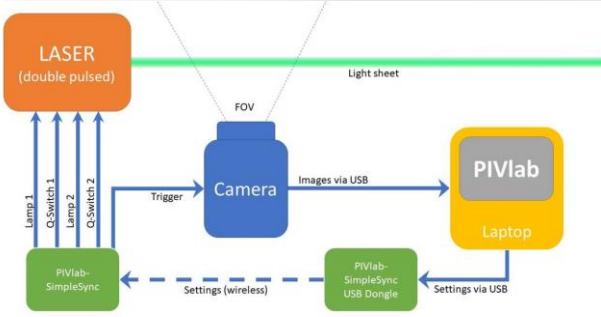
PIVlab SimpleSync

OPTOLUTION Messtechnik GmbH

The SimpleSync is a small electronic device ('synchronizer') that coordinates the timing of a pulsed laser source with a digital camera. It is connected to a computer (USB or wireless) and controlled via PIVlab, an open source PIV tool for MATLAB.



Main Features:

- Made for dual cavity pulsed lasers and pco cameras
- Wireless or USB option
- SMA or SMB connectors
- Minimum interpuls distance: 2 µs
- 20 ns jitter, 20 ns rise time
- Outputs: Lamp 1, Lamp 2, Q-switch 1, Q-switch 2, Camera
- Trigger input for synchronization of external events
- Frequency measurement on trigger input
- Supplementary hardware available for automatic control of additional electronic devices (seeding generators, pumps, valves)

Requirements: PIVlab, MATLAB (R2019b and newer), Image Processing Toolbox
http://pivlab.blogspot.com/

Datasheet

PIVlab, time-resolved (micro) particle image velocimetry toolbox for MATLAB

https://de.mathworks.com/matlabcentral/fileexchange/27659

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Main Features:

- userfriendly and GUI based PIV tool
- multi-pass, multi-grid window deformation technique
- parallel processing supported when the parallel computing toolbox is installed
- ensemble correlation
- import bmp/ tiff/ jpeg image pairs/ series
- acquire PIV images and control a camera and laser directly in PIVlab (additional hardware required)
- multiple image sequencing styles
- individual image masking and region of interest
- image pre-processing
- two different sub-pixel estimators
- multiple vector validation methods
- magnitude/ vorticity/ divergence/ shear / ...
- data smoothing, vector field highpass
- multiple colormaps
- streamlines
- extensive data extraction tools
- statistics
- synthetic PIV image generator
- many data export features
- main features accessible via comand line scripting
- Over 1000 scientific citations (https://scholar.google.de/scholar?cites=8192443120151415 43)
- Tutorials available (https://github.com/Shrediquette/PIVlab/wiki)

Requirements: MATLAB (> R2014b), Image Processing Toolbox
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Datasheet