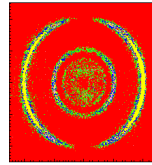


# The RM-6 Rate-meter and Counter



**RoentDek**  
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Data Acquisition Systems  
Multifragment Imaging Systems

The **RoentDek RM-6** is a six-channel 100 MHz counter/rate-meter for logic signals (default: NIM, on 50 Ohm impedance lemo00 input socket) with a variety of display and computing options. The counter memories can be read-out via USB and blue-tooth allowing full control for analysing the data stream on the inputs by software (not all options fully implemented yet).



**Figure: RM-6 counter module. Several displays allow simultaneous observation of up to six count rates.**

The display range adopts automatically for each channel. The Response Time (i.e. display refresh rate) can adopt automatically for each channel or be manually set for all channels.

Parallel read-out through a USB socket or via Bluetooth allows full control in recording the data stream. An audio output allows sensing count-rate changes if the **RM-6** display is out of sight.

The display of channel 3 can optionally show the ratio between the rates on channels 1 and 2. Channel 6 can either show the rate on input 6 *or* the ratio between channels 4 and 5 *or* the integrated counts on input 6. The actual rates on inputs 3 and 6 can still be accessed via USB or Bluetooth.

The **RM-6** comes in a 1 HU 19" case (WxHxD: 483 x 43.6 x 230 mm<sup>3</sup> incl. bluetooth antenna. Insertion depth: < 270 mm with power cable connected. Weight: 1.6 kg without mains adapter). It has a power consumption of about 12 W (1 A on 12 V, supplied via mains adapter (included) for 100-250 VAC).

## List of features:

- Input: 6 channels via 50 Ohm Lemo00 sockets, NIM level ("High" < - 0.3 V), DC coupled
- other input levels and polarities (e.g. TTL) can optionally be factory-set.
- Maximum rate per channel: about 160 MHz (burst: 250 MHz for up to 4 signals), but display is limited to 99.999 MHz. Higher rates will only be visible via USB or Bluetooth!
- Minimum count rate 1 Hz
- Minimum input signal width: 2 ns (for NIM)
- Maximum voltage tolerance of inputs +/- 2V (for NIM input version)
- Outputs:
  - o 6x digital displays with automatic ranging and variable integration times
  - o 1x audio output (3.5mm Line Out jack for connecting active speakers)
  - o 1x analog output (Lemo 00 socket) for channel 6 (0.55-2.75 V correspond to a rate of 0-100 MHz)
  - o data logging via USB and Bluetooth.
- Available Response Times: 'AU' (each channel adjusts automatically), '--' (current rate will be displayed without smoothing), '1.0', '2.0', '5.0', '10.0' (smoothing with 1/2/5/10 s time constant)
- Windows read-out and control software