

STREAK CAMERA SWEEP UNIT

# SSU11-10

## Synchrosan Sweep Unit



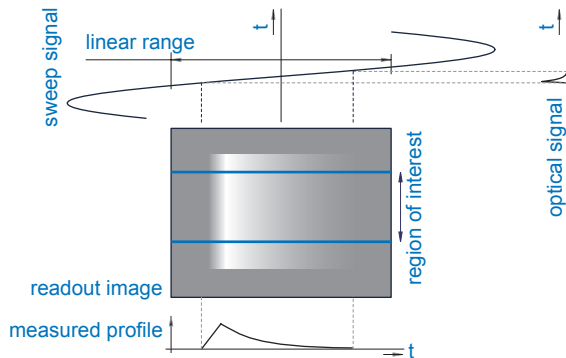
- 25 - 250 MHz synchrosan frequency
- Large frequency tuning range
- 2 ps temporal resolution
- Integrated phase shifter
- <1 ps jitter

# Sweep Unit SSU11-10

**Optronis**

Make time visible

The SSU11-10 sweep unit is used with the SC-10 main unit. The sweep unit operates in syncrosweep mode. The high frequency sinusoidal deflection allows high sweep speed with low non-linearity. Syncrosweep operation provides outstanding dynamics and sensitivity. Low phase jitter allows very good temporal resolution even for long term measurements.



Measurements with positive but also negative time axis are possible. Combined with orthogonal sweep this can be used to capture pulses with double the repetition frequency than sweep frequency.

## GENERAL SPECIFICATIONS

Jitter	<1 ps (FWHM)
Time base (max. usable)	T / 7 with T = 1 / sweep freq.
Sweep speed accuracy	±5% (mean over 16 mm)
Sweep speed non-linearity	±5% (over 20 mm)
Phase adjustment range	0 - 360° with 0.04° resolution
Operation modes	Sweep / Focus
Synch signal connectors / imp.	BNC / 50 Ω
Synch signal output level	0 dBm (typ. / sinusoidal)
Temperature	0 - 35°C (op.) / -5 - +45°C (stor.)
Humidity	20 - 80% rel. non-condensing
Altitude	sea level up to 3000 m
Weight	5.5 kg (5.7 kg with /H2 option)

## SSU11-10

Sweep frequency	75 - 150 MHz (factory set)
Temporal resolution	2 ps (FMHM including jitter)
Sweep frequency tuning range	±1 MHz (@ 80 MHz)
Sweep speeds (typ. @ 80 MHz)	15, 25, 50, 100 ps/mm
Time base (typ. @ 80 MHz)	300, 500 ps, 1, 2 ns
Synch signal input level	0 ± 6 dBm (sinusoidal)

## OPTIONS

The SSU11-10 is manufactured to be operated at a specific frequency, typically ~80 MHz. The sweep frequency is tunable within a large range by the user. This is assisted by a tune level indicator.

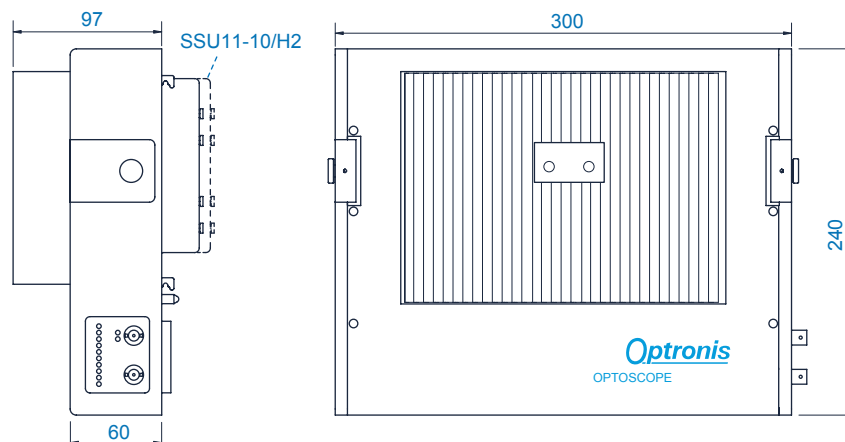
Options for low frequency /LF and high frequency /H2 are available. For high frequency operation a /H2 option is needed for the main unit SC-10.

## SSU11-10/LF

Sweep frequency	25 - 75 MHz (factory set)
Temporal resolution	3 ps (FMHM including jitter)
Sweep frequency tuning range	±400 kHz (@ 40 MHz)
Sweep speeds (typ. @ 40 MHz)	25, 50, 100, 200 ps/mm
Time base (typ. @ 40 MHz)	500 ps, 1, 2, 4 ns
Synch signal input level	0 ± 6 dBm (sinusoidal)

## SSU11-10/H2

Sweep frequency	150 - 250 MHz (factory set)
Temporal resolution	2 ps (FMHM including jitter)
Sweep frequency tuning range	±1.5 MHz (@ 250 MHz)
Sweep speeds (typ. @ 250 MHz)	15, 25, 50 ps/mm
Time base (typ. @ 250 MHz)	300, 600 ps, 1 ns
Synch signal input level	0 ± 3 dBm (sinusoidal)



All Dimensions in mm

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