltage warning</b>	when the output voltage differs from the programmed value by more than 2% of set value (minimum 10V).
<b>Overcurrent detection</b>	if a channel tries to draw a current larger than its programmed limit, it enters TRIP status, keeping the maximum allowed value for a programmable time (TRIP), before being switched off.
<b>Hardware VMAX</b>	Programmable VMAX protection limit.
<b>Safety Board Interlock</b>	common Interlock logic for channels enable/disable and individual inputs signal for channel Kill function.

## Technical Specifications

### Package

Desktop module housed in a 154 x 50 x 164 mm<sup>3</sup> (WxHxD) alloy box; weight: ~800g

### No. of Channels

4

### Output Voltage

0 ÷ 6 kV

### Polarity

Positive / Negative / Mixed depending on purchased version; common ground

### Max. Output Current

1 mA (4W max)

### Voltage Set/Monitor Resolution

100 mV

### Voltage Set/Monitor Resolution

50 mV

### Current Set Resolution

20 nA

### Current Monitor Resolution

5 nA (high range) / 500 pA (low range)

### Current Set Maximum Value

1050  $\mu$ A

### VMAX hardware

0 ÷ 6100 V common to all board channels

### VMAX hardware resolution

1 V

### VMAX hardware accuracy

2% of FSR

### Ramp Up/Down

1 ÷ 500 Volt/sec, 1 Volt/sec step

## Trip

Max. time an "overcurrent" is allowed to last (seconds). A channel in "overcurrent" works as a current generator; output voltage varies 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 ÷ 999.9 s; 1000 s = Infinite. Step = 0.1 s

## Voltage Ripple

20 ÷ 1000 Hz: <10 mVpp typical; < 15 mVpp maximum  
1 ÷ 20000 kHz: <10 mVpp typical; < 15 mVpp maximum

## Vset vs. Vout accuracy

±0.05% of read ±1 V

## Vmon vs. Vout accuracy

±0.05% of read ±1V

## Imon vs. Iout accuracy

high range: ±2% of read ±500 nA  
low range: ±2% of read ±50 nA

## Iset vs. Imon Accuracy

high range: ±2% of read ±500 nA  
low range: ±2% of read ±50 nA

## Maximum output power

4 W per channel (software safety limit)

## Ordering Options

Code	Description	
WDT5534EXMAA	DT5534EM - 4 Channel 6 kV/1 mA (4 W) Desktop HV Power Supply (USB/Ethernet) - Mixed	RoHS
WDT5534EXNAA	DT5534EN - 4 Channel 6 kV/1 mA (4 W) Desktop HV Power Supply (USB/Ethernet) - Negative	RoHS
WDT5534EXPAA	DT5534EP - 4 Channel 6 kV/1 mA (4 W) Desktop HV Power Supply (USB/Ethernet) - Positive	RoHS

## Accessories

### HV CABLES



High Voltage Cable Assemblies

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### A1483

Inhibit - Kill Signal BNC Adapter for HV Power Supply Modules

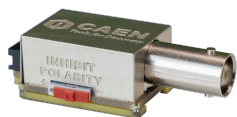
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### A1484

Inhibit - Kill Signal BNC Adapter for HV Power Supply Modules

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### A148x



Inhibit - Kill Signal BNC Adapter for HV Power Supply Modules

## Related Software

### CAEN Toolbox



Multi-Functional Software Suite for the Upgrade of Front-end Boards, Bridges and Power Supplies

### GECO2020



General Control Software for CAEN HV Power Supplies

## Related Software Libraries

### CAEN HV Wrapper Library



Library for CAEN Power Supply Control

## Related Products

### LabVIEW Driver (PSM - Power Supply Modules)



LabVIEW Instrument Driver for Power Supply Modules

# Gallery



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