

Bring the challenge. We'll build the solution.

Solving complex engineering challenges in a global market, Celera Motion advances the field of precision motion. Our integrated mechatronic solutions and components solve application-specific challenges for technology-driven original equipment manufacturers (OEMs) around the world to help enhance and improve people's lives.

Derived from the latin word *celer* for quick and swift, the name Celera reflects our commitment to delivering solutions that accelerate our customers' success. Celera Motion's cohesive vision, superior technologies, consultative team approach, and best-in-class reliability make us the trusted partner in solving your most challenging precision motion problems.

Celera Motion is part of Novanta (NASDAQ: NOVT), a leading global supplier of precision photonic and motion technologies to OEMs in medical and advanced industrial markets.

› Visionary › Innovative › Expert › Trusted



We're growing to
better accelerate
your innovations.

Westwind launched the air bearing paint spraying spindle in 1980, and solidified their position as the world's leading air bearing technology designer and manufacturer

2000

MicroE Systems launched a series of encoders—Mercury™, ChipEncoder™, and Mercury II™—that set a new standard for miniature precision optical encoders

2003

In 2003, Westwind became part of Novanta, continuing to deliver world leading innovation and service to the microelectronics, semiconductor, robotics, and precision manufacturing markets

2004

Zettlex was founded in 2004, with a focus on manufacturing non-contact sensors

2013

In 2013, Ingenia launched the Base Series—Pluto servo drive—a compact, modular design with drag-and-drop programming capability

2015

In 2015, MicroE Systems and Applimotion—two companies with a rich history of delivering cutting-edge precision motion technologies—**came together to form Celera Motion**

2017

In 2017, Celera Motion expanded and highlighted its line of comprehensive mechatronics to deliver customized, highly integrated solutions for unique specification requirements

2018

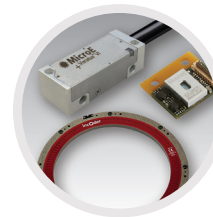
Zettlex expanded their range of shaft inductive IncOders™ to offer unprecedented resilience to shock, vibration, dirt, fluids, high pressures, and extreme temperatures

In 2018, with the acquisition by Novanta, Zettlex joined Celera Motion—expanding the product line offerings to provide inductive absolute encoders

2019

Westwind is welcomed into the Celera Motion family of product lines to provide integrated solutions and precision motion expertise from one single manufacturer

In 2019, with the acquisition by Novanta, Ingenia joins Celera Motion—delivering servo drives and enhancing the motion control solutions





VISIONARY

Advancing the future of precision motion to enhance people's lives.

Our customers are committed to creating some of the world's most complex machines and instruments to help enhance the lives of others. They are solving the world's challenges in healthcare, life sciences, metrology, satellite communications, robotics, and numerous other advanced industrial and scientific applications.

We share their commitment, working in partnership to design and build comprehensive precision motion solutions that deliver best-in-class performance. We constantly develop new approaches, products, and technologies to help our customers deliver better outcomes.

› Motion Control Solutions › Thought Leadership › Best-in-class Technology



Extensive expertise in a range of applications

Medical Robotics

Surgical
Device Packaging
Pharmacy Automation

Medical Devices

Dental CAD/CAM
Ophthalmic Diagnostic & Surgery
Diagnostic Imaging
Precision Pumps
Radiation Therapy

Laboratory & Diagnostics

Surface Sciences
Life Sciences
Laboratory Automation
Analytical Instruments
In Vitro Diagnostics

Metrology

Coordinate Measuring (CMM)
Optical Digitizing & Scanning
Scanning & Inspection

Satellite Communications & Surveillance

Communications Control
Antenna Control
Camera & Video Control

Robotics

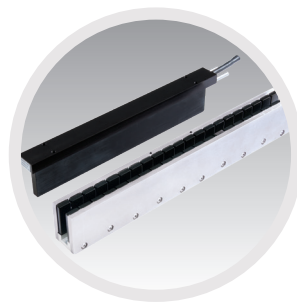
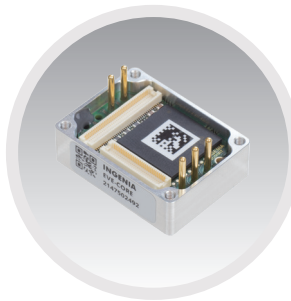
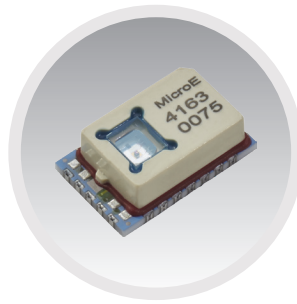
Mobile & Warehouse
Autonomous Vehicles
Collaborative
Precision Automation

Semiconductor Equipment

Lithography
Ion Implantation
Etch, Chemical &
Physical Vapor Deposition
Assembly & Wire Bonding
Test & Inspection
PCB Assembly
Wafer Grinding & Dicing

Industrial

Precision Machining Spindles
Rotary Atomizing Spindles
PCB Drilling and Routing Spindles





INNOVATIVE

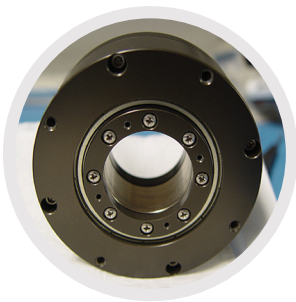
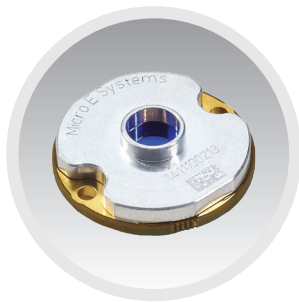
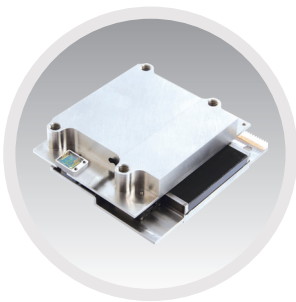
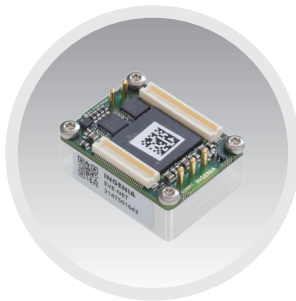
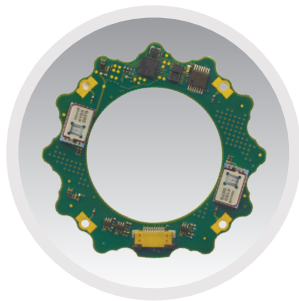
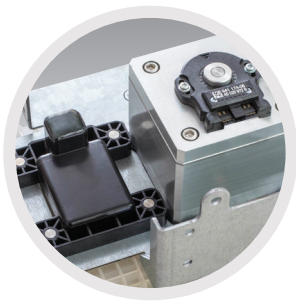
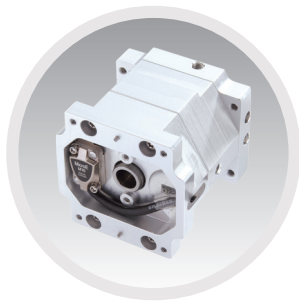
Blending technical expertise with integrated world-class products and technology, we develop optimized solutions for demanding real-world applications.

In today's medical and advanced manufacturing markets, it can be a challenge to continually improve performance and productivity while simultaneously reducing complexity.

To help you meet that challenge, we combine miniature precision encoders, direct drive motors, compact servo drives, and the latest technologies to deliver unparalleled results. We give you the ability to consult directly with our engineers to design specific, custom solutions that meet your applications' technical requirements. We are constantly investing in finding new ways to create solutions and products that are smaller, smarter, and simpler.

› Application-Specific Solutions › Increased Performance › Reduced Complexity





Customization & integration

Benefits

Responsive Solutions
Engineering

Lightweight & Compact
Form Factors

Integration of Drive
Electronics, Bearings,
Brakes, Clutches, Gearing,
and Precision Mechanics
with Applimotion Motors,
Ingenia Servo Drives,
MicroE & Zettlex Encoders,
and Westwind Air
Bearing Spindles

Easier Implementation

Reduced Supplier
& Component Count

Lower Overall Cost

Deliverables

Integrated Mechatronic
Solutions

Value-Add Encoder
Assemblies

Custom Frameless Motors

Compact Servo Drives

Air Bearing Spindles

Linear Stages

Gimbals

Rotary Stages

Gantry Systems

Rotary Positioners
& Indexers

Linear Positioning Stages

Robot Arm Joints
& Manipulators

Cartesian Robots

Traction Drives

Pumping Systems

PCB Drilling and Routing

Rotary Atomizing

Delivering a complete mechatronics solution— from concept through serial production.

Celera Motion Mechatronics

We know that no two motion control challenges are alike. We customize each mechatronic solution with the latest advanced technologies for your project's specific application requirements. Our mechatronics engineering group is renowned for seamlessly fusing product and technology to create optimized solutions. Every project is driven through our rigorous testing protocol to ensure our products deliver repeatable, reliable performance. From prototype through serial production, our team leaders integrate up-to-the-minute practices, unparalleled experience, and our core encoder and motor components to help shape the future of motion control.

- › Robotic Joints
- › Gimbal Systems
- › Customized Rotary Stages
- › Customized Linear Stages (X/Y/Z/Theta)

Our best-in-class components consistently define performance and efficiency.



MicroE Encoders

MicroE products are built with PurePrecision™ and VeraPath™ technologies. The MicroE miniature precision optical encoders are available in several form factors and mounting options, with incremental and absolute interfaces and resolutions up to 1.2 nm. A wide selection of rotary and linear scales are available, delivering accuracy up to 1 µm.



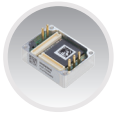
Zettlex Encoders

Zettlex inductive encoders have a solid track record in demanding applications such as industrial machinery, satellite communications, unmanned autonomous vehicles, and marine equipment. These inductive encoders come in a variety of specifications, including size, resolution, mount, and housing material.



Applimotion Motors

The Applimotion direct drive motors and actuators are the product of unparalleled application expertise and performance-driven design. Optimized solutions range from direct drive motor components to fully engineered, validated, and tested products and value-add assemblies.



Ingenia Servo Drives

The Ingenia brand provides original equipment manufacturers (OEMs) with customized motion control solutions including high performance, high-power servo drives and control software for most motor technologies: servo motors (DC brush and brushless). Advanced features include field buses (CANopen, EtherCAT, Ethernet/IP), sinusoidal commutation, field oriented control, advanced PID filters and more.



Westwind Air Bearing Spindles

Westwind air bearing spindles have been market leaders for over 50 years due to constant product innovation and development. All spindles feature high precision, high rotational speed, and robust design for long product life.

- › Miniature Precision Optical Encoders
- › Robust Inductive Encoders
- › Direct Drive Rotary & Linear Frameless Motors, Actuators
- › Compact Servo Drives
- › Air Bearing Spindles

MicroE | Optical Encoders | Tape & Glass Scales | Custom Solutions



Optira™ Series

Dimensions: 13 x 11.4 x 3.7 mm
Resolution: 5 µm – 5 nm (Linear)
2,000 CPR – 75M CPR (Rotary)



ChipEncoder™ Series

Dimensions: 11 x 7 x 3.1 mm
Resolution: 10 µm – 1 µm (Linear)
3,300 CPR – 327K CPR (Rotary)



Mercury™ Series

Dimensions: 15.3 x 12.7 x 5.6 mm
Resolution: 5 µm – 0.5 µm (Linear)
6,600 CPR – 655K CPR (Rotary)



Veratus™ Series

Dimensions: 35 x 13.5 x 10.2 mm
Resolution: 5 µm – 20 nm (Linear)



Mercury II™ Series

Dimensions: 22.6 x 12.7 x 8.2 mm
Resolution: 5 µm – 1.2 nm (Linear)
20K CPR – 268M CPR (Rotary)



Mercury II™ High Vacuum Series

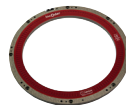
Dimensions: 22.6 x 12.7 x 8.1 mm
Resolution: 5 µm – 1.2 nm (Linear)
20K CPR – 268M CPR (Rotary)

Zettlex | Inductive Absolute Encoders | Custom Solutions



IncOder™ Series – Mini Range

Outer Diameter: 37 & 58 mm
Resolution: 1,024 – 131K CPR
Communications: SSI, BiSS-C, SPI, ASI
& A/B/Z pulse



IncOder™ Series – Maxi Range

Outer Diameter: 325 to 595 mm
Resolution: 1,024 – 4.19M CPR
Communications: SSI, BiSS-C, SPI & ASI



Ultra IncOder™ Series – Midi Range

Outer Diameter: 75 to 300mm
Resolution: 131K to 4.19M CPR
Communications: SSI, BiSS-C, SPI, ASI
& A/B/Z pulse



LinTran™ Inductive Linear Encoders

Full Scale: 200 to 800 mm
Resolution: 0.025% full scale
Communications: 4-20mA & 0-10V



IncOder™ Series – Midi Range

Outer Diameter: 75 to 300mm
Resolution: 1,024 – 4.19M CPR
Communications: SSI, BiSS-C, SPI, ASI,
A/B/Z pulse & 0-10V



Shaft IncOder™ Series

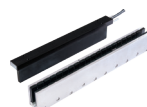
Outer Diameter: 58mm
Resolution: 1,024 – 131K CPR
Communications: SSI, BiSS-C, SPI, ASI
& A/B/Z pulse

Applimotion | Direct Drive Rotary & Linear Frameless Motors | Direct Drive Actuators | Custom Solutions



Omni™ Series Rotary Torque Motors

Peak Torque: Up to 579 Nm
Outer Diameter: 25 to 355 mm
Speed: Up to 5,000 rpm



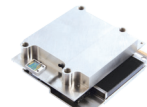
Javelin™ Series Linear Motors

Peak Force: Up to 420 N
Speed: Up to 24 m/s
Construction: Single & Double Sided



Agility™ Series Slotless Rotary Motors

Peak Torque: Up to 45 Nm
Outer Diameter: 19 to 292 mm
Speed: Up to 7,000 rpm



Juke™ Series Voice Coil Motors

Peak Force: Up to 175 N
Designs: Linear, Rotary, Angle
Configurations: Flat Body, Circular Body



Infinity™ Series Arc Motors

Peak Torque: Up to 190 Nm
Outer Diameter: Unlimited
Construction: Low Profile



OmniRH™ & AgilityRH™ Rotary Actuators

Torque: Up to 0.3 Nm
Frame Size: NEMA23, 16.5 mm through hole
Speed: Up to 4,400 rpm



Everest Series - XCR

Dimensions: 42.1 x 29.1 x 23.1 mm
Voltage: Up to 72 VDC
Current: Up to 60 ARMS
Mounting Type: Panel Mount
Communications: CANopen, EtherCAT



Everest Series - NET

Dimensions: 34.5 x 26 x 15 mm
Voltage: Up to 72 VDC
Current: Up to 60 ARMS
Mounting Type: PCB Mount
Communications: CANopen, EtherCAT



Everest Series - Core

Dimensions: 34.5 x 26 x 10.4 mm
Voltage: Up to 72 VDC
Current: Up to 60 ARMS
Mounting Type: PCB Mount
Communications: SPI



Base Series - Triton Core

Dimensions: Plug-in 43 x 43 x 15.9 mm
Continuous: 5.6 ARMS
Current: 6.5 ARMS
Peak Current: 6.5 ARMS
Supply Voltage: 8-48 VDC



Base Series - Triton Go

Dimensions: 43 x 45 x 23.6 mm
Continuous: 5.6 ARMS
Current: 6.5 ARMS
Peak Current: 6.5 ARMS
Supply Voltage: 8-48 VDC



Base Series - Jupiter

Dimensions: 100 x 100 x 26 mm
Voltage: Up to 130 VDC
Current: Up to 80 ARMS
Communications: EtherCAT, CANopen, USB



Base Series - Neptune

Dimensions: 40 x 40 x 15 mm
Voltage: Up to 48 VDC
Current: Up to 5 ARMS
Communications: CANopen, USB, RS232



Base Series - Pluto

Dimensions: 60 x 60 x 15 mm
Voltage: Up to 48 VDC
Current: Up to 16 ARMS
Communications: CANopen, USB



Base Series - Nix

Dimensions: 75 x 60 x 14 mm
Continuous: 10 ARMS
Current: 20 ARMS
Peak Current: 20 ARMS
Supply Voltage: 10-170 VDC
Communications: CANopen, USB, RS485



PCB Drilling & Routing Series Spindles

Speed: Up to 300,000 rpm
Power: 100 to 750 Watts



Light Industrial - Precision Machining Series Spindles

Speed: Up to 125,000 rpm
Power: Up to 750 Watts



Coating Atomizer Series Spindles

Speed: Up to 70,000 rpm
Bell Cup Diameters: 30-80mm



Linear Slide Series Spindles

Stroke: Up to 300 mm
High Vacuum Applications



Advanced Material Processing Series Spindles

Speed: Up to 60,000 rpm
Power: Up to 4kW



EXPERT

Integrating world-class knowledge, core components, and trusted experience—we offer unparalleled engineering solutions and exceptional customer support.

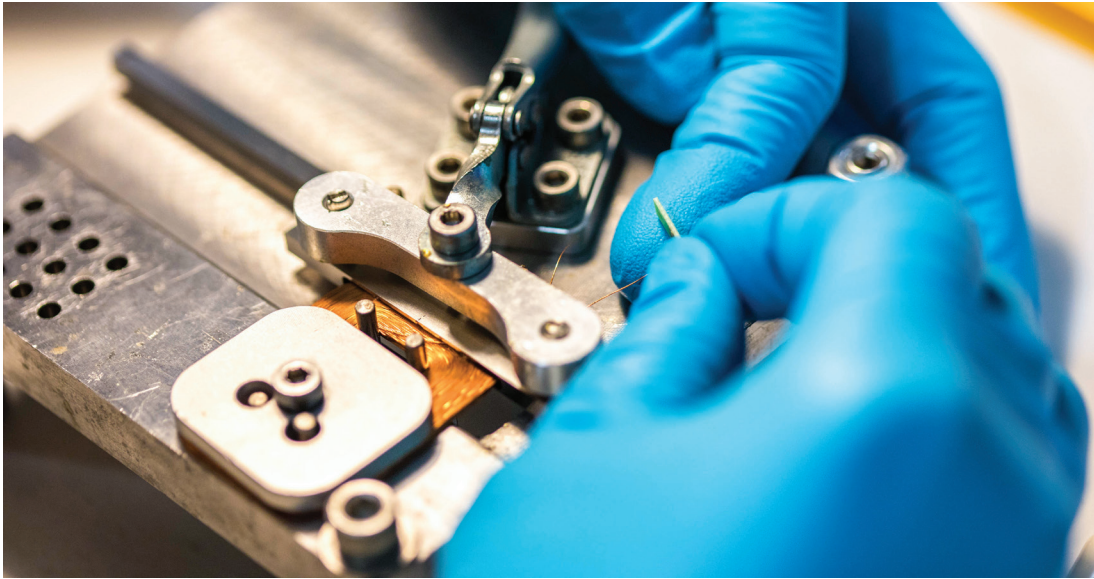
Celera Motion helps you efficiently deliver results on time and on budget. The key to our success is a global team of experienced and customer-focused professionals who pride themselves in delivering precision motion solutions that achieve the best possible results.

Count on us to provide close technical support throughout your entire project. Together, we'll establish form, fit, function, and performance targets for your project. During product design and production phases, our experienced applications engineering team and our web-based resources are available to you.

Our worldwide Celera Motion technical and commercial engineering teams are dedicated to helping you address your most challenging motion control requirements.

› Innovative Product Development › Responsive Solutions Engineering







TRUSTED

Celera Motion is the global partner of choice for precision motion control solutions.

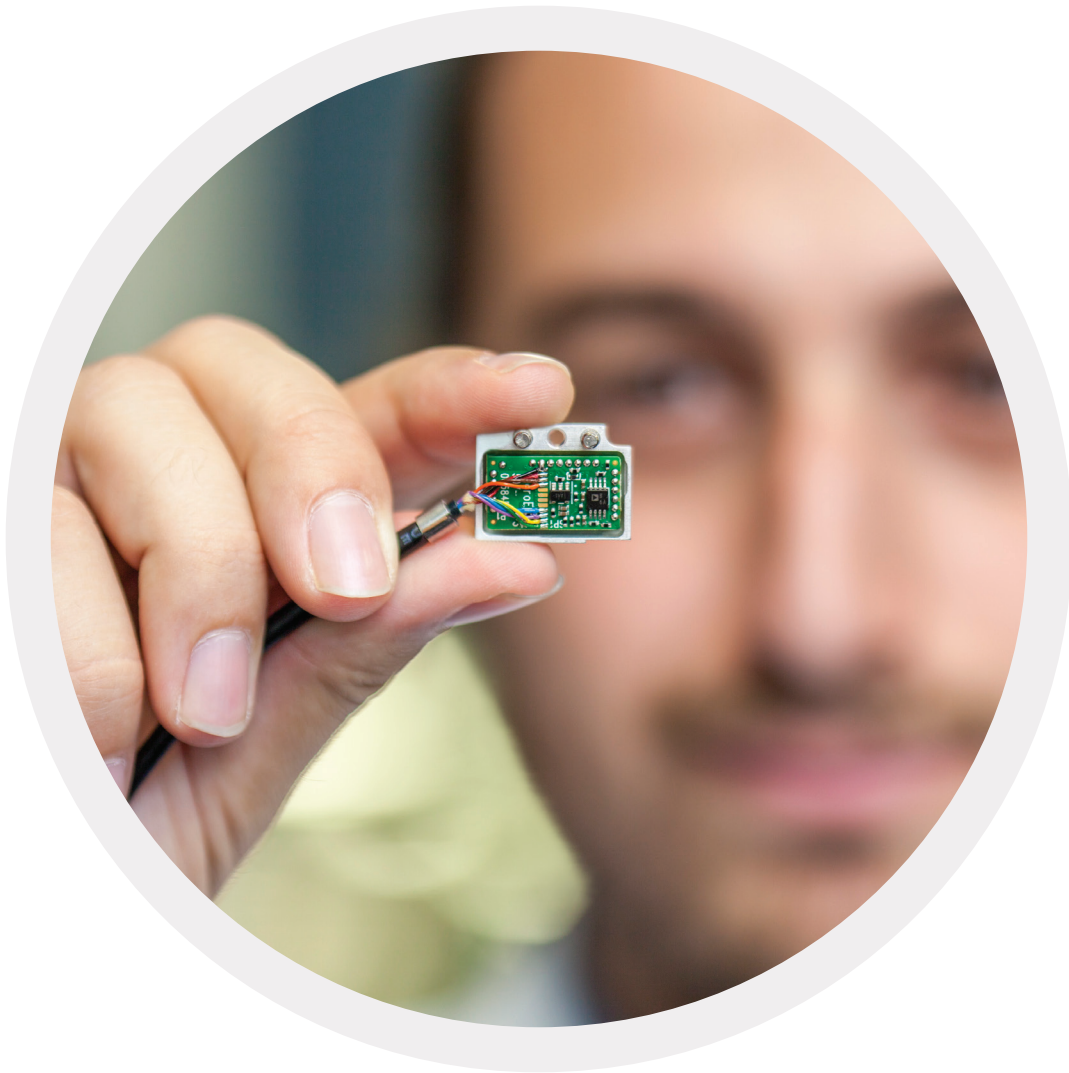
As a Novanta company, Celera Motion's global footprint positions us to serve you wherever support is needed. We're more than a supplier of best-in-class products. You can count on us as a trusted partner.

We know that engineering a solution is only the first step. We enable our customers to gain a competitive edge with fast prototyping, domestic and off-shore manufacturing, and the consistent delivery of high-quality solutions. Our in-house serial production capabilities include in-depth experience with supply chain and logistics management, as well as ISO 9001 and ISO 13485 quality management systems.

Discover how our visionary approach, innovative products, and industry expertise can accelerate your innovation today.

➤ Application-Specific Solutions ➤ Increased Performance ➤ Reduced Complexity







› 781.266.5200 › celeramotion.com › innovation@celeramotion.com