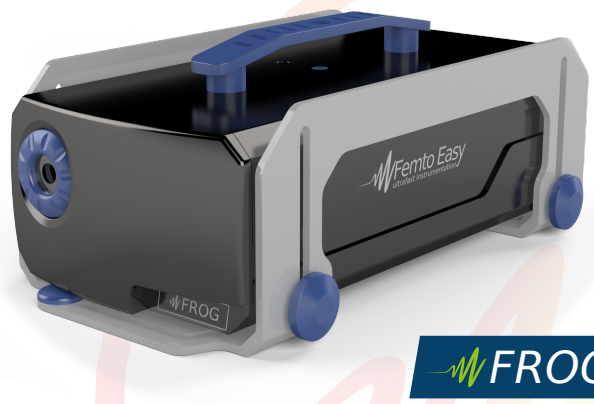
Fast FROG

FROG stands for Frequency Resolved Optical Gating. The *Femto Easy* single shot Fast FROG, based on second harmonic generation is reliable and compact. Key design features, such as the wavefront division technique and the use of our mini imaging spectrometer MISS, make the Fast FROG very easy to use, leading to accurate measurements. Six models are available, covering different pulse duration ranges from sub-5 fs to 10 ps, over a broad spectral range. Two designs are available : one for long pulses mainly relying on transmission optics, and one for ultrashort pulses which is fully achromatic.



FROG

Key features

- User-friendly
- Suitable for any rep rate (Single shot up to GHz[1])
- High level of accuracy
- No calibration and no tweaking necessary
- Sub-5 fs pulses can be measured
- Broad accessible spectral range[2]
- Achromatic and non-dispersive[3]
- Can access Spatio-Temporal couplings (Spatial chirp, Pulse Front Tilt)
- Fiber connector available (FC/APC, FC/PC)

Models	FC	FS	PS1	PS3	PS5	PS10
Pulse Duration Range (fs)	4-150[3]	10-300[3]	50-1000	100-3500	150-5000	300-10000
Spectral Range (nm)	500-2000[2]					800-2000[2]
Spectral Window Δλ (nm)	580	420	300			
Shot to shot Measurement capacity	80 kHz with synchronization / 40 kHz without[1]					
Input pulse repetition rate	From Hz to GHz					
Input pulse energy (nJ) Single shot: 1 MHz: 100 MHz: 1 GHz:	 > 5000 > 100 > 5 > 0.050 (with low energy option)					
Input polarization	Linear horizontal or vertical					
Detection	CMOS 12 Bit - 3 Mpx - 72 dB					
PC interface	USB 3.1 or GigE[4]					
Beam height (mm)	83-180					

[1]Over 80 kHz, the measurements are averaged over several shots. The number of shots depends on the laser rep rate (ex: 4 shots for 200 kHz). Devices with higher shot to shot measurement capacity can be made upon request.

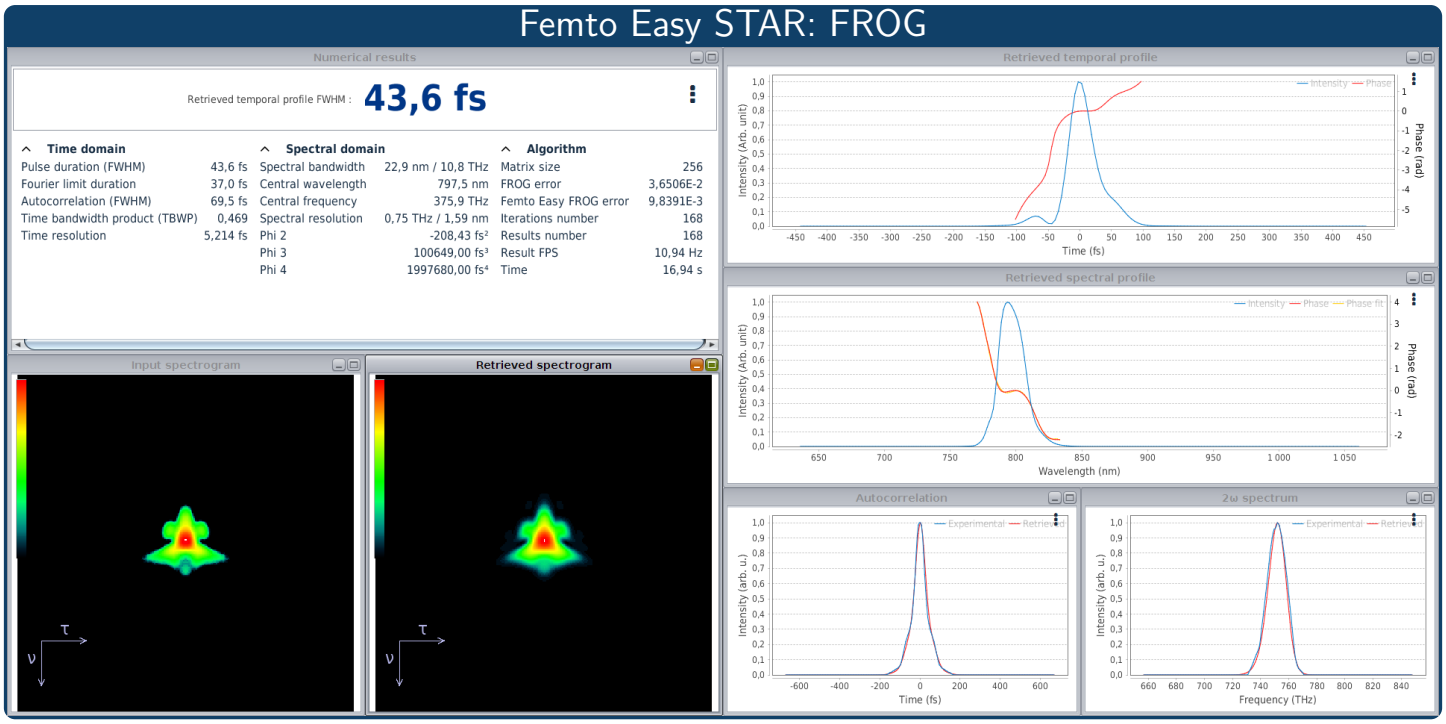
[2]The announced spectral range is the bandwidth accessible in factory. The customers have to choose a detection window of width $\Delta\lambda$ within this range. Custom spectral window and spectral resolution can be made upon request. Also spare spectrometers can be provided to address several spectral windows.

[3]The FC and FS models are non-dispersive and achromatic to achieve non-ambiguous phase retrieval.

[4]GigE available as an option.

Femto Easy SAS
Bât. Sonora, Parc scientifique et technologique Laseris 1
Avenue du Médoc, 33114 Le Barp, France
info@femtoeasy.eu - phone (+33) 972 603 792

Femto Easy STAR: FROG



Software designed by users for users

- STAR stands for Software Technology for Acquisition and Retrieval
- Live extraction of pulse properties:
  - temporal profile intensity and phase
  - fundamental spectrum and phase
  - Chirp, Third-order dispersion values and more
- Several algorithms (PCGPA and the Ptychographic Iterative Engine) are combined to enhanced the reconstruction speed and quality
- Phase loop available on several pulse shaper
- Enhanced background & hotspots treatment, for enhanced reconstructions
- Client/Server interface, allowing remote control through network
- All data are exportable into most common formats