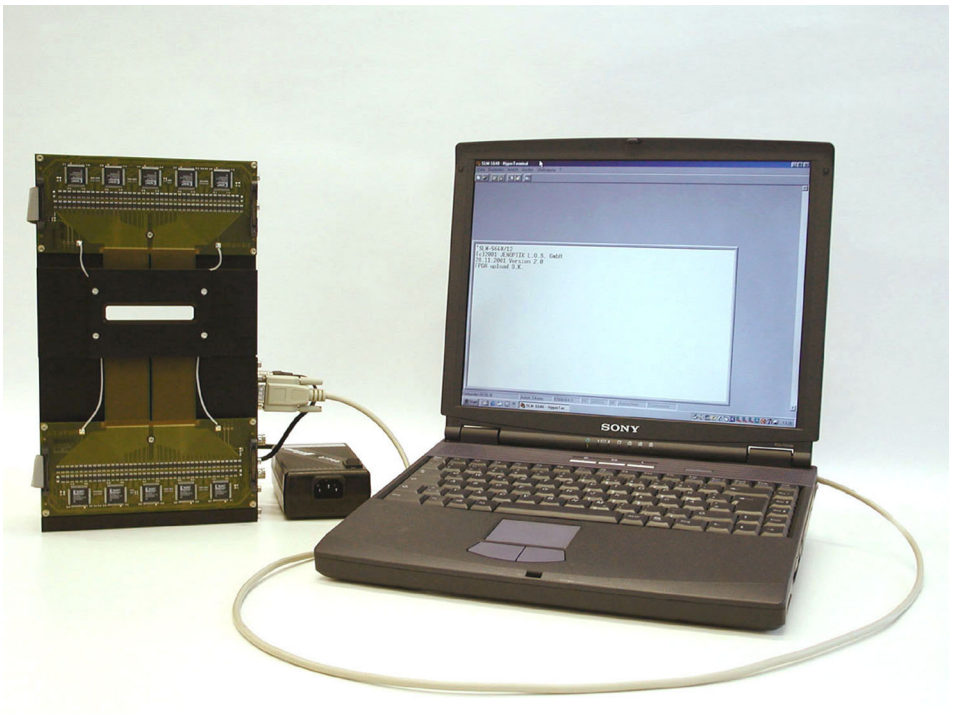
Excellence through light.

JENOPTIK JENA

Laser.Optik.Systeme.

Spatial Light Modulator SLM-S 640/12.



MPQ

FRIEDRICH-SCHILLER-UNIVERSITÄT JENA

In co-operation with:

Max Planck Institute of Quantum Optics, Garching/München

Friedrich-Schiller-University, Jena

The new Liquid Crystal Modulator with 640 stripes and a 12 bit resolution combined with an all-reflective zero dispersion compressor overcomes two major problems of standard devices: due to the large active area it is suitable for shaping high power lasers and allows for the first time to generate waveforms to control quantum systems.

The SLM-S 640/12 has been designed for modulation of femto-second laser pulses and can be used for phase modulation in a 4f arrangement or inserted in a cpa (chirped pulse amplification) system.

Two SLM-S 640/12 in a package can be used for modulation of phase and amplitude.

Due to integrated microprocessor the system offers convenient handling by connection to standard serial port RS 232 independent from PC system and can be easily run under Windows™ and LabView™.

Applications:

Optimum coherent control studies.

Optical information processing.

Multiphoton microscopy.

Micro-materials processing.

Implementation into Ti: Saphirre laser systems for non-linear interactions, combustion studies etc..

Quantum chemistry.

Ultrafast spectroscopy.

Optical coherence tomography.

Surface second harmonic generation.

JENOPTIK Group.

Spatial Light Modulator SLM-S 640/12.

Technical data

Optics

Active Area:	app. 63.7 mm x 7 mm
Number of Strips:	640
Strip Size:	97 µm
Gap:	3 µm
Liquid Crystal Type:	nematic
Wavelength Range:	430 – 1500 nm
Transmission:	>75% at 430 – 800 nm (without polarisers)

The system can either be used as phase modulator or amplitude modulator.

Phase Modulation:	max. phase shift at 430 nm:	7π
	max. phase shift at 1500 nm:	2π

Note: no polarizers included!

Electronics

Driving Voltage:	0...8 V / 12 bit resolution (optional 0...15 V)
Frame Buffers:	64 optional more

Specification

Interface:	RS 232
Trigger in and trigger out:	(Optocoupler)
Power requirement:	+24 V DC
Functions:	Load pattern Set pattern Rotate pattern n-positions left or right Switch between different patterns with programmable delay Test/ Justify Additional functions available

OPTIONS

AR coating:	450 - 850 nm or on customer's request

Delivery of SLM-S 640/12 includes:

- LC Display, driver boards and controller board fixed on a mounting plate
- RS 232 link cable
- Power supply
- Software and hardware documentation
- LabView™ software-driver

As our policy is constantly to improve the design and specification of our LC components, the details here shown are not be regarded as binding.

For further information please contact:

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