AA-DD. Scanning Real-Time Autocorrelator

- 10 fs - 30 ps input pulse duration
- 450-3200 nm full wavelength range
- 0.1-20 Hz scan rate
- USB connection and Windows software included with all units
- Interferometric autocorrelation trace
- Broadband fiber-coupled input for 450-3200 nm coverage (optional)

The AA-20DD optical unit

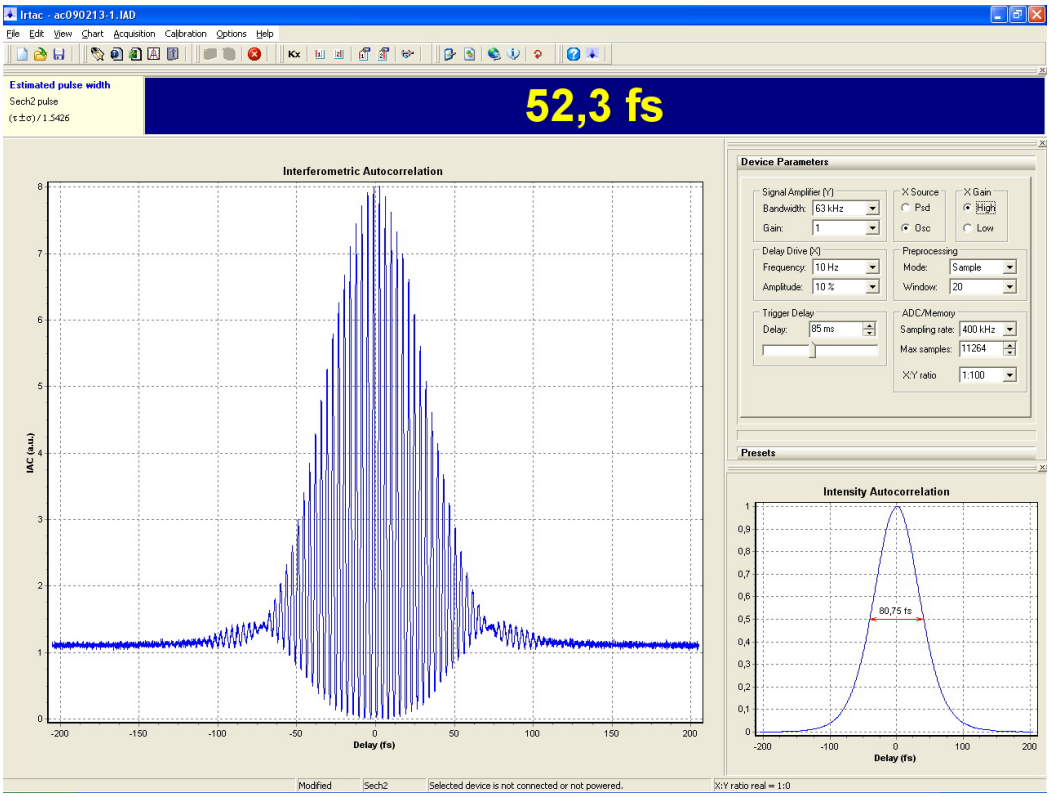
Product overview

The AA-DD real-time autocorrelator offers smooth and fast measurement of femtosecond and picosecond pulse duration. The autocorrelator can cover several wavelength ranges by using up to 4 interchangeable photodetectors and optics. Two separate ranges can also be covered upon request. Input pulse duration ranges from 10 fs to 30 ps for easy monitoring of different laser systems, especially femtosecond and picosecond oscillators (for low repetition rate amplifier monitoring <10 kHz please also see our ASF single-shot autocorrelator series).

The device features USB interface and can be easily hooked up to a PC with Windows OS, LabView drivers are also included in the package. The software is supplied with the device and comprises several useful tools. The acquired pulse duration data can be visualized, stored or exported to a .txt or .dat file. Autocorrelation function and final FWHM pulse duration in femtoseconds are calculated and displayed in real-time. Moreover, Gaussian or sech2 fitting options are available, intensity function may also be observed. The statistical viewer feature allows the comparison of data acquired from several separate pulse measurements.

The tiny body of the AA-DD flawlessly fits any experimental setup with strict space requirements. We also offer an optional fiber input for fast and reliable pulse duration measurement in various optical fibers. Moreover, the autocorrelator in this case still maintains the free-space measurement capability.

AA-DD Software



AA-20DD software Irtac Screenshot

AVESTA
LASERS AND OPTICAL SYSTEMS

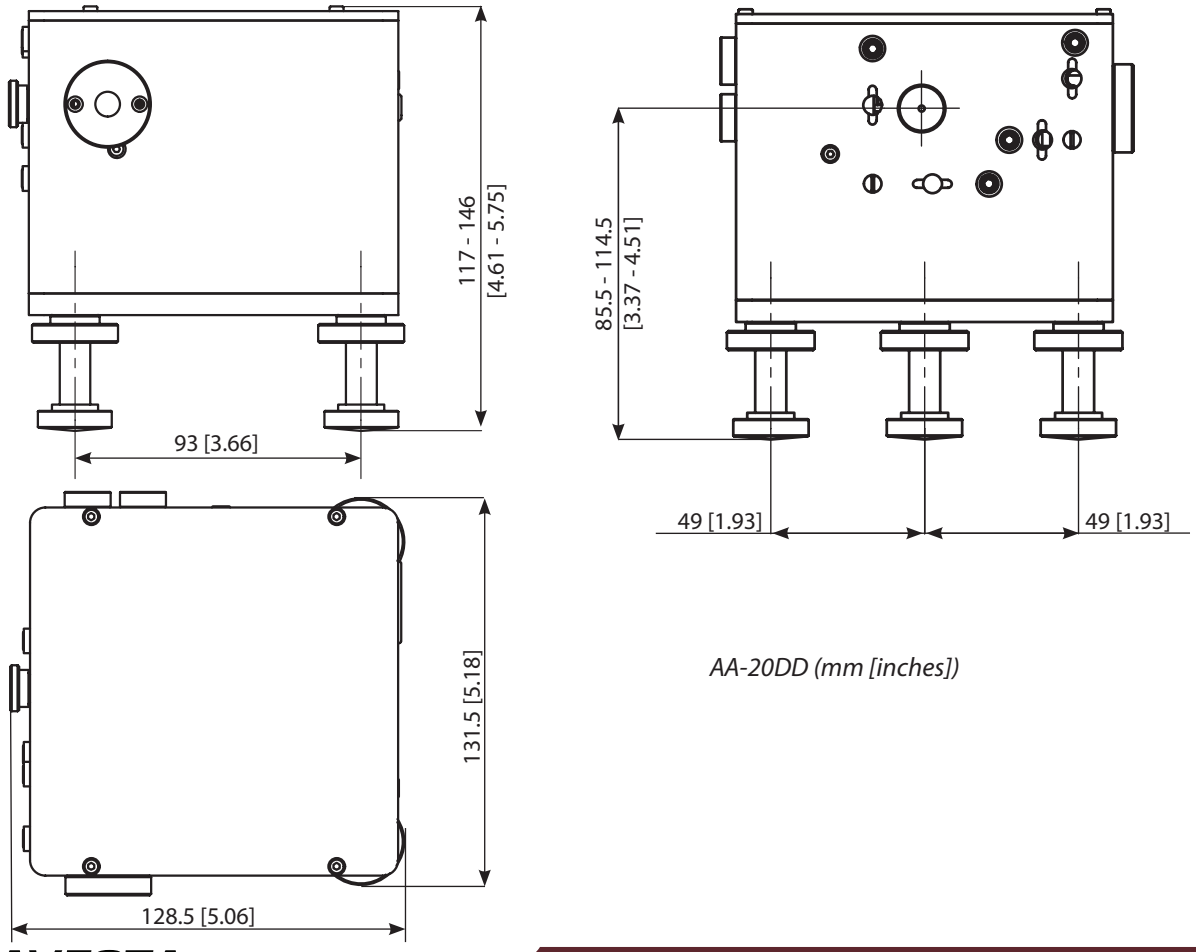
Avesta Ltd., 11 Fizicheskaya Street
Troitsk, 108840, Moscow, Russia
Tel.: +7 (495) 967-94-73

fs@avesta.ru
www.avesta.ru

	AA-20DD	AA-10DD-12PS	AA-10DD-30PS
Possible full wavelength range*	450-3200 nm		
Subranges* (exchangeable photodetector/beam splitter pairs)	V: 450-700 nm R1: 700-1300 nm R2: 1300-2000 nm R3: 1950-3200 nm		
Input pulse duration range	20 fs - 6 ps	10 fs - 12 ps	10 fs - 30 ps
Input pulse repetition rate	>10 kHz	>10 Hz	>10 Hz
Sensitivity (typical)	100 mW^2		
Autocorrelation	collinear interferometric (fringe), intentsity collinear (selectable modes)	collinear interferometric (fringe), intentsity collinear, intentsity non-collinear (selectable modes)	
Input polarization	linear, horizontal (vertical upon request)		
Scan rate	0.1-20 Hz		
Linear distortion	<1%		
Collinear	yes (interferometric and intentsity)		
PC connection	USB		
Required equipment	Windows PC		
Fiber input (optional)	FC/PC or FC/APC (other types on request)		
Signal source and detector type	two-photon conductivity in semiconductors		
Dimensions, mm	132x129x117 - optical unit 170x190x36 - control unit	148x133x117 - optical unit 170x190x36 - control unit	185x180x145 - optical unit 170x190x36 - control unit

** - the indicated subranges are covered by exchangeable photodetector/beam splitter pairs. I.e. the customer may choose from one subrange of their choice (to cover a desired corresponding wavelength region indicated in the table above) to four sets for complete full wavelength range coverage. Please indicate the required subranges for precise quotation and information when making a request for the product.*

AA-DD dimensions



AA-20DD (mm [inches])

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