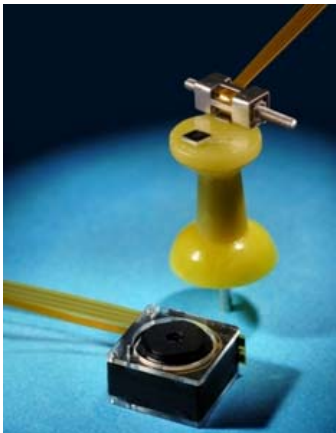


Products & Services



M3 micro-mechatronics modules – fully integrated motion systems including actuator, position sensor, guide mechanism, drive and control electronics and software.



Patented SQUIGGLE® micro motor – the world's smallest linear motor – with drive ASIC, (on top of push pin). **Custom UTAF™** ultra-thin auto focus module (in foreground).



TRACKER™ position sensor – the smallest, highest-resolution encoder available.



Custom product development including rotary piezo motors & ultra-small motion systems.

What We Do

New Scale Technologies is an innovation and micro-manufacturing company delivering ingeniously small motion systems. We serve worldwide markets for mobile products, medical devices, defense and security systems and industrial instruments. Our engineers and scientists use their deep understanding of micro-mechatronic and piezoelectric technologies to solve the most demanding customer problems. We combine our talents with the capabilities of our global strategic partners, who provide best-in-class integrated circuits, ceramic components and high-volume manufacturing.

Through direct customer engagements, continuous innovation and strategic partnerships, we deliver disruptively small, precise and low-power motion systems that enable our customers to create smaller, feature-rich products.

Core Technology and IP

Our products fill the gap between traditional motor systems (which have reached their miniaturization limits) and MEMS devices (which have extremely limited motion and force). Since 2002, we have been awarded six patents with more pending.

Using our **M3 micro-mechatronics module** platform, we integrate micro motors, sensors, drive and control electronics and robust packaging to create tiny application-specific motion modules, ready for integration into OEM products. Our patented **SQUIGGLE® piezo motor** is the world's smallest linear motor. Half the size of competing micro motors, it delivers ten times more precision and push force. Our patent-pending **UTAF™ (Ultra-Thin Auto Focus) piezo motors and modules** for phone cameras enable high-resolution images with camera thickness less than 5 mm. UTAF cameras easily fit in the thinnest mobile phones. Our **TRACKER™ position sensor** integrates a magnetic sensor with on-chip digital encoder, for smaller size and higher resolution than miniature optical encoders.

Development and Manufacturing Partners

- **austriamicrosystems** (www.austriamicrosystems.com) (SWX:AMS) is a minority shareholder and development partner for power-efficient motor controller ICs and precision magnetic sensors.
- **ALPS** (www.ALPS.co.jp) and **Tamron** (www.Tamron.co.jp) are licensed manufacturing partners, enabling high volume SQUIGGLE motor production.
- **TDK-EPC** (www.epcos.com) manufactures advanced piezoelectric ceramic components for our UTAF motors and reduced-voltage SQUIGGLE motors.

New Scale also has prototype and low- to mid-volume production capacity, including a micro-precision semi-automated manufacturing line for SQUIGGLE motors, at our 15,000 square foot technology center in Victor, NY.

Financial

New Scale received a \$6 million investment from austriamicrosystems (SWX:AMS) in a Series B equity transaction in 2008. Initially self-funded by its founders and a core group of employees, the company also received Series A funding in 2005 from local investors Trillium Group, Istria and the Rochester Angel Network.

Background

- Founded in 2002 by SQUIGGLE motor inventor David Henderson to capture emerging opportunities for smaller consumer products, automated biomedical instruments, and nanotechnology research.
- Located in Victor, NY (USA) with sales and high-volume manufacturing partners in the USA, Europe and Asia
- Employs 30 engineers and other professionals in research, development, manufacturing, sales and administration



Milestones

- 2002** Founded by David Henderson
- 2003** First products ship
- 2004** First SQUIGGLE motors ship
- 2005** First US patent issued for SQUIGGLE motor
Series A equity investment from Trillium and local angel investors
- 2006** “World’s smallest linear motor” debuts
Tamron licenses SQUIGGLE motor technology for use in tiny zoom modules for phone cameras
- 2007** Two additional US patents issued for SQUIGGLE motor
\$1M manufacturing expansion yields 10,000 motors/month capacity in Victor, NY
SQUIGGLE motor wins *EE Times* ACE award, *Design News* Golden Mousetrap award and *Small Times* Best of Small Tech award
- 2008** Series B equity investment from austriamicrosystems (SWX:AMS)
Additional license agreements with Tamron, ALPS and TDK-EPCOS
UTAF motor demonstrated.
First piezo motor driver ASIC introduced
TRACKER position sensor launched
- 2009** Named to “Best Companies to Work for in New York” list
Product innovations including rotary piezo motor, simplified mounting, improved drive electronics and higher-resolution position sensors
- 2010** Reduced voltage SQUIGGLE motor, smaller drive ASIC launched
M3 micro-mechatronic modules introduced
Second year on “Best Companies to Work for in New York” list

Management

- **David Henderson - founder, CEO & Chief Technology Officer**
David has more than 25 years of experience in engineering, technology innovation, new product introduction, worldwide market development and business operations. Before founding New Scale, he was director of positioning products at Burleigh Instruments (now EXFO). He has prior experience as program manager and mechanical engineer with Contraves USA. He has published or presented numerous papers and holds several patents including the patent for the SQUIGGLE motor. He has a BSME and an MBA from Carnegie Mellon University.
- **Ted Franceschi - CEO & Chief Development Officer**
Ted has more than 30 years of experience with start up, turn-around and blue chip companies. His numerous executive positions over 20 years with Toshiba America Electronic Components included senior VP responsible for the \$2.5B business unit. Subsequent entrepreneurial roles include CEO of Consequent Partners, COO of fabless semiconductor firm BTI and executive VP of SRS Labs. As Entrepreneur in Residence with High Tech Rochester, Ted has forged financial and commercial relationships for New Scale since 2005. He has a BS from the Rochester Institute of Technology.
- **Steve Mowers - Chief Financial Officer**
Steve has 25 years of experience in financial management. Prior to joining New Scale he was treasurer and VP of business planning at Choice One Communications. He has previous experience as controller for US operations with ACC (now ATT), and director of finance (Canada) and strategic planning (US) for Fisons Pharmaceuticals. He has additional financial experience with Computer Consoles and Sykes Datatronics. He has BS in Accounting from Rochester Institute of Technology and an MBA in Finance from the University of Rochester’s Simon School of Business.
- **Todd Haran - VP Engineering**
Todd’s leadership and effective collaboration with global strategic partners have driven New Scale’s product and technology innovations including smaller, lower-voltage micro motors; advanced ICs and fully integrated motion systems. He has prior experience developing precision motion systems at Burleigh Instruments, and as a structural analyst for combustion turbine development at GE Power Systems. He has a BSMET and an MBA with a concentration in computer integrated manufacturing and technology management from Rochester Institute of Technology.
- **David Simpson - VP Marketing and Sales**
Dave has 24 years of experience in sales, marketing and operations. Before joining New Scale, he was responsible for directing sales, marketing, engineering and channel resources for the company’s strategic partner, austriamicrosystems. His prior experience includes vice president of sales and marketing with Harris Corporation, director of sales for Temic Semiconductor (a division of Daimler Corp.), president of the collaboration business unit of E2open (an IBM Company), and IGC LLC. He has a BS from SUNY Brockport with dual concentrations in marketing and finance.

