

## PointProbe® Plus Non-Contact / Soft Tapping Mode - Au Coating

The PointProbe® Plus (PPP) combines high application versatility and compatibility with most commercial SPMs. The typical AFM tip radius of less than 7 nm and the minimized variation in AFM tip shape provide reproducible images and enhanced resolution.

NANOSENSORS™ PPP-NCSTAu AFM probes are designed for non-contact or soft tapping mode imaging. The combination of soft AFM cantilever and fairly high resonance frequency enables stable and fast measurements with reduced AFM tip-sample interaction. This feature significantly reduces AFM tip wear and sample wear at the same time.

### The AFM probe offers unique features:

- metallic conductivity of the AFM tip
- AFM tip height 10 - 15 µm
- Au coating on both sides of the AFM cantilever
- chemically inert
- high mechanical Q-factor for high sensitivity

A metallic layer (Au) is coated on both sides of the AFM cantilever. The tip side coating enhances the conductivity of the AFM tip and allows electrical contacts - the typical AFM tip radius of curvature is less than 50nm. The detector side coating enhances the reflectivity of the laser beam by a factor of 2.5 and prevents light from interfering within the AFM cantilever. The coating process is optimized for stress compensation. As the coating is nearly stress-free the bending of the AFM cantilever due to stress is less than 2 degrees.

**Please note:** Wear at the AFM tip can occur if operating in contact-, friction- or force modulation mode.

This AFM probe features alignment grooves on the back side of the holder chip. These grooves fit to the NANOSENSORS Alignment Chip.

### Cantilever data:

Property	Nominal Value	Specified Range
Resonance Frequency [kHz]	160	75 - 265
Force Constant [N/m]	7.4	1.2 - 29
Length [µm]	150	140 - 160
Mean Width [µm]	27	19.5 - 34.5
Thickness [µm]	2.8	1.8 - 3.8

### Order codes and shipping units:

Order Code	AFM probes per pack	Data sheet
PPP-NCSTAu-10	10	of all probes