

Monolithic 3D Nanopositioner with 6 degrees of freedom

most accurate three dimensional motion at nanoscale for positioning professionals

Highest precision six degrees of freedom 3D space motion nanopositioner

Annual Sales Forecast for USA * 				Innovation Status		Idea
Sales & Marketing Support Level	Conservative 80% odds of selling	Most Likely 50% odds of selling	Aggressive 20% odds of selling	Development Status	Proprietary Protection Status	Concept Score
Ultra Low	\$0	\$1,100	\$7,100	2 of 5 Successful Prototypes	5 of 5 Granted Patent Claims	32 <small>29 is Average</small>
Low Support	\$16,000	\$35,000	\$65,000			
Medium Support	\$140,000	\$240,000	\$380,000			
High Support	\$400,000	\$650,000	\$1.0 M	Remaining Time & Cost to First Sale		
Ultra High	\$740,000	\$1.2 M	\$1.9 M	6 mos-1 yr	\$100k-\$1M	

Monolithic 3D Nanopositioner with 6 degrees of freedom - most accurate three dimensional motion at nanoscale for positioning professionals

Final Decision Maker: Manufacturers of high precision motion and metrology equipment

Six degree of freedom three dimensional (3D) space monolithic nanopositioner can be built to any scale that can deliver x- y- x linear and angular motions from a fraction of a nanometer to 500 microns. The new design developed by National Institute of Standards and Technology (NIST) researchers makes use of a monolithic hexapod. Remarkable benefits of this novel design include the use of embedded safety steps (door stops) which prevent the destruction of the deformable kinematic mechanisms and sensor assembly if accidentally overloaded. A sensor assembly can be embedded into the device underneath the payload and measure the translational and angular motions about the xyz axes. Zero backlash and stiction are uniquely available due to the patented monolithic design.

A few of these devices have been built and tested in the NIST Laboratories along with various types of controllers. Their size range from the macroscale (300mm x 300mm x 300mm) to MEMS- scale (6mm x 6 mm x 6 mm). Materials used include aluminum, steel, and single crystal silicon for the MEMS devices. Capacitance displacement sensors have been embedded into the macro- and meso- scale devices, interferometers into the MEMS microscale devices. Computer Assisted Designs (CAD) drawings exist for all the above mentioned devices and would be available to licensee(s). Likewise, lithography mask designs for the MEMS devices are also available. A fully equipped laboratory is available to assist with the testing of the devices.

\$10 - 5,000 for MEMS to macro or mesoscale device (excludes controllers)

Seeking: Purchase, Investment, Manufacturing/ R&D

 Email Inventor(s)
  Link to Website With More Info
  Link to YouTube Video
  Inventor(s) Open to Consulting Requests
  Agree to use Fair Contract
  Invention can be exported

* Consumption sales forecast. Does not include "Random" events or Inventory Fill . Forecast is for Year 1 for Large or Year 2 for Small Companies. Forecast should be read as ... With Low marketing support there is an 80% odds of achieving sales of at least...



Report Assumptions and Inventor(s) Commentary

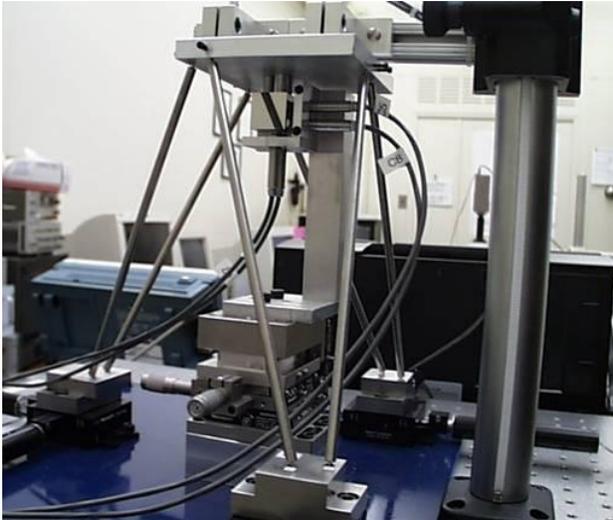
Inventor(s) Assumptions	"Most Likely" Estimate	Confidence	Inventor(s) Commentary Data Source or Basis for Assumptions
# of Possible Final Decision Makers	7,000	20%	Computer and Electronic Product Manufacturers, Optical equipment manufacturers, Biotechnology firms
Revenue per First Purchase	\$4,000.00	30%	For devices that offer less accuracy than what we offer, these are market prices.
% that will Repeat	N/ A	N/ A	
Number of Annual Repeats	N/ A	N/ A	
Revenue per Repeat Purchase	N/ A	N/ A	
Reseller (Trade) Margin	50%	30%	These devices are customarily available through resellers.
Producer Profit (EBITD)	30%	20%	The MEMS device would be SIGNIFICANTLY cheaper to produce, those margins could exceed 200%. The macro and mesoscale devices are monolithic and therefore cost to produce is less.

Innovation Status			
Development Status	2 of 5 Successful Prototypes		several working prototypes of different sizes and materials have been built and tested at the NIST Labs
Cost to First Sale (remaining)	\$100k-\$1M	30%	The device is ready for manufacture. All plans would be made available to licensee.
Time to First Sale (remaining)	6 mos-1 yr	30%	The device is ready for manufacture. All plans would be made available to licensee.
Confidence in Concept Claims made in description		50%	The patent claims were granted and the inventor is a world renowned expert.
Proprietary Protection Status	5 of 5 Granted Patent Claims		

Concept Score & Diagnostics						
 Merwyn Concept Score With Confidence Bands	Concept Diagnostics		Red	Yellow	Green	
	Percentile Group		Bottom 40%	Middle 40%	Top 20%	
Pessimistic 80% odds of at Least	Most Likely 50% odds of at Least	Optimistic 20% odds of at Least	Overt Benefit			
			Reason to Believe			
22%	32%	46%	Dramatic Difference			

Inventor Commentary & Alternative Development Scenarios
Inventor(s) Sales Goals

Minimum Goal	\$20,000	Current GOAL	\$30,000
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**Monolithic 3D Space Micro/ Nano Positioner
Capable of Translation and Rotation About XYZ
Axes**

Inventor(s) Commentary:
CURRENT SALES FORECAST

Sales & Marketing Support Level	Conservative 80% odds of selling	Most Likely 50% odds of selling	Aggressive 20% odds of selling
Ultra Low	\$0	\$1,100	\$7,100
Low Support	\$16,000	\$35,000	\$65,000
Medium Support	\$140,000	\$240,000	\$380,000
High Support	\$400,000	\$650,000	\$1.0 M
Ultra High	\$740,000	\$1.2 M	\$1.9 M

If MARKETING CONCEPT Improved

(Increase Concept Score by +20 Points)

Sales & Marketing Support Level	Conservative 80% odds of selling	Most Likely 50% odds of selling	Aggressive 20% odds of selling
Ultra Low	\$0	\$1,900	\$12,000
Low Support	\$28,000	\$58,000	\$100,000
Medium Support	\$250,000	\$400,000	\$610,000
High Support	\$700,000	\$1.1 M	\$1.6 M
Ultra High	\$1.3 M	\$2.0 M	\$3.0 M

If MARKETING CONCEPT and PRODUCT/ SERVICE Improved

(Increase Concept +20 Points, Repeat Rate & Number of repeats by 30% and Revenue per purchase 20%)

Sales & Marketing Support Level	Conservative 80% odds of selling	Most Likely 50% odds of selling	Aggressive 20% odds of selling
Ultra Low	\$0	\$1,900	\$11,000
Low Support	\$28,000	\$58,000	\$110,000
Medium Support	\$250,000	\$400,000	\$600,000
High Support	\$700,000	\$1.1 M	\$1.6 M
Ultra High	\$1.3 M	\$2.0 M	\$3.0 M

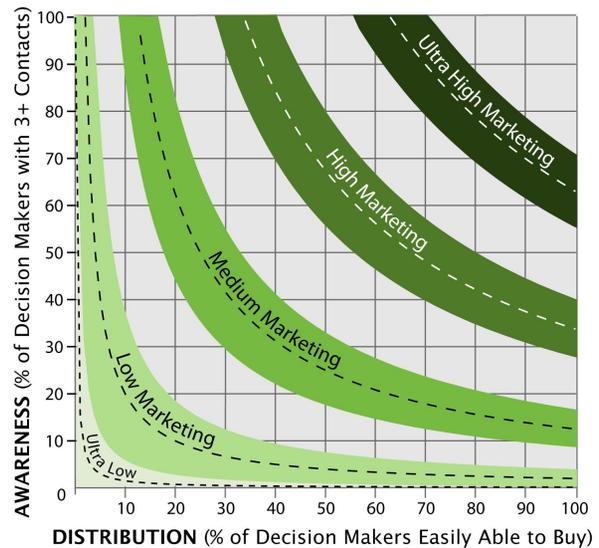


Additional Details

Fair Market Royalty (%)				
	Conservative - 80% Odds Royalty Percentage	Most Likely - 50% Odds Royalty Percentage	Aggressive - 20% Odds Royalty Percentage	
At CURRENT State & Status	3.3%	4.9%	6.7%	
Sales & Marketing Support Level	Annual Inventor Royalty Revenue			3 Year Value to Inventor If 50% Odds
	80% Odds	50% Odds	20% Odds	
Ultra Low Support	\$22	\$59	\$120	\$180
Low Support	\$360	\$790	\$1,400	\$2,400
Medium Support	\$2,700	\$5,300	\$8,600	\$16,000
High Support	\$7,600	\$14,000	\$23,000	\$43,000
Ultra High Support	\$14,000	\$27,000	\$43,000	\$80,000

Sales & Marketing Support Level Assumptions				
Sales & Marketing Support Level	Sample Numbers		% Aware x % Distribution (Aware & Able)	Inventor Estimate of Odds
	% Distribution	% Awareness		
Ultra Low Support (Word of Mouth)	5%	3%	0.2%	N/A
Low Support (Small Company)	20%	10%	2%	N/A
Medium Support (Medium Sized Company)	50%	25%	13%	N/A
High Support (Large Company)	75%	45%	34%	N/A
Ultra High Support (Mega or Niche)	90%	70%	63%	N/A

Graph of EQUIVALENT (Awareness x Distribution) Combinations



NAICS Industry Codes For This Invention
54171 - Research and Development in the Physical, Engineering, and Life Sciences
33461 - Manufacturing and Reproducing Magnetic and Optical Media
33441 - Semiconductor and Other Electronic Component Manufacturing
33429 - Other Communications Equipment Manufacturing
32541 - Pharmaceutical and Medicine Manufacturing

Patent Numbers that apply to this Product/ Service
6,484,602

Inventor(s) PEDIGREE	
Years EXPERIENCE in related industry	25
GRANTED Patents	5
Licensing Deals SIGNED	1
Innovations that have SHIPPED	4

For USA Patents: Utility Patent = 7 digit number, Design Patent starts with D, Planet Patent starts with PP. Provisional Application "61/ xxx,xxx", Non provisional application "12/ xxx,xxx", Design patent application "29/ xxx,xxx"

CAUTION: This Merwyn Business Simulation Research Report includes no warranty or guarantee. Results and opinions should be considered rough and directional in nature. This is because the report is based upon inventor-supplied data and simplified modeling methods. If you are looking to invest, distribute, purchase or become involved with this innovation, in any way, we strongly urge you to validate the inventor data and sales forecasts BEFORE committing yourself or your resources. Merwyn Research, Inc. shall not be responsible for any liability or damages arising out of the failure to perform such investigation and validation. Changes in the concept description, product, pricing, or input assumptions will almost certainly change results.



Additional Forecasts for Other Countries

Annual Sales - Probability Forecast - for Canada 			
Sales & Marketing Support Level	Conservative 80% odds of selling	Most Likely 50% odds of selling	Aggressive 20% odds of selling
Ultra Low	\$0	\$120	\$790
Low Support	\$1,800	\$3,800	\$7,200
Medium Support	\$16,000	\$26,000	\$42,000
High Support	\$44,000	\$72,000	\$110,000
Ultra High	\$82,000	\$140,000	\$210,000

Assumptions: exchange rate of \$1.00 US = \$1.01083 CAN; population of 33,390,141

Annual Sales - Probability Forecast - for United Kingdom 			
Sales & Marketing Support Level	Conservative 80% odds of selling	Most Likely 50% odds of selling	Aggressive 20% odds of selling
Ultra Low	£0	£110	£710
Low Support	£1,600	£3,500	£6,500
Medium Support	£14,000	£24,000	£38,000
High Support	£40,000	£65,000	£100,000
Ultra High	£75,000	£120,000	£190,000

Assumptions: exchange rate of \$1.00 US = £0.50458 UK; population of 60,776,238

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