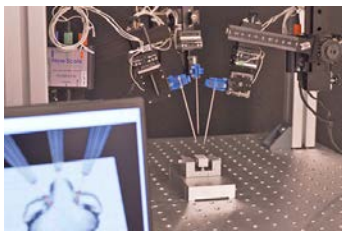


Products

NEW SCALE TECHNOLOGIES



M3 modules include **Linear and Rotary Smart Stages** for embedded motion in precision OEM instruments



M3 Smart Stages power our **MPM Multi-Probe Manipulator** for neuroscience research



Custom M3 modules enable smaller, smarter products

NEW SCALE ROBOTICS



Q-Span® Workstations automate dimensional gauging to improve quality and throughput in high-mix, small-batch manufacturing

Overview

The New Scale team creates and manufactures miniature motion systems that make our customers more competitive. We make small, precise, and smart motion modules that embed drive, control, and digital communications inside.

Our customers benefit from dramatically simplified integration, enhanced performance, and accelerated deployment, especially for OEM products, robotic automation, IoT and I4.0 applications. Our products are used by organizations that make medical instruments, smart phone cameras, extended reality devices, neural recording measurements, and automated metrology tools.

Our staff has decades of experience inventing and producing micro mechatronic systems that integrate precision mechanisms, microelectronics, and plug-and-play software.

Divisions

New Scale Technologies (NST)

Embedded Motion Modules Make Great Products Smaller

Founded in 2002, NST develops, licenses and manufactures standard and customized embedded motion modules that fit on your fingertips. These include rotary and linear smart stages that incorporate our patented and proprietary technologies: SQUIGGLE® and UTAF piezoelectric ultrasonic motors, position sensors, precision bearings, drive and control circuits, and microprocessors with closed-loop firmware that connect to New Scale Pathway® PC software.

Our M3 micro mechatronic modules require only battery power and high-level digital commands to produce sub-micrometer precision movements. M3 smart stages are easy for customers to integrate into wearable, handheld, portable and battery-powered products to move very small optics, produce haptic feedback, and miniaturize complex instruments. For example, we use our M3 stages to create multi-probe manipulator (MPM) systems for electrophysiology research. www.newscaletech.com

New Scale Robotics (NSR)

Automated Dimensional Gauging Elevates Quality Teams

Formed in 2018, NSR develops and manufactures robotic tools that automate dimensional metrology and make high-mix, small-batch manufacturing companies more competitive. Our Q-Span® Workstations elevate quality teams by improving skills, capacity, productivity, recruitment, and retention. These automated workstations integrate (1) collaborative robots from Universal Robots, (2) NSR smart gripper/calipers and other standard gages, and (3) teachable "plug-and-produce" software.

The resulting do-it-yourself (DIY) tools solve workforce challenges and automatically digitize inspection data. Real-time data logging improves process control and meets the most demanding customer requirements. www.newsclerobotics.com

Quality Systems and Certifications

Both the New Scale Technologies and New Scale Robotics divisions use **ISO 9001:2015** certified quality management systems.

The New Scale Technologies Division uses **ISO 13485:2016** certified quality management systems for the manufacturing of medical devices.



Milestones

- 2002** Founded by David Henderson
- 2003** First products ship
- 2004** First SQUIGGLE® motors ship
- 2005** First US patent (SQUIGGLE motor)
Series A equity investment
- 2006** Tamron licenses SQUIGGLE motor
- 2007** Two additional US patents and three industry innovation awards
- 2008** Series B equity investment
Additional license agreements
UTAF motor demonstrated
Single-chip driver ASIC introduced
- 2009** Rotary piezo motors demonstrated
- 2010** Reduced-voltage SQUIGGLE motor invented
First M3 Modules delivered
- 2011** UTAF focus module demonstrated by tier-one phone camera supplier
- 2012** Two additional IP licensees signed
10th anniversary, 10th US patent
- 2013** First custom micro beam steering solutions delivered
- 2014** First M3-FS and M3-LS smart motion modules delivered
15th US patent awarded
- 2015** Additional micro beam steering solutions
- 2016** 16th and 17th US patents awarded
Multi-Probe Micromanipulator (MPM) introduced
- 2017** Longer-travel, higher-load M3-LS Linear Smart Stage introduced
2,550 COBRA fiber positioners shipped
- 2018** **New Scale Robotics (NSR) launched**
NSR-PG Precision Gripper is UR certified
- 2019** 18th and 19th US patents awarded
Virtual Coordinate System software for MPM introduced
Series C Equity Investment, License and Development Agreement
- 2020** 21st patent (UTAF technology)
NSR introduces Q-Span® Systems, UR+ certified application kit for QC
- 2021** NSR is UR Certified System Integrator
- 2022** ISO 9001:2015 and ISO 13485:2016 certs
20th anniversary, 22nd US patent

Partners and Investors

New Scale is privately held entity.

- **Series A Investors (2005)** - Individuals and institutions from the greater Rochester, NY region.
- **Series B Investor (2008)** - ams (SWX: ams-OSRAM), a global leader in light emitters and optical components including micro-modules, light sensors, ICs and related software.
- **Series C Investor (2019)** - A strategic customer and license holder in the medical industry.
- **License Holders** (consumer and mobile) – Including ALPS Alpine, Tamron, and TDK-EPC.
- **NSR Partner** - Universal Robots (UR). NSR is a UR Certified System Integrator. Q-Span Workstations are certified UR+ Application Kits.

Management

- David A. Henderson, CEO & Founder
- Bruce Hayward, COO
- Rauni English, Controller
- Qin Xu, Ph.D., VP Engineering
- Jason Austin, Manufacturing Manager
- Tammy VanTassel, Materials Manager
- Steve Jackson, Quality Manager
- Stefan Friedrich, Marketing Manager
- Fred Haas, NSR Sales Manager

Board of Directors

- David A. Henderson, Director & Chair
- Allison Leet, Corporate Secretary
- Bruno B. Glavich, Director
- Jacob Jacobsson, Director
- Peter Loeppert, Ph.D., Director
- Geoffrey H. Rosenberger, Director
- Carl Vause, Director

Highlights

Design, manufacturing, marketing, sales and support located in Victor, NY USA (near Rochester)

World-wide sales and distribution network

More than 20 US patents for piezoelectric motors and mechatronic systems

IP licensed to consumer and medical partners

Full on-site capabilities to design and build mechatronic motion modules

Standard products

Custom products

ISO 9001:2015 and ISO 13485:2016 certifications

Certified System Integrator for Universal Robots

