

## attoCFM I

low temperature confocal microscope - stable. modular. easy to use



Confocal unit	
configuration	compact and modular design, up to three optical channels standard configuration: 1 excitation channel, 1 detection channel
key benefits	quick and reliable alignment of each channel, steering mirror for the combined beams exceptional long-term stability
quick-exchange of optical components	beamsplitters, filter mounts for up to 4 filters / polarizers (1" diameter), optional piezoelectric rotator with filter mount
LT-compatible objective	achromat, NA = 0.82, WD = 0.4 mm, confocal resolution ~ 550 nm (@635 nm in reflection)
inspection unit	sample imaging with large field of view: ~ 75 µm (attoDRY), ~ 56 µm (attoLIQUID)
Sample positioning	
coarse range	5 x 5 x 5 mm <sup>3</sup>
step size	0.05 .. 3 µm @ 300 K, 10 .. 500 nm @ 4 K
scan range	50 µm x 50 µm @ 300 K, 30 µm x 30 µm @ 4 K
step scan range	any size; e.g.: 200 x 200 µm <sup>2</sup>
Illumination	
excitation wavelength range	632 nm, others on request
port specification	FC/APC-connector for single mode fibers
Detection	
detection mode	e.g. reflection, luminescence, fluorescence, ...
detection wavelength	detector on user's choice, typically Si detector (coupling of the light to other detectors possible, e.g. spectrometer, APD, ...)
port specification	FC/APC-connector for single mode fibers (other connector types on request)
options	low temperature compatible detector below the sample for transmission measurements (intensity),
Imaging Modes	
single optical sections	xy scans
time lapse imaging	xyt scans
z series and 3D imaging	xyz scans
Operating Conditions	
temperature range	1 .. 300 K (dependent on cryostat)
magnetic field range	0 .. 15 T+ (dependent on magnet)
operating pressure range	1E-6 mbar .. 1 bar (designed for exchange gas atmosphere)
Cooling Specifications	
bore size	designed for a 2" (50.8 mm) cryostat/magnet bore
cryostat	attoLIQUID1000, attoDRY1000
Scan Controller and Software	
ASC400 SPM controller	for detailed specifications please see attoCONTROL section

