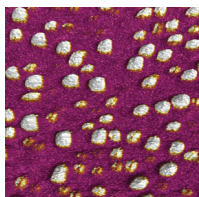


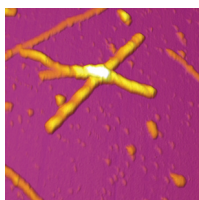
Options and Accessories for the Cypher™ AFM

Advanced Applications Options



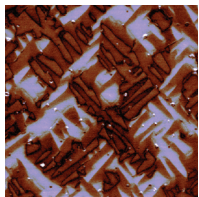
ORCA™ Conductive AFM

ORCA provides conductive AFM imaging and I-V measurement capabilities. The standard module is capable of measuring currents from $\sim 1\text{pA}$ to 20nA . The kit includes a sample mount, conductive AFM probes, and accessories. Modules for different current ranges are available upon request. Also available as a dual gain version for expanded range. (Models ORCA-CYP, ORCA-DG-CYP)



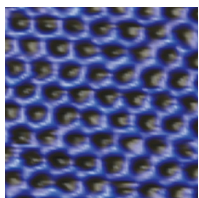
iDrive™ Fluid Imaging

The iDrive cantilever holder simplifies AC mode imaging in liquid by driving the cantilever electromagnetically. Spurious mechanical resonances associated with the traditional acoustic piezo drive are thereby eliminated. This allows for easy auto-tuning of the cantilever in liquid for AC (tapping), Dual AC™, and phase imaging. iDrive operates without the need for magnetic cantilever coatings, which can be detrimental for biological samples. The kit includes iDrive cantilevers and a variety of accessories. (Model IDRIVE-CYP)



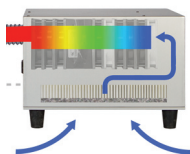
High Voltage Piezoresponse Force Microscopy (HV-PFM)

The HV-PFM option enables high sensitivity, high bias, and crosstalk-free measurements on piezoelectrics, including ferroelectrics and multiferroics. The kit includes an integrated high voltage amplifier ($\pm 150\text{V}$), high voltage cantilever holder, high voltage sample mount, and conductive cantilevers. (Model HV-PFM-CYP)



Scanning Tunneling Microscopy (STM)

The STM option provides tunneling current imaging at constant current or constant height, and I-V measurement capability. The kit includes STM probes, STM probe holder with integral preamp ($\sim 1\text{pA}$ to 10nA ; other modules for different current ranges are available upon request), and a $500\text{M}\Omega$ test resistor. (Model CH-STM-CYP)



Air Temperature Controller (ATC)

The ATC flows temperature regulated, HEPA filtered air through the Cypher enclosure. Closed-loop temperature control isolates the AFM from room temperature variations, minimizing thermal drift for imaging and force curves. The temperature control system is controlled via a graphical user interface within the Asylum Research software. (Model ATC-CYP)



MultiLux™ Laser Modules

Cypher offers four Laser Modules, one of which is included with initial system purchase. It is possible to add any of the following additional laser modules to enhance the capabilities of the Cypher:

- Standard Laser Module: RF-modulated laser diode light source module with nominal $10\mu\text{m} \times 30\mu\text{m}$ focused spot size. Recommended for all AC-mode imaging. (Model LD-STD)
- Small Spot Laser Module: RF-modulated laser diode light source module with nominal $3\mu\text{m} \times 9\mu\text{m}$ focused spot size. Recommended for all AC-mode imaging with small cantilevers. (Model LD-SS)
- Standard SLD Module: Superluminescent Diode (SLD) light source with nominal $10\mu\text{m} \times 30\mu\text{m}$ focused spot size. Recommended for all contact mode and force measurements. (Model SLD-STD)
- Small Spot SLD Module: SLD light source with nominal $3\mu\text{m} \times 9\mu\text{m}$ focused spot size. Recommended for contact mode and force measurements using small cantilevers. (Model SLD-SS)



Air Cantilever Holder

The air cantilever holder is used for all ambient environment imaging. In addition to AC mode and contact mode, it can be used for many other modes such as EFM, MFM, LFM, SKPM, PFM, FM-AFM and many others. This item is included with initial system purchase. (Model 901.705)



Droplet Cantilever Holder Kit

The droplet cantilever holder is used for all fluid measurements. It includes a low-evaporation chamber to minimize evaporation during longer term imaging sessions. The holder can be fully disassembled for cleaning. This kit is included with initial system purchase. (Model 901.720)



Vertical Sample Clamp

This sample clamp allows sectioned, micro-cryotomed and other samples to be firmly held for a variety of AFM measurements. Compatible with the Cypher AFM and the sample puck holder on the MFP-3D AFM. For samples 0-2mm thick. (Model 900.184)