

# SYNCHRONIZATION

Synclock & Amplock are state-of-the-art synchronization add-ons compatible with all Amplitude ultrafast laser portfolio. This versatile solution is designed for highest accuracy synchronization of the laser system to either a radio frequency or an optical reference.

## *Synclock*

Synclock ensures an excellent synchronization of the ultrafast amplified pulses on the fast time scales. It consists in an active stabilization of the seed oscillator cavity to an external reference. Furthermore, the user can adjust remotely and precisely the time of arrival of the pulses.

## *Amplock*

Placed at the output of the laser, Amplock compensates for long-term drifts induced by the environmental conditions on the laser and the experimental setup.

These two add-ons, by offering both accuracy and reliability for long-term synchronization, are a must-have for demanding applications such as ultrafast pump-probe experiments, or integrated into secondary sources such as FELs, ICS and OPAs



Synclock



Amplock

## Applications

### Science:

- > Photocathode
- > Inverse Compton Scattering
- > Time-resolved Experiments
- > Terahertz Spectroscopy
- > Picosecond Acoustics

## Key Features

- > Synchronization with RF
- > Remote Delay & Scanning
- > Amplifier drift compensation

# Synchronization offer

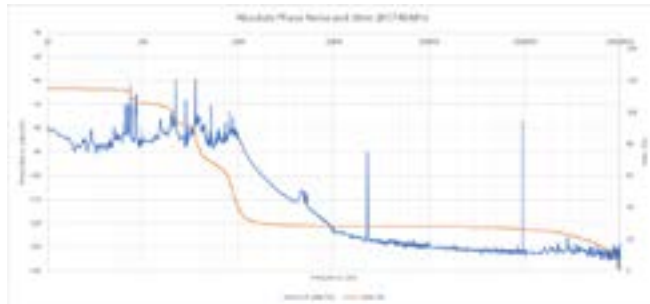
Synclock

Laser

Amplock

## Specifications

Jitter	< 150 fs rms from 10 Hz to 10 MHz
Reference	RF: 7 dBm @ 250 to 900 MHz Optical: 10 mW @ 40 MHz
Dimensions	2U 19" rack

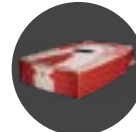


## Functionalities

Delay	150 fs to infinite
Scan	< 250 fs/s to 250 μs/s



## Compatibility



Satsuma



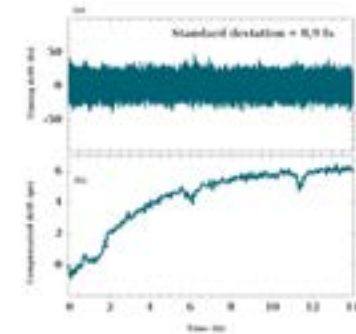
Tangor



Magma

## Specifications

Long Term Jitter	< 30 fs rms over 1 h
Optical Reference	40 mW @ 40 MHz
Dimensions	464 x 568 x 180 mm



## Jitter Measurement

Frequency Range	0,1 Hz - up to 100 Hz
Sensibility	250 as