TECHNICAL DATA

XtalController 900

Micro balance	**R**esolution 1 µg
Illumination	**B**right field illumination with LED
Climate chamber	**R**egulated relative humidity up to 100% with a precision better than 0.1% Control of the temperature max 10°C above or below ambient, stability better than 0.1°C
Microscope	**O**bjective: Planachromat 1x Five different magnification steps: 0.32x, 0.63x, 1x, 1.6x, 3.2x Resolution: 9.2, 4.6, 2.9, 1.8, 0.9 µm/pixel, motorized drop position setting Zoom and focus setting fully motorized
Camera	**C**CD color camera with a resolution of 1600 x 1400 pixel
DLS system	**L**aser diode wavelength/optical power: 660nm/120mW (adjustable) Measurement position in drop adjustable with computer control **D**etector Photomultiplier tube, dark count rate < 300 kHz Single photon counter, quantum efficiency 5-7%, count sensitivity 1.5 10^5 Hz/pW Fixed scattering angle for back scattering (148°) **C**orrelator multi-tau architecture correlator with 210 quasi logarithmically spaced channels enabling sample times of 400 ns to 13.43 s sample rates **S**ensitivity Sample concentration with standard laser parameters Minimum concentration: 0.3 mg/ml for a 15 kDa protein, 0.1 mg/ml for a 50 kDa protein. Max. concentration ~120 mg/ml
Microdispensing system	**P**iezo operated drop generator for contact free addition of liquids Dispensed volume per piezo stroke: 30 pL Options for additional drop generators (e.g ligand, seeding, additives) Regulated dispensing frequencies for pre-defined time dependent sample composition.
Instrument	**T**able top System 650 mm x 550 mm x 450mm (LxBxH) Weight: approx. 30 kg Power consumption: 90 to 264 V 200 W Clean pressurized air 2-6 bar, oil free is required
Instrument table	**F**or optimal performance a vibration damped table is required
Computer	**M**ini-PC ready to use OpenSUSE Linux Leap 15.3 Desktop PC ready to use LCD-Display 4K
Software features	**X**tal-Controller software runs on Linux Determination of crystal size for control of growth rate Fully automated operation mode Full remote control via internet Integrated SQL-data base Real time monitoring of the sample composition Recording of sample composition history Live display of camera images Storage and retrieval of all relevant information in the data base