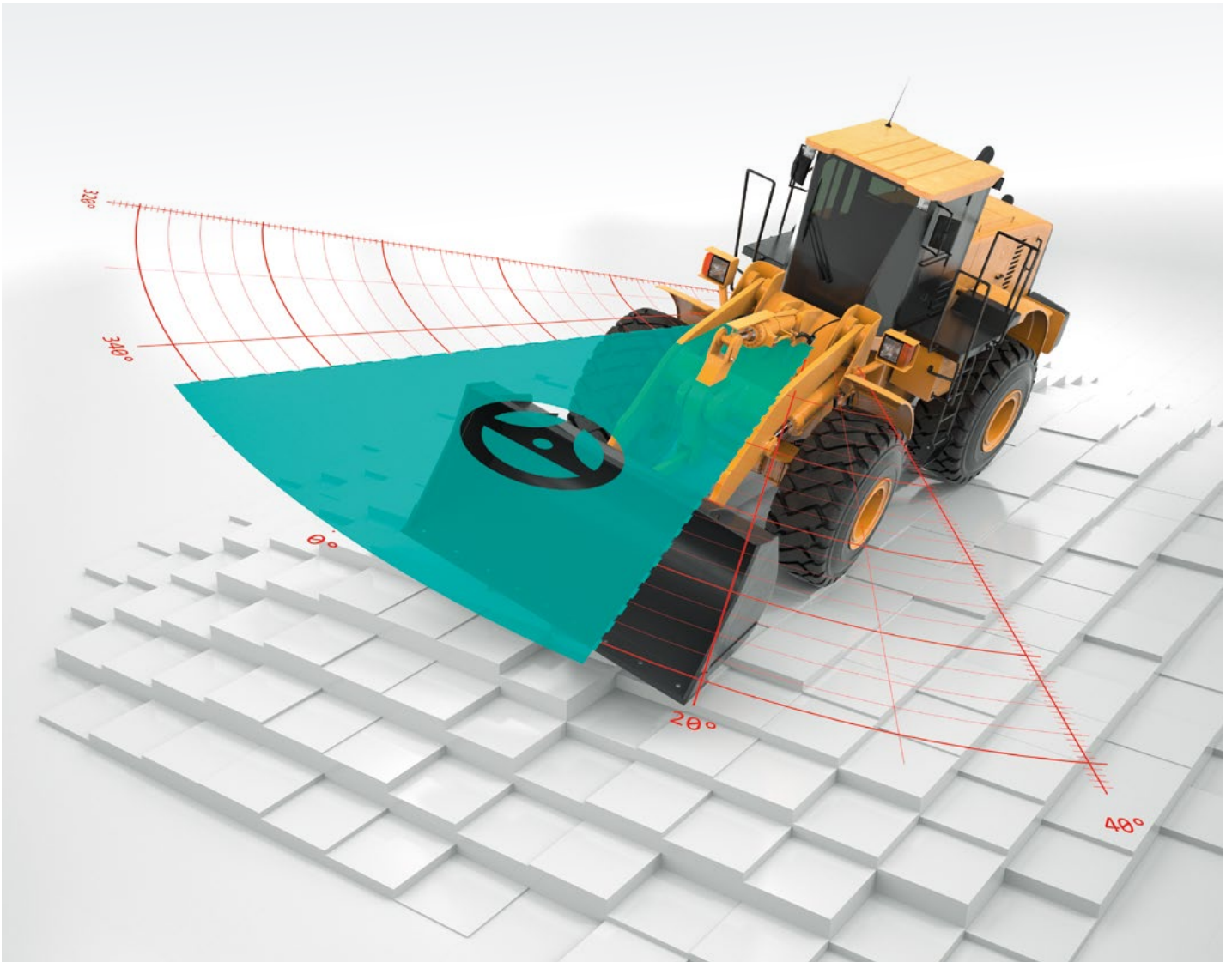


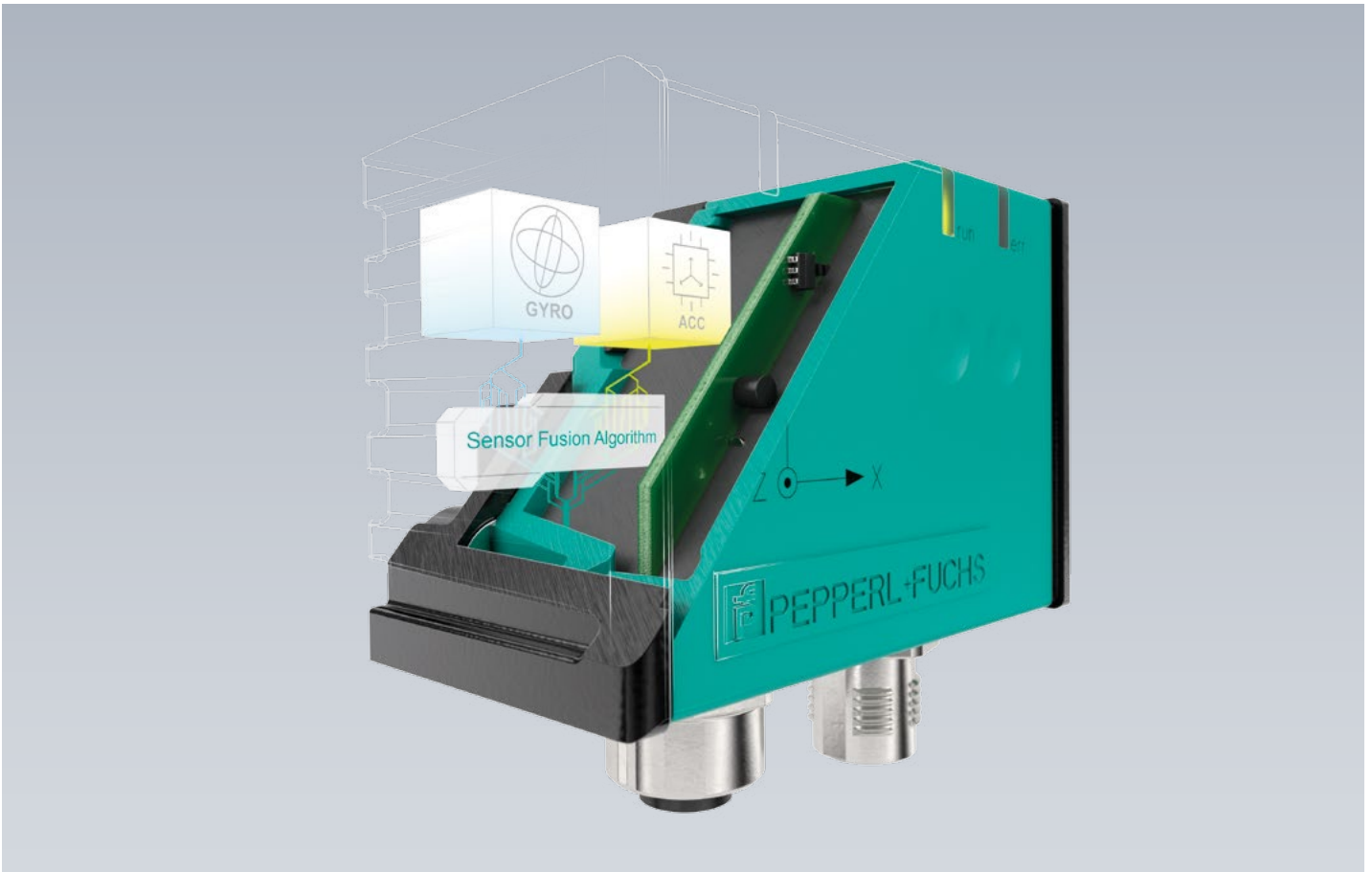
Steering-Angle Limit on Inclines

Reliable Inclination Monitoring on Applications in Motion

The Application

Monitoring inclination on large vehicles such as wheel loaders and dump trucks is necessary to prevent damage or injury. If these machines are used on uneven or steep surfaces, a sharp turning angle in an inclined position can cause the vehicle to tip over. The risk is greatest for vehicles with a small turning radius.





The Goal

The sharper the steering angle of a vehicle, the higher the risk of an accident. Therefore, the steering angle has to be limited based on the vehicle's inclination. To do this, the vehicle's overall inclination has to be reliably monitored, even when there is multidirectional motion. External influences like changes in speed or direction should not affect measurements.

The Solution

The F99-Fusion inertial measurement unit is used to measure vehicle inclination. Its ability to compensate for external acceleration that occurs during braking, acceleration, or when driving around curves makes it the perfect solution. An intelligent combination of an acceleration sensor and a gyroscope, the F99-Fusion compensates for external acceleration and enables high-precision inclination measurement. This allows the steering angle to be regulated and the vehicle to be kept upright.

The Benefits

An intelligent Sensor Fusion Algorithm allows the F99-Fusion inertial measurement unit to reliably measure inclination, even when there is dynamic movement. Specially developed for outdoor use (IP68/69K) and use on public roads (E1 approval), it helps keep personnel and equipment safe.

At a Glance

- Compensation of multidirectional acceleration enables quick, precise, and dynamic inclination measurement
- Variety of measurement outputs for complete application flexibility
- IP68/69K rating and protective mounting bracket provide maximum durability for outdoor use
- E1 and GL approvals allow a wide range of applications, including off-road and marine

For more information, visit:
www.pepperl-fuchs.com/f99-fusion