

Real-time seat occupancy, without guesswork

Accurate data. Smarter decisions. Better journeys.

>98%

VERIFIED ACCURACY

5+ year

BATTERY LIFE

0

CABLES REQUIRED

!

LIVE FLEET DEPLOYMENT

WHAT IS SEATSENSE?

SeatSense is an end-to-end seat occupancy solution designed specifically for the rail industry. It covers everything from onboard hardware sensors to cloud-based data management and third-party integrations.

SeatSense can be deployed as a standalone solution or integrated seamlessly with existing rail IT infrastructure, providing dependable, real-time insight into how seats are actually used.

WHAT SEATSENSE DELIVERS

- Real-time seat-level occupancy
- Coach- and train-level load profiles
- Historical data and trend analysis
- Open API integration with any rail IT system

THE CHALLENGE

Rail operators typically rely on reservation data or other indirect sources to estimate train loading. These approaches fail to capture walk-up passengers, no-shows and actual seat-by-seat usage.

THE RESULT: Important commercial and operational decisions are made based on assumptions — not on real passenger behaviour.

WHY SEATSENSE

MULTIPLE USE CASES INCLUDING

- Improved forecasting
- Capacity planning
- Improved customer service
- Environmental reporting

+more

NON-INTRUSIVE

- Quick installation without taking trains out of service
- Wireless sensors — no cabling required
- Over five years of battery life with minimal maintenance

CERTIFIED FOR RAIL

EN 50155

Electronic equipment for rolling stock

EN 61373

Shock and vibration resistance

EN 50121-3-2

Electromagnetic compatibility

EN 45545-2* / UL94-V0

Fire protection performance

*EN 45545-2 testing is not required as total device mass falls below testing limits.

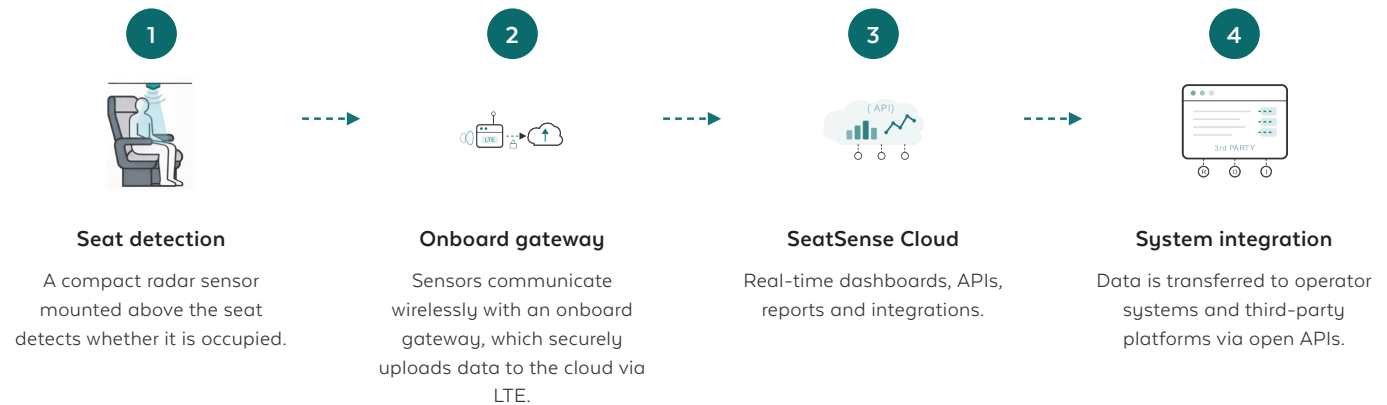
Ready to see SeatSense in action?

Get in touch to arrange a demo or discuss your fleet.

Technical overview & data platform

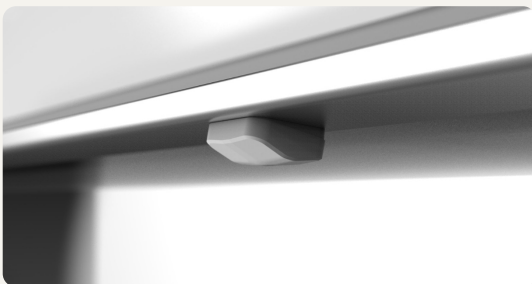
From sensor to insight — how SeatSense delivers real-time occupancy data

HOW IT WORKS



PRISM SENSOR - SPECIFICATIONS

Detection Technology	60 GHz coherent radar
Accuracy (verified)	>98%
Battery life	5+ years
Protocol	LoRaWAN 1.0.4
Configuration	NFC & OTA firmware
Installation	Cable-free, high-grade tape
Seat types	Single & dual, std & 1st class
Operating temp.	-25 to +70°C
Casing	Fire-resistant ABS, UL94 V-0



CLOUD BACK END & DATA PLATFORM

SeatSense Cloud is built on Sensative's enterprise IoT platform for real-time data management and device control, used by cities, utilities, airports and rail operators worldwide.

All seat occupancy data is available via open APIs.

Dashboards & visualisation

- Fleet-wide real-time KPI overview
- Per-train and per-coach seat maps
- Colour-coded graphical seat status
- Dashboard export and publishing tools

Integration & data management

- REST APIs and MQTT messaging
- Integration with Darwin, LENNON and third-party systems
- Configurable data retention policies
- GDPR-compliant, encrypted data handling

Device & network management

- Real-time sensor health monitoring
- LoRaWAN network management

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seatsense@sensative.com