

# SLAM

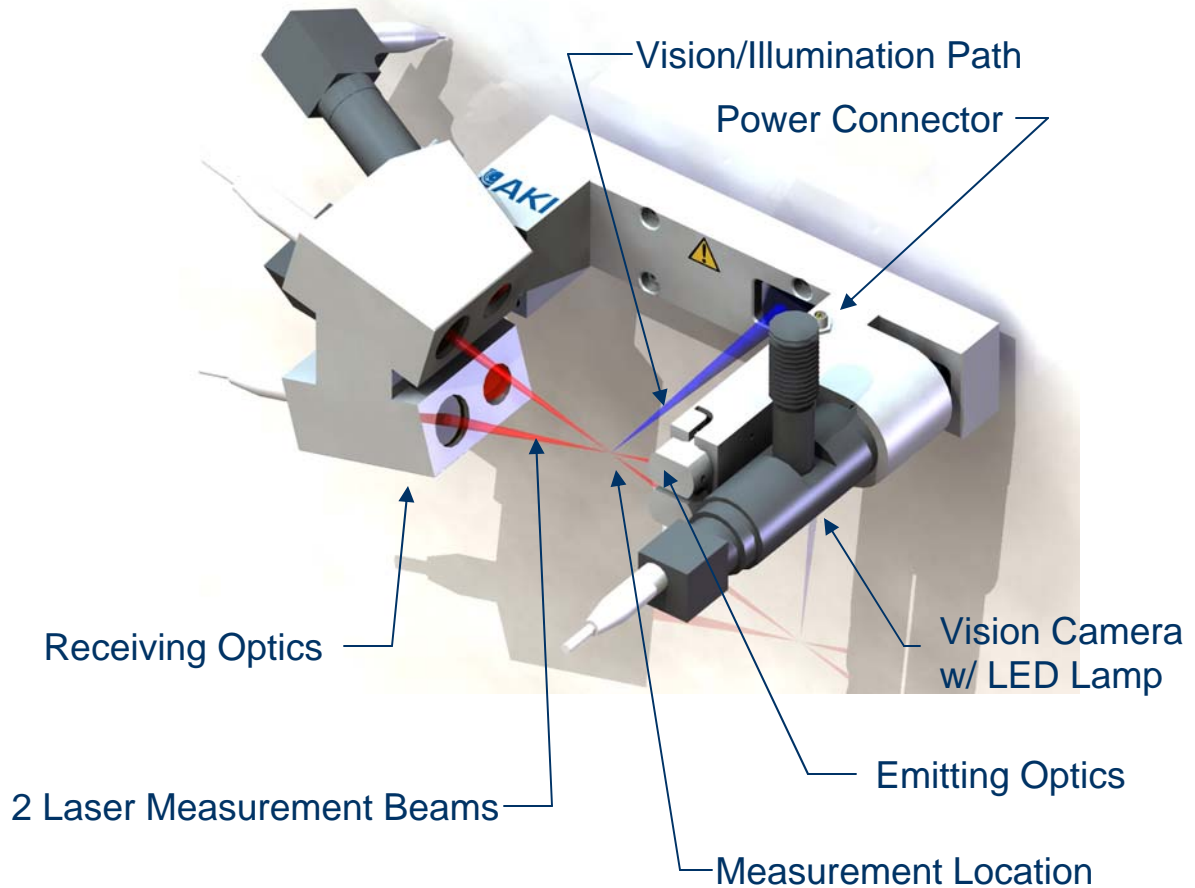
## Stack Level Attitude Measurement Probe



# SLAM Description

- The SLAM (Stack Level Attitude Measurement) probe is designed to measure static attitude in the head stack prior to drive installation.
- PSA/RSA and Z information is gathered for each measurement.
- This patent-pending non-contact, laser based technology measures both up and down facing sliders
- This revolutionary technology yields throughput and gage capabilities that far exceed existing “shadow” technologies.
- A process vision camera provides precise slider location feedback to the system and is used to measure other parameters, such as head alignment.
- Measurements may be taken along the suspension, arm, e-block or bearings, to further characterize the assembly (depending on assembly geometry).
- A similar version of the SLAM probe without the process vision camera is also available.

# SLAM Features





# SLAM Specifications

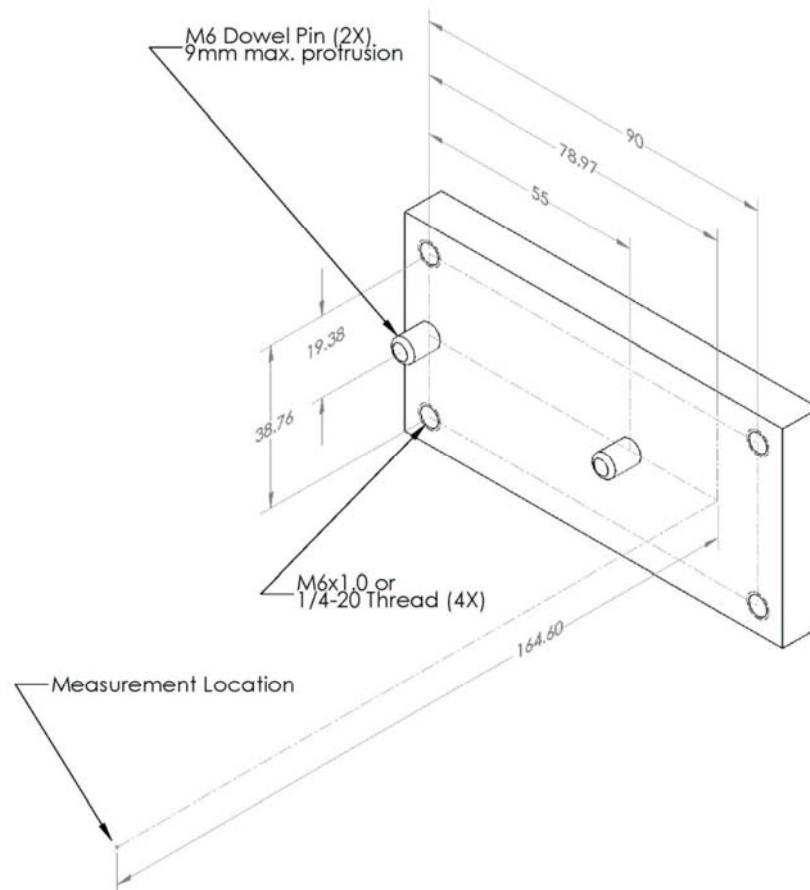
	<b>PSA</b>	<b>RSA</b>	<b>Z</b>
<b>Measurement Range</b>	$\pm 7.0^\circ$	$\pm 2.0^\circ$	$\pm 0.5\text{mm}$
<b>Resolution</b>	$<0.0020^\circ$	$<0.0005^\circ$	$<0.10\mu\text{m}$
<b>RMS Repeatability</b>	$<0.0040^\circ$	$<0.0010^\circ$	$<0.25\mu\text{m}$
<b>Full Range RMS Accuracy</b>	$<0.0300^\circ$	$<0.0080^\circ$	$<4.00\mu\text{m}^1$

Measurement Speed (PRSA or Z):	<70 msec
Lasers (Wavelength, Class, Power, Qty):	635 nm, IIIa, 4.2mW, 2
Laser Approach Angle:	15°
Minimum Femto Slider Spacing <sup>2</sup> :	0.15mm
Sensor Technology:	1/3" CCD (x5)
Spot Size:	<50μm
Physical Dimensions (H x W x D):	180 x 160 x 80mm
Weight:	8.5 Kg
Power Requirements:	5VDC, 400mA max.

<sup>1</sup> Over 80% of full range

<sup>2</sup> Certain slider and suspension geometries may increase the minimum spacing.

# SLAM Mounting Details



Sample mounting arrangement.  
Measurements given in millimeters.

# Additional Information

- Included in package:
  - SLAM probe
  - 1 LED light source w/ power supply
  - 2 Cognex vision cards
  - 1 Camera port expansion panel
  - 5 Camera cables
  - 1 Power cable
  - Installation package including:
    - Stand alone probe software
    - Sample source code available in a variety of languages
  - 1 USB or Parallel port Hardware Key
  
- Minimum PC Requirements:
  - Intel Pentium CPU, 166MHz
  - Two open PCI slots
  - One additional open slot (any type)
  - 512 MB RAM
  - 400 MB free disk space prior to installation
  - 1024x768 display
  - PCI, PCI Express, or AGP video adapter (2X or better AGP or PCI Express; recommended)
  - Microsoft Windows 2000 SP4 or XP SP2
  - Microsoft Internet Explorer 6.0