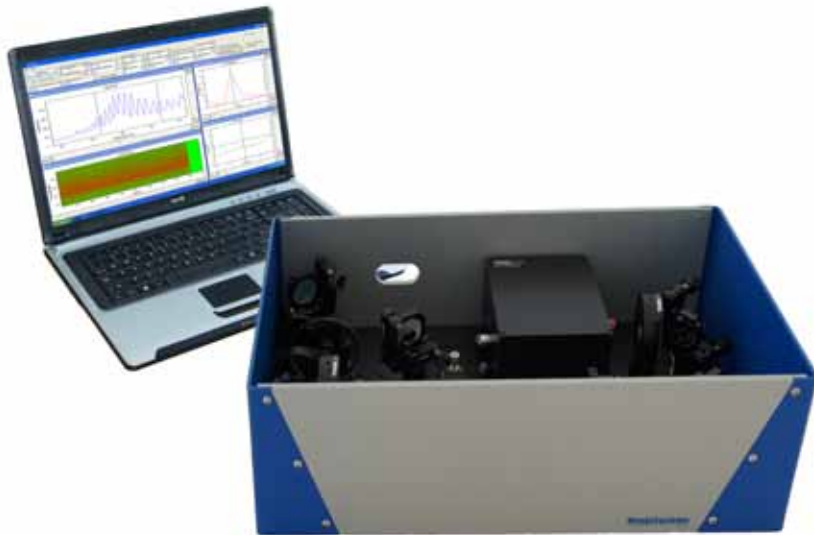


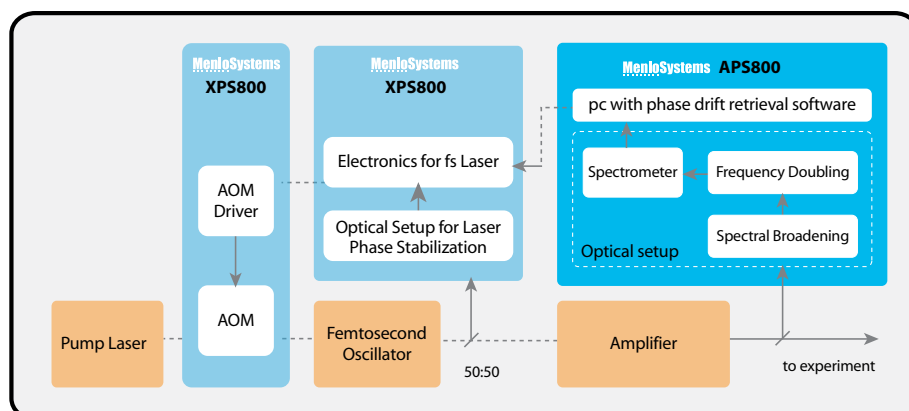
APS800

Amplifier Phase Stabilization



During amplification of phase stabilized femtosecond pulses, slow carrier-envelope phase drifts occur. The Menlo Systems APS800 is used to monitor and stabilize this phase relation after the amplifier. To monitor the slow carrier-envelope phase drifts, a small part of the amplifier output is split off and spectrally broadened in a sapphire plate. In an optical interferometer, the green part of the resulting octave spanning spectrum is overlapped with the frequency doubled infrared part. With the help of a spectrometer and control software algorithms, the resulting interferogram is analyzed, and a slow correction signal is generated. This signal is fed into the corresponding input port of the phase stabilization electronics XPS800 or similar control electronic setups.

SCHEMATIC SETUP



MenloSystems

KEY SPECIFICATIONS

- Wavelength 800 nm

APPLICATIONS

- Attoseconds and CEP Control
- High Harmonic Generation
- Coherent Control

FEATURES

- Sapphire Plate for Spectral Broadening
- f to 2f Interferometer with Frequency Doubling Crystal
- Spectrometer to Record and Monitor the Interferogram
- Laptop with DAQ Hardware for Spectrometer Control
- Analyzing Software

OPTIONS

- **XPS800**
Femtosecond Phase Stabilization
for oscillators with 800 nm center wavelength
- **XPS800-E**
Femtosecond Phase Stabilization Electronic Part
electronic feedback loop for oscillators with octave spanning output
- **XPS1000**
Femtosecond Phase Stabilization
for oscillators with 1- μ m center wavelength
- **XPS800-E CUSTOM**
Femtosecond Phase Stabilization Electronic Part
customized for zero phase slip instead of the standard $\frac{1}{4}$ slip rate

APS800



Amplifier Phase Stabilization

SPECIFICATIONS

Center Wavelength	800 nm
Energy Fluctuations	<1% (pulse-to-pulse, rms)
Repetition Rate	1 ... 10 kHz
Input Energy	>10 μ J/pulse
Pulse Length	<50 fs
Beam Diameter	5-15 mm

REQUIREMENTS

Operating Voltage	100/115/230 VAC
Frequency	50 to 60 Hz
Power Consumption	120 VA
Cooling Requirements	no water cooling is required
Laser Head Stabilization	active temperature stabilization
Operating Temperature	22 °C \pm 5 °C
Interferometer Dimensions / Weight	410 x 230 x 140 mm ³ , 9 kg

ORDERING INFORMATION

Product Code	APS800
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Please call for pricing. Specifications are subject to change without notice. Custom modifications are available, please inquire.



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