

ESSI SINGLES



Optimized wheel-drive systems

The New Hub Wheel Gear Motor

The **Hub Wheel Gear Motor+ ZED 65** is a cutting-edge driving solution engineered for mobile robotics, delivering high efficiency in a compact design. With an ultra-short motor and an integrated gearbox, this system optimizes space while maintaining exceptional performance. Its innovative bearing design enhances durability and enables higher loads and speeds, making it an ideal choice for AGVs, AMRs, and other mobile platforms requiring performance and reliability.



- **Higher Speeds & Efficiency** Optimized bearings enhance traction, enabling faster, smoother robot operation.
- ■Compact Design Integrated gearbox reduces system length, maximizing efficiency in confined spaces.
- Easy Maintenance Quick-access brake design allows for rapid replacements, minimizing downtime.
- Seamless Integration Compatible with ZED 65 servo drive for precise motion control and improved performance.
- Reliable & Durable Designed for long service life and high energy efficiency, ensuring consistent performance in demanding environments.

Functional Safety. Simplified. Integrated

STXI Motion's **TIM Integrated Motors and ZED 65 Drive** deliver advanced functional safety with a fully integrated Safe Motion Module, ensuring precise, reliable protection for mobile robots and automation systems. Going beyond Safe Torque Off (STO), the module includes a full suite of safety functions—such as Safe Stop, Safely Limited Speed, and Safe Direction—designed to meet IEC 61800-5-2 standard. With Safety over EtherCAT (FSoE), this solution eliminates the need for additional wiring, reducing complexity while maintaining high-performance motion control in space-constrained environments.

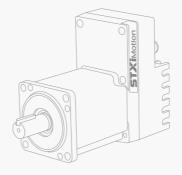


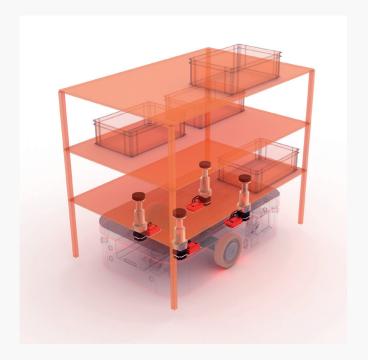


Safe Motion Module supported functions:

Safe Torque Off (STO) | Safe Stop 1 (SSI-t, time-controlled) | Safe Brake Control (SBC) | Safe Stop 1 (SSI-r, ramp-monitored) | Safe Stop 2 (SS2-r, ramp-monitored) | Safe Operating Stop (SOS) | Safely Limited Speed (SLS) | Safe Brake Test (SBT) | Safe Speed Monitor (SSM) | Safe Direction (SDI)

Customized motion from head to wheel







Lifting mechanism with drives and motors

Distributed motion control with servo drives and servo motors to achieve smooth actuation for rack and pallet lifting applications.

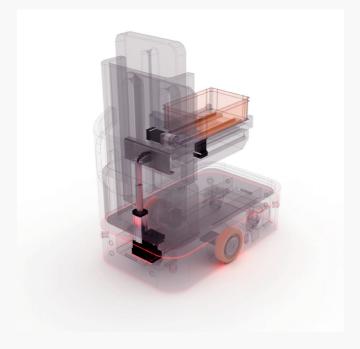
Centralized elevation with integrated actuators

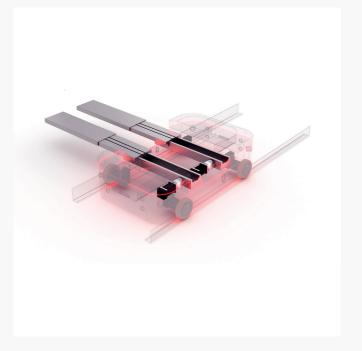
Using TIM integrated servo motors combined with a linear actuator to control a scissor lift mechanism.

Our products and solutions are used in a wide range of applications, accommodating the increasing demand for multiple axes and application flexibility in mobile robots. In addition to the traction axes, STXI's drives and motors are used for lifting mechanisms and other auxiliary motion axes, such as rotating units and telescopic manipulators.

Fast and Agile Product Modifications

Our products allow diverse configurations, including brake and planetary gear options and different mechanical variants, allowing flexibility in the positioning and orientation of the electronics and connectors.





Fork, tilt and lift axes

TIM Integrated servo motors control the rotating box picking unit. Also suitable for load handling attachments and mobile robot arms.

Telescopic Manipulators in shuttle systems

Integrated gearmotors are an ideal solution for actuating telescopic axes and in a variety of shuttle systems/ASRS applications.

SERVO DRIVES



ZED 15 Low Voltage Servo Drives

- Current (cont./peak): 12/40 A rms
- ■Voltage: 24 VDC



ZED 25, 30 Low Voltage Servo Drives

- Current (cont./peak): 20/70 A rms
- Voltage: 24/48 VDC



ZED 65 Low Voltage Servo Drives

- Current (cont./peak): 45/135 A rms
- Voltage: 48 VDC

SERVO MOTORS AND GEAR MOTORS



MOT-PM **Low Voltage Servo Motors**

- Power: 50 W 3 kW
- Rated torque: 0.16-9.55 Nm
- Rated speed: 3000-3200 rpm
- Voltage: 24/48 VDC



TIM-SG **Integrated Gear Motors**

- Power: 200 800 W
- Rated torque: 6.4-64 Nm
- Rated speed: 75-3000 rpm
- Voltage: 24/48 VDC



MOT-SG Gear Motors

- Power: 200 800 W
- Rated torque: 6.4-64 Nm
- Rated speed: 75-3000 rpm
- Voltage: 24/48 VDC

INTEGRATED MOTORS



Integrated Servo Motors

- Power: 200 800 W
- Rated torque: 0.64 2.55 Nm
- Voltage: 24/48 VDC



stepIM **Integrated Stepper Motors**

- Nema 17,23,34. Stack 1-3
- Holding torque: 0.35-7.7 Nm
- Rated speed: 1000 rpm
- Voltage: 14-75 VDC

WHEEL HUB GEAR MOTORS



TIM-GT **Wheel Hub Integrated Gear Motors**

- Power: 200 800 W
- Rated torque: 5.3-45 Nm
- Rated speed: 133-3000 rpm
- Voltage: 24/48 VDC



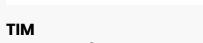
MOT-GM **Wheel Hub Gear Motors**

- Power: 200 3 kW
- Rated torque: 5.3-36 Nm
- Rated speed: 151-3000 rpm
- Voltage: 24/48 VDC



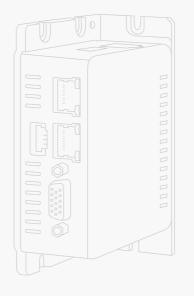
MOT-HM **Wheel Hub Gear Motors**

- Power: 1.4 kW
- Rated torque: 45.7 Nm
- Rated speed: 300 rpm
- Voltage: 48 VDC



- Rated speed: 3000 rpm

Motion solutions that drive our customers forward





Decentralized motion solutions for the traction and auxiliary axes of both lift and cart robots, used in goods-to-person order fulfillment. The specific design of the mechanical interfaces facilitated a seamless integration process.

In addition, the robust wheel-drive system is tolerant to the high shock and vibration caused when driving over bumps and uneven flooring.





Mobile transport robots

Sturdy wheel-drive motion system with high power density. Suitable for operation in harsh environments and on rough floor surfaces. The optimized servo motor with planetary gear enables a high starting torque and smooth operation over a wide speed range.



temperatures

Shuttle systems / ASRS

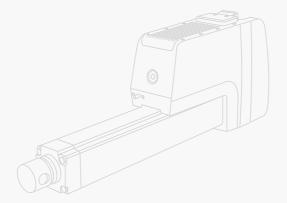
A ruggedized and food-grade servo solution for a shuttle system in pallet storage and handling operation.

The comprehensive operational temperature range permits the use in refrigerated warehouses.



Engineering. Made better.

With unmatched industry know-how and over 35 years of experience using the most innovative technologies, STXI offers smart, flexible, and cost-effective motion solutions, precisely designed for peak performance, seamless integration and optimal efficiency.



Smart Actuation

An end-to-end solution, providing a complete integrated axis. Combining integrated motors, a gearbox or actuator, and a brake- with one part number and one ownership, creating a fully-functional smart actuation solution.

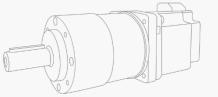


Custom Electronics

Combining extensive knowhow and field-proven software and hardware building blocks, we provide fast and accurate development of the ideal solution for your motion challenges. From minor modifications to full customization, we integrate any peripheral functionalities required to simplify and optimize your design.



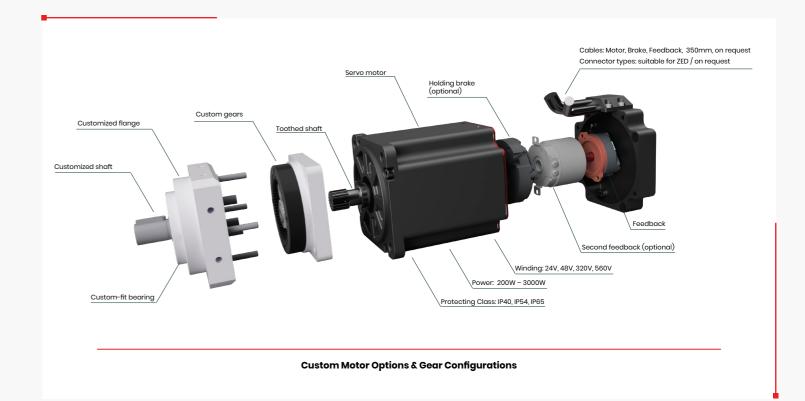
Tailored Motion. **Endless Possibilities.**



Custom Gearmotor Solutions

Fast, flexible configurations with custom gears, brakes, and encoders, combining a wide range of motor and gearbox options to match specific performance requirements.

With seamless integration, engineers can optimize torque, speed, and efficiency for the most demanding motion challenges.







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