

KVASER

Advancing connectivity



Kvaser Edge

Rugged, Reliable, **Ready**

What is Kvaser Edge?

The Kvaser Edge is a secure, rugged ARM-based Linux computer tailored for demanding real-time data acquisition, edge analytics and seamless cloud integration, all within a compact form factor.

Beyond its robust hardware, the Kvaser Edge offers flexibility through our containerized software architecture, Kvaser OS (KEOS) ensures secure isolation. You can choose your Linux distribution, use apps for data processing, and retain full control of your data and intellectual property. This makes Kvaser Edge ideal for proof-of-concept testing or scalable production.

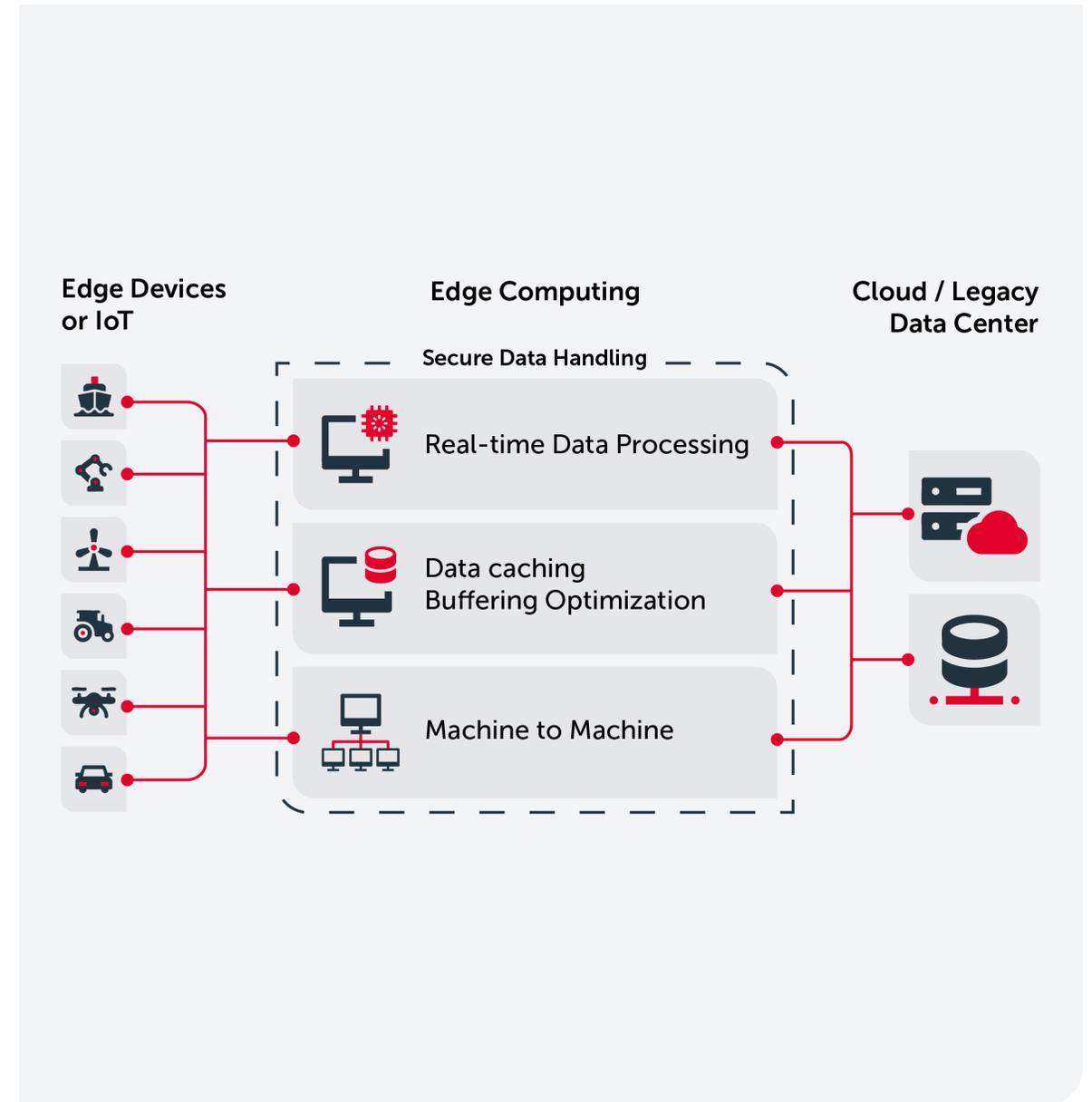
An Edge computer that:

Connects with edge devices using:

- CAN FD
- Ethernet/TSN
- WiFi
- Bluetooth

And with cloud servers using:

- Ethernet
- WiFi
- LTE/4G



Benefits of Kvaser Edge

Reduced Latency

- Edge computing processes data locally, minimizing delays caused by sending data to distant cloud servers.

Bandwidth optimizations

- Only relevant information is sent to the cloud, reducing network congestion.

Improved Reliability

- System can continue functioning even when the cloud connectivity is lost.

Enhanced Security & Privacy

- Protects your data in a contained environment, preventing system-wide risks.

Lower Cloud & Infrastructure Cost

- Processes data and applications locally on Kvaser Edge, reducing reliance on costly cloud servers.



Kvaser Edge

Rugged and secure

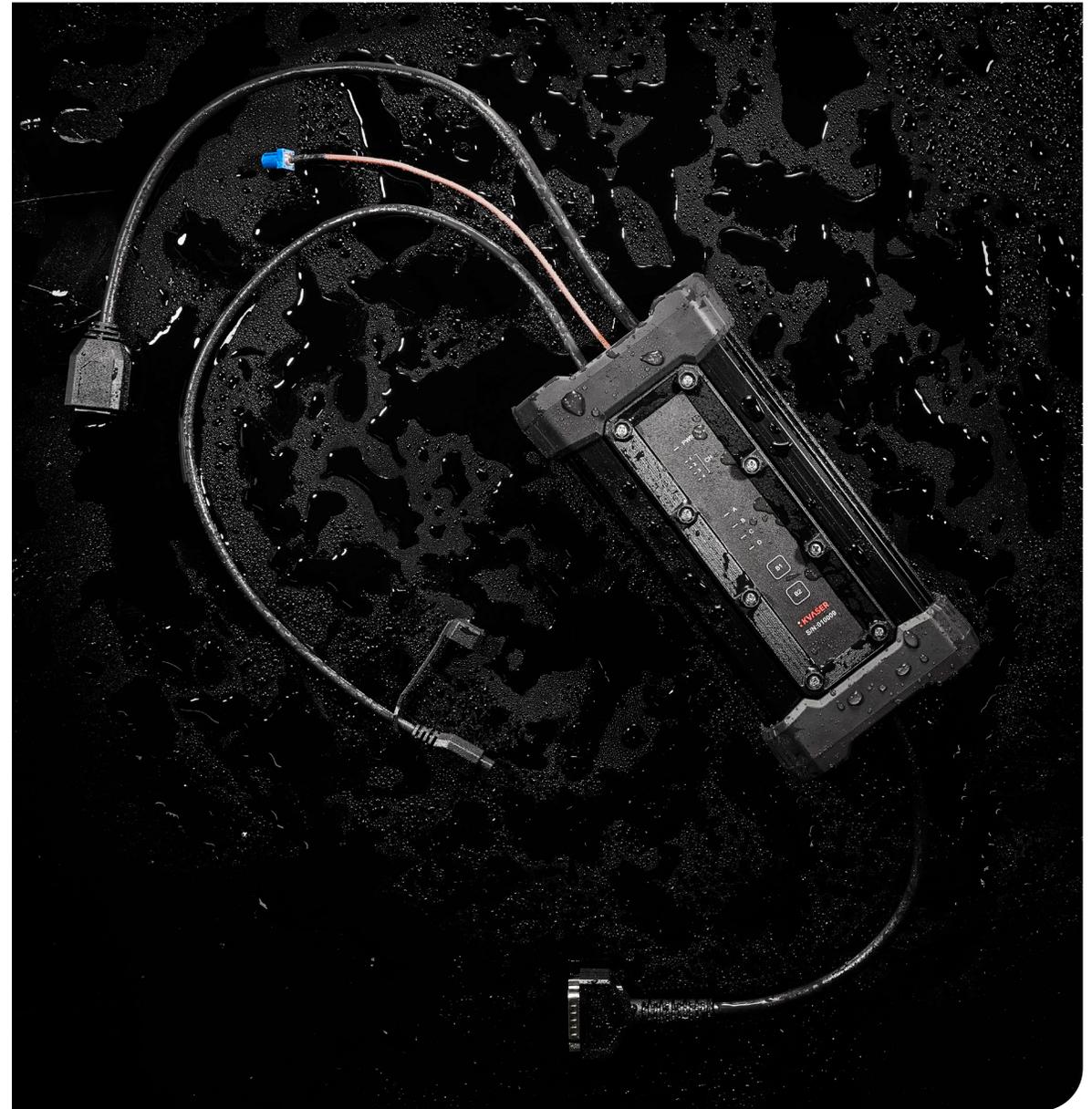
Rugged for demanding data acquisition

With an IP67 rating, our Kvaser Edge is sealed against dust, resistant to water and proved to withstand extreme temperature changes. The result is dependable computing power at the edge – ready to deliver insights wherever the work takes you

Secure and reliable remote access

At the core is a powerful ARM-based Linux computer with a Secure Element (NXP SE051C2), supporting CRA and RED compliance for critical software applications.

You can monitor and troubleshoot units remotely, removing the need for on-site maintenance and keeping operations efficient. Integrated GPS tracking adds location awareness, giving you greater visibility for fleet management and security.



Kvaser Edge OS Plattform

Kvaser Edge OS is our purpose-built operating system for the Kvaser Edge, built for acquisition of data and edge analytics. It gives teams a flexible and reliable foundation to run critical automotive and industrial tasks directly at the edge.

Flexible user environment:

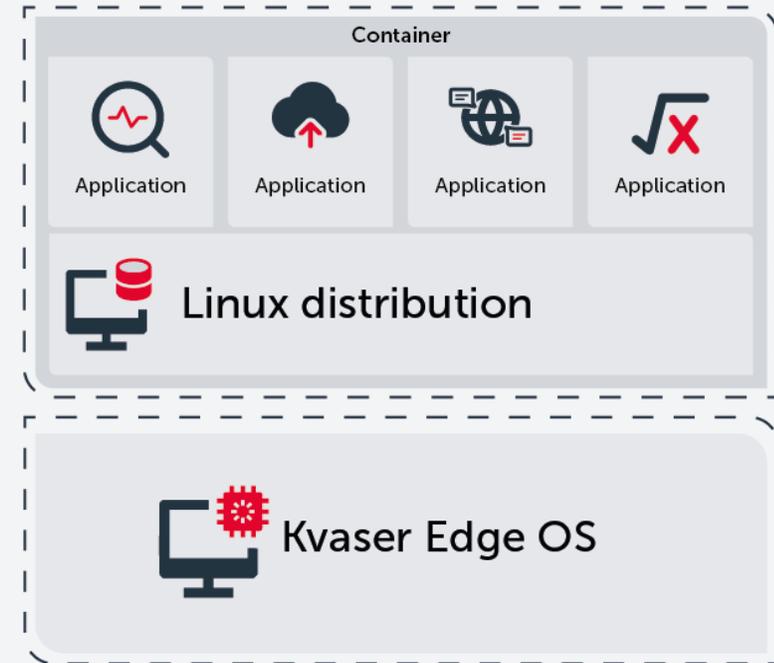
- Run any Linux distribution seamlessly in a lightweight and flexible user environment.

Freedom of apps:

- Use your own applications or select from the vast Linux software library.

Improved security:

- Advanced security features to safeguard your data, apps and communication.



Kvaser Edge OS Platform

Security and User Containers

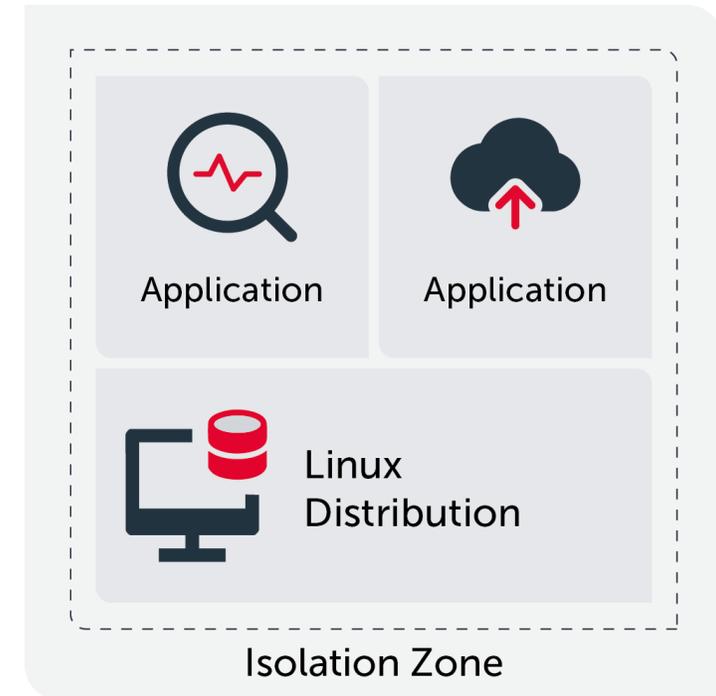
Security

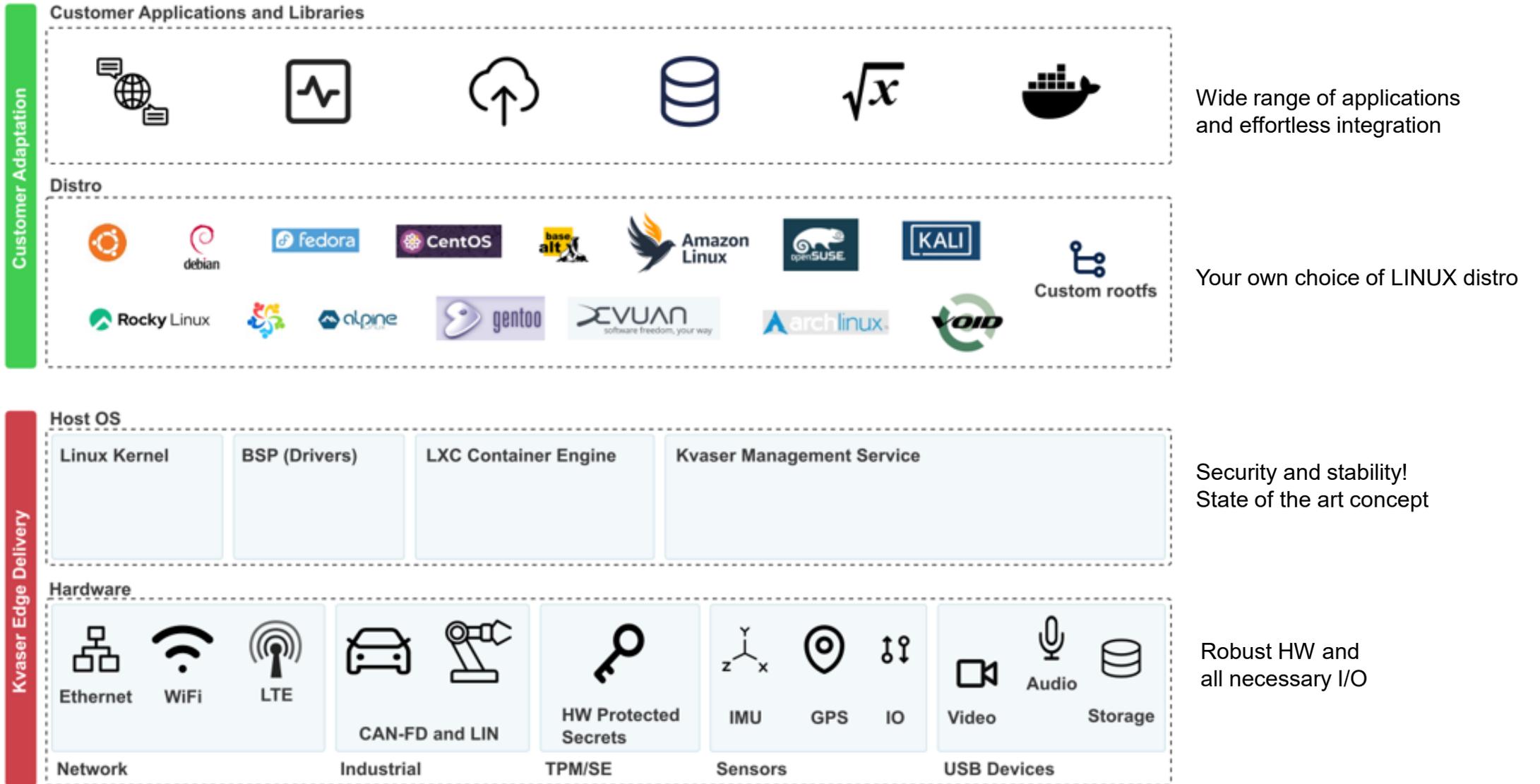
Kvaser Edge OS integrates advanced security and encryption features to safeguard applications, data and communications. These capabilities not only harden the system against unauthorized access, but also align with the requirements of the Cyber Resilience Act (CRA) and Radio Equipment Directive (RED) – providing you with a strong security foundation to deploy and managing Kvaser Edge safely.

User Containers

With Kvaser Edge OS, you can run a Linux (LXC) container on the Kvaser Edge. The container is a fully isolated user environment, operating its own processes on top of Kvaser Edge OS.

This means you get a secure, efficient setup that keeps workloads separated without wasting resources – maximizing performance, simplifying management and allowing you to scale your system without compromise.





Use Cases

Use Cases

What can Edge be used for?



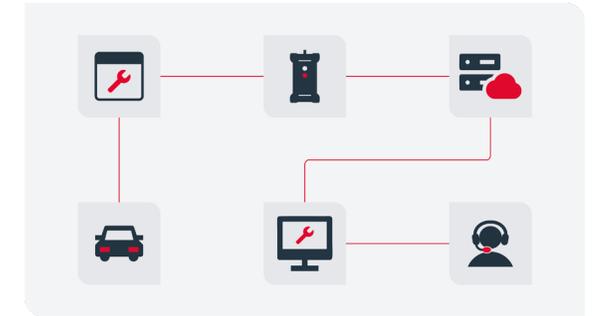
Data-Driven Product Development

Capture and process usage data directly at the source to deliver structured insights for the development teams. Enabling faster iteration, informed design decisions and products that better meet real-world needs.



Fleet Management

Optimize fleet operations by using local and connected data to monitor performance, track usage and detect issues in real time – ensuring safety, efficiency and reliability.

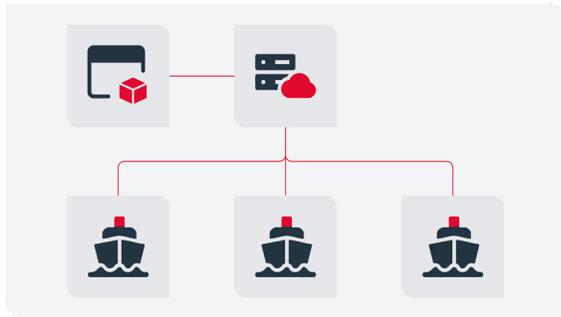


Predictive Maintenance

Monitor health in real time by using connected data to detect issues early. Provide alerts to operators and enable reliable proactive maintenance to prevent breakdowns and ensure reliability.

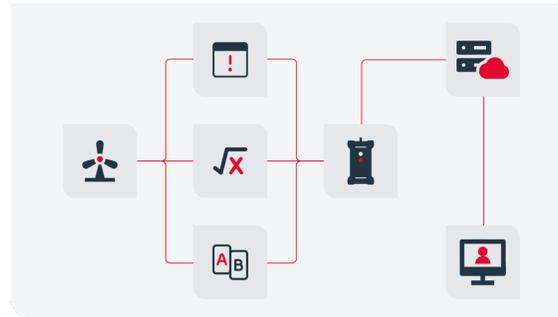
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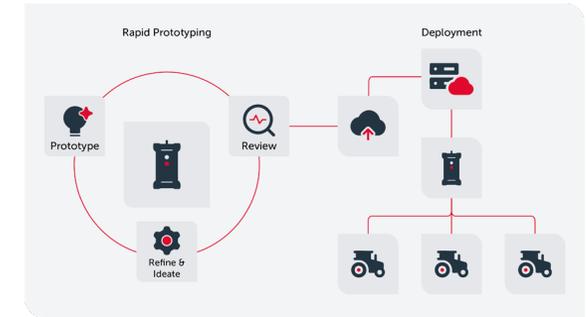
Software Deployment

Deploy software in real time to ensure fast, reliable and consistent updates across the entire fleet.



Data Acquisition

Capture and process sensor data at the source to filter and structure information in real time – delivering actionable insight while reducing bandwidth and storage requirements.



Rapid Prototyping

Develop and test new software quickly by running it directly in the target environment – allowing developers to simulate, validate and refine features before full deployment.

Technical Data

Technical Data

Kvaser Edge 4xCAN WL400S

Battery	Lithium-ion 18650
Bluetooth	Supporting model BLE 5.3
CAN	4xCAN FD SIC Galvanic Isolated, HD26
CAN FD Bit Rate	Up to 8 Mbit/s
Ethernet	Gigabit Ethernet 1000 BaseT, RJ45 Socket
GPIO	2x Digital Input 1x Digital Output
Housing	Aluminum housing with plastic protective caps, approx. 200x110x58 mm
IMU	6-axis (accelerometer + gyroscope)
<ul style="list-style-type: none"> • Acceleration sensitivity • Angular rate sensitivity 	+-2g range 0.061 mg/LSB (Typical) +-125 dps range 4.375 mdps/LSB (Typical)
Ingress Protection Housing	IP67
Operating Temperature	-40 to 50 °C ambient (<i>If handheld use is not a requirement, the device can operate at ambient temperatures up to +70 °C.</i>)
Operating System	Linux-Kernel
Positioning accuracy (CEP) 1.5m	Multi-GNSS (GPS, Galileo, GLONASS) with external active antenna via FAKRA connector (Key Code-C)
Power activation	Galvanic Isolated

Power consumption	Up to 15 W in active mode Standby mode, down to 200 mW
Power supply	9-36 V, DC Galvanic Isolated
Processor	ARM, Quad core Cortex®-A53 up to 1.6 GHz
RAM	2 GB
Regulatory compliance	CE, FCC
Status display	9 LEDs
Storage	256 GB eMMC (embedded MultiMediaCard)
USB	USB 3.1 Host, Type-C (PD 400 mA)
Weight	850 g, cables excluded
Wi-Fi	Wi-Fi 6 IEEE 802.11ax, Dual Band, 2x2 MIMO (5GHz), Antenna Diversity, Integrated antennas





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