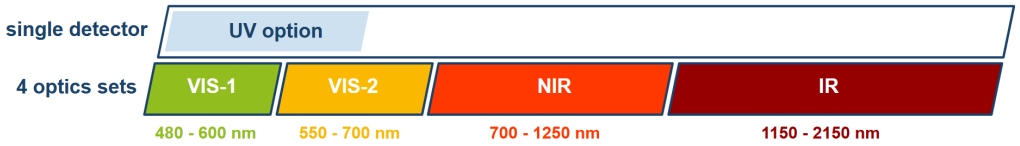
MS-ROC

MS-ROC stands for Multi-Shot Row Optical Correlator. It has been specially developed for laser sources with low pulse energy. They are all integrated and offer **extended pulse duration range** (3 fs to 80 ps, depending on the version), **increased sensitivity** (ideal for weak laser sources, pJ-level) **super resolution** and **modularity,** as the wavelength range can easily be changed thanks to swappable crystals and phase matching options. The high scan speed allows real-time operations for measurement and optimization.

MS-ROC



Key features

- Ultra simple alignment (2 min to setup)
- Large pulse duration measurement range (from 3 fs to 80 ps)
- High sensitivity (sub-nJ pulse)
- Broad available spectral range, only 4 crystals to cover 480 - 2150 nm (optional), and no need to change the detector
- User-friendly and powerful software

Options

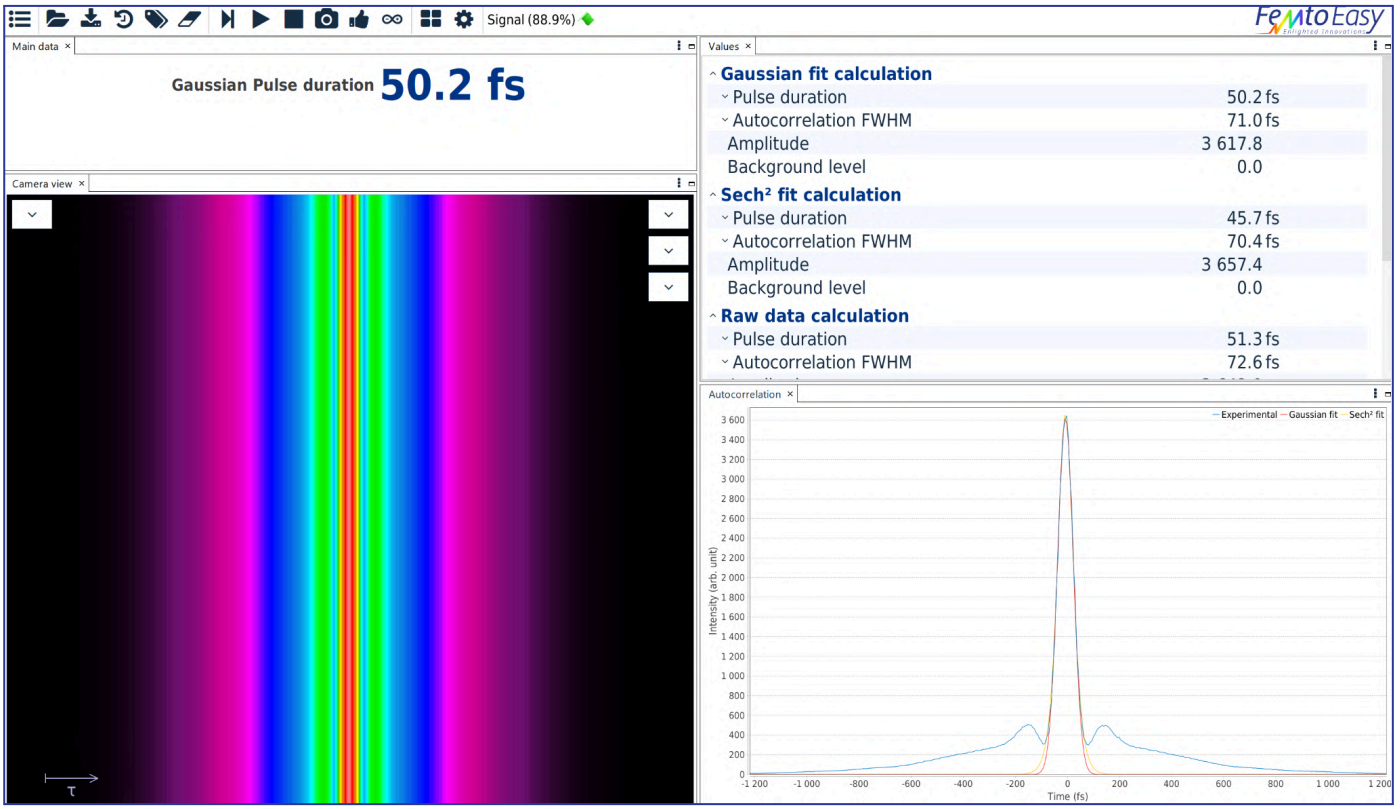
- Fiber input connector
- Additional crystals
- Low repetition rate

Specifications

Models		MS-ROC	MS-ROC LP	MS-ROC SP	MS-ROC SLP	MS-ROC USP
Pulse duration range	min	50 fs	50 fs	15 fs	15 fs	3 fs
	max	40 ps	80 ps	40 ps	80 ps	40 ps
Accessible spectral range (nm)		480 - 2150 [1]				
Minimum temporal resolution		1 fs	1 fs	0.25 fs	0.5 fs	0.25 fs
Maximum scan speed		39 ps/s	78 ps/s	39 ps/s	78 ps/s	39 ps/s
Input pulse repetition rate		100 Hz to GHz [2]				
Min input pulse energy [3]	1 MHz	5 pJ	5 pJ	1 nJ	1 nJ	1 nJ
	100 MHz	0.5 pJ	0.5 pJ	100 pJ	100 pJ	100 pJ
Polarization		Linear vertical				
Detection		CMOS 12 Bits – 3 Mpx – 72 dB				
PC Interface		USB 3.1				
Beam height (mm)		69 - 148				
Dimensions (mm)		222 x 194 x 129				

[1] Effective spectral bandwidth to be defined within the accessible spectral range according to customer's requirements.
[2] Low repetition rate available as an option.
[3] Those values give an order of magnitude, with "low energy" option when applicable. The exact sensitivity depends on many parameters (pulse duration, beam profile, wavelength...)

STAR Software



- Different calculation methods available for proper pulse estimation
- (Raw data FWHM, Gaussian fit, sech2…)
- Enhanced treatment for real time simultaneous data extraction
- Client / Server interface, allowing remote control through network
- All data exportable into most common formats

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