

Pulse Streamer 8/2

Synchronous digital and analog waveform generator

Key features

- 8 digital outputs (1 GSa/s), 2 analog outputs (125 MSa/s)
- synchronous digital and analog output
- efficiently define complex pulse patterns
- instant device upload and execution
- benefit from a large memory, 1 M pulses
- repeat modes 1, N, infinite
- modern and easy to handle API

Simple and powerful: Run Length Encoding (RLE)

How would you intuitively describe a digital pattern that controls your experiment? Say you want the laser on for 2 ns, then a microwave pulse for 12 μ s, then everything off for 1 ms. A graphic representation of this pulse sequence could look like this:



One way to represent this sequence in a computer readable format is 'Run Length Encoding'. In pseudo code, the above sequence could look like this

2 ns, [laser]

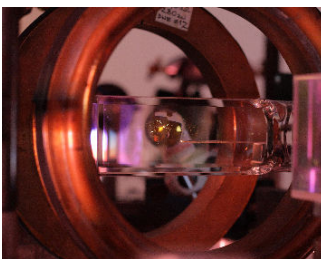
12 μ s, [microwave]

1 ms, []

This is how you represent digital patterns for our Pulse Streamer 8/2. No data blocks, no predefined chunk lengths. You'll be surprised how simple, readable and efficient your experiment control becomes.

Applications

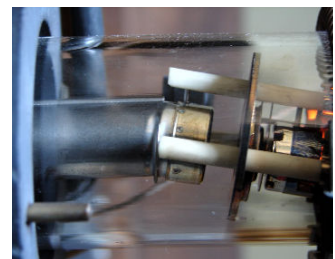
The Pulse Streamer 8/2 enables you to implement complex digital and analog control sequences rapidly. Start using it for your experiments!



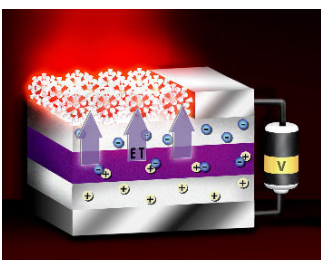
Cold Atoms, EIT



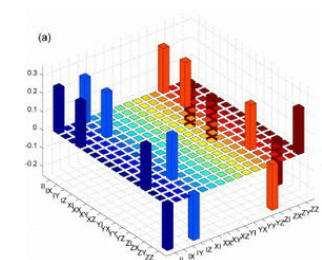
Pulsed ESR / NMR



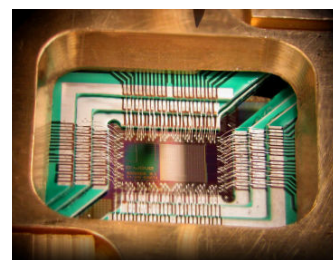
Ion Traps



Quantum Dots



Quantum Optics



Circuit QED

Specifications

Digital Output

Output channels	8x SMA
Sampling rate	1 GSa/s
Output voltage	3 V, 50 Ω
Rise and fall time	< 2 ns

Analog Output

Output channels	2x SMA
Sampling rate	125 MSa/s
Bandwidth	25 MHz
Output voltage	-1 to 1 V, 50 Ω

Pattern Generation

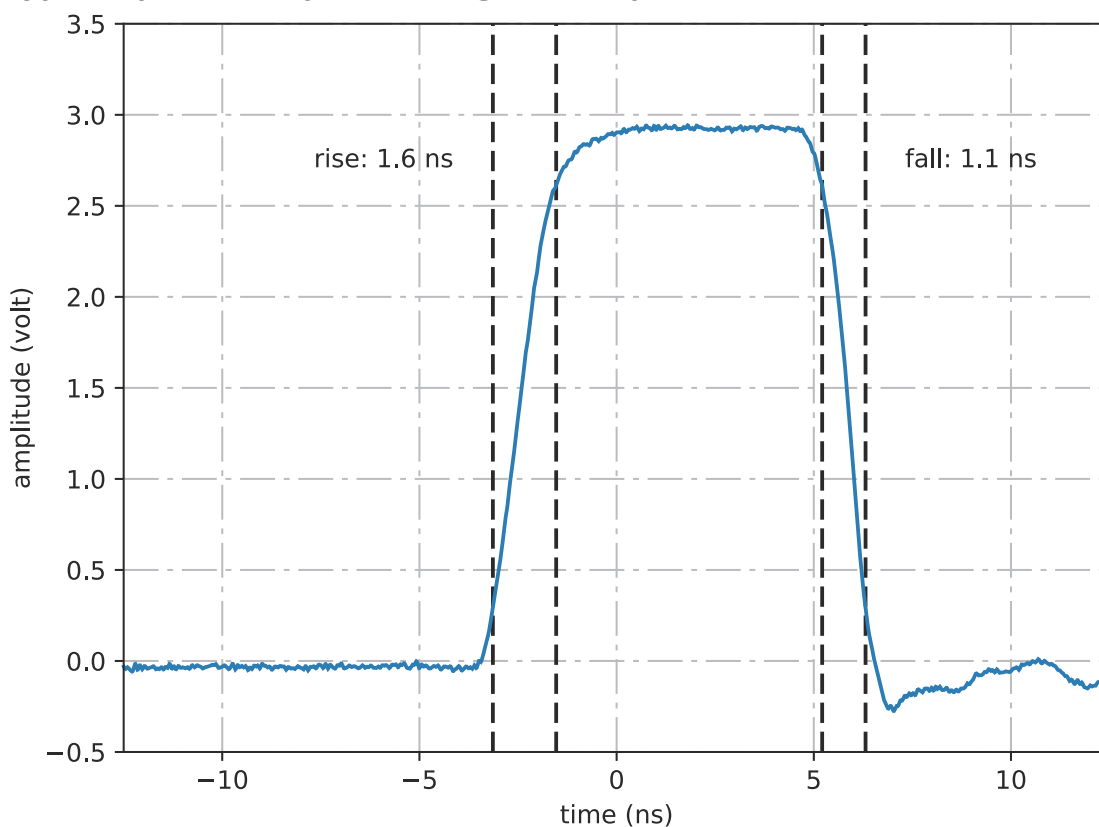
Max. Pattern length	1 M pulses
Repeat modes	1, N, infinite
Trigger modes	internal, external

Mechanical Parameters

Interface	Ethernet (1 Gbit/s)
Dimensions	185 x 145 x 60 mm

All specifications are subject to change without notice.

Typical pulse response (digital output)



Easy to program, flexible to use.



Pulse Streamer 8/2

Synchronous digital and analog waveform generator

- digital out: 8 channels, 1 GSa/s, 3 V into 50 Ω
- analog out: 2 channels, 125 MSa/s, ± 1 V into 50 Ω
- 1 Gbit ethernet interface
- three-year warranty
- free software and firmware updates

Send an email to sales@swabianinstruments.com to get a quotation or to place a purchase order.

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