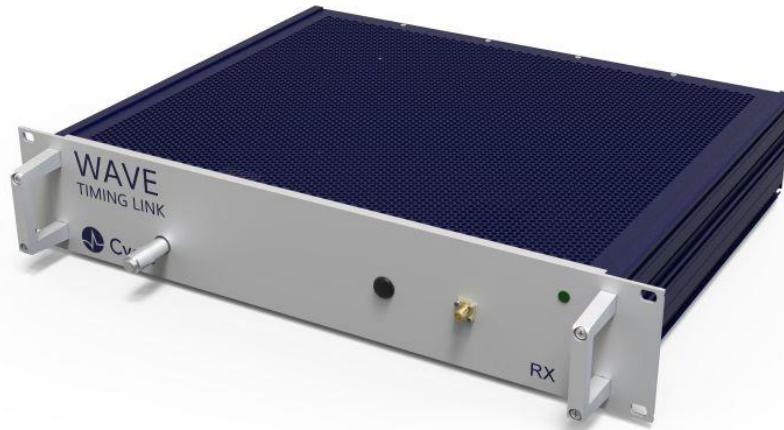Cycle

WAVE
Timing Link

APPLICATIONS

- Clock or RF signal transfer over long distances, such as:
  - GPS distribution
  - Maser distribution
  - Atomic clock distribution
  - Particle accelerators
  - Radio telescope arrays
- High flexibility in terms of clock type, clock frequency and transfer length
- Robust and fully automated operation

BENEFITS

- Below **40-fs timing jitter**
- **100-fs long-term timing drift** (over 8 hours)
- **Tens of km fiber link length** possible
- **Any frequency** up to 10 GHz possible

DESCRIPTION

Cycle's fully-automated WAVE LINK precisely distributes and transfers high-quality RF clock signals to remote locations, which can be even tens of kilometers away. WAVE LINK is actively stabilized and compensates any changes of optical path length caused by e.g. temperature variations. Therefore, multiplexing of other signals along the fiber is also possible.

Please contact our team of timing experts for your customization needs.

SPECIFICATIONS

| Parameters	Value	Unit	Comment
Timing jitter	<40	fs RMS	integrated from 1 Hz to 1 MHz[1]
Long term drift	<100	fs RMS	over 8 hours at 2-Hz sampling[1]
Fiber link length	<10	km	longer Links on request
Control system	optional		available in Epics, Tango...
Auto lock	included		
Max. RF output	15	dBm	
Max. RF output frequency	10	GHz	user defined
RF power stability	0.1	%	
Dimensions Transmitter			19 in. Rack Mount, 4HU
Dimensions Receiver			19 in. Rack Mount, 2HU
Weight Transmitter	16	kg	depending on options
Weight Receiver	8	Kg	Depending on options
Requirements			
Min RF input	15	dBm	
Max RF input frequency	10	GHz	

[1]Higher precision is available upon request.

MEASUREMENT DATA

Out-of-loop timing jitter above 1 Hz:
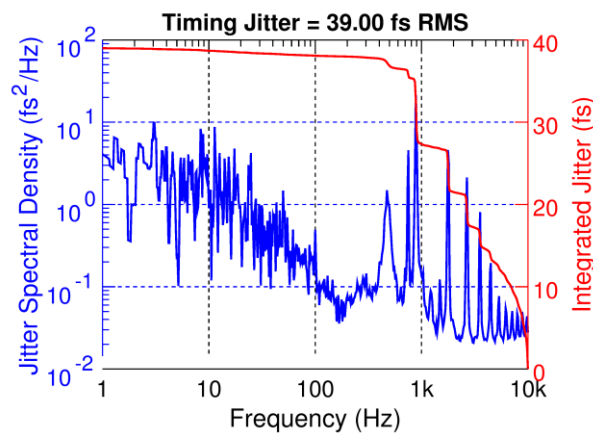
Out-of-loop timing drift sampled at 2 Hz over 8 hours:
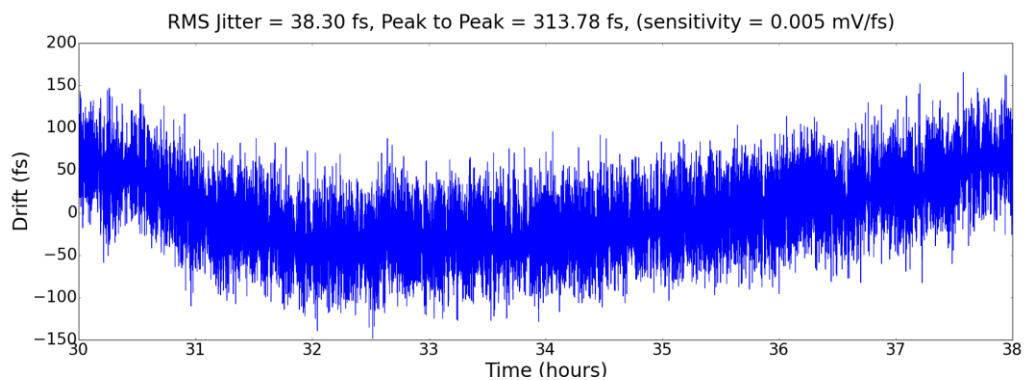
Contact sales@cyclelasers.com to discuss your requirements and receive a free white paper on timing jitter measurements