

TAOGLAS®

Rail Systems

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Industry-leading Antenna Supplier for Rail Systems

Connected Rail Experience

Supporting reliable connectivity for passenger services, train operations, and real-time railway communications networks.

Railway-Certified Performance

Solutions designed to support **EN50155** railway requirements and **EN45545** fire-safety standards for rolling-stock deployments.

Simplified Integration

Multi-function antenna platforms combine cellular, GNSS, and Wi-Fi technologies into a single enclosure, reducing antenna count and installation complexity



Key Technologies for Rail Systems

GNSS: Provides precise positioning and timing for train tracking, operational visibility, and intelligent railway systems.

Wi-Fi®: Enables passenger internet access, onboard services, and operational communications throughout the journey.

MIMO: Technology Improves signal quality, throughput, and reliability for bandwidth-intensive rail applications such as passenger Wi-Fi and telemetry.

Multi-Function Antenna Platforms: Combine multiple wireless technologies in a single low-profile housing, simplifying installation and reducing roof penetrations.

Railway-Certified Connectivity: Engineered to meet stringent railway environmental, safety, mechanical, and EMC requirements



APPLICATIONS – RAIL

Passenger Wi-Fi



Supports reliable onboard internet access and digital passenger services while improving the travel experience

Train-to-Ground Communications



Enables continuous data exchange between trains, infrastructure, and operational control systems.

Real-Time Fleet Monitoring



Provides visibility into vehicle performance, diagnostics, maintenance requirements, and operational status.

Predictive Maintenance



Connected systems enable proactive maintenance strategies that help reduce downtime and improve fleet availability.

Smart Rail Infrastructure



Supports the growing need for connected, data-driven railway systems and future rail communications technologies

MA8020 | Raptor X Rail Platform



One Antenna. Total Rail Connectivity.

Built for Rail. Proven for Safety.

Engineered for Reliability

Rail operators need fewer antennas, simplified installations, and reliable connectivity across increasingly complex communication systems.

To address these challenges, Taoglas developed the MA8020 Raptor X, a railway-certified antenna platform that combines GNSS, cellular, and Wi-Fi connectivity into a single roof-mounted enclosure4G/5G cellular (including FirstNet, 600–6000 MHz)

Direct Screw-Mount and Standard Rail-Mount Options available.

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Raptor X

Quality & Certifications



Designed to meet **EN 50155** railway standards and **EN 45545** flammability requirements

IP69K-rated for protection against water, cleaning and demanding outdoor conditions

IK10-rated enclosure for high-impact resistance

- **EN 50155** – Passed railway environmental, electrical, shock and vibration testing.
- **EN 50121-3-2** – Passed railway EMC emissions and immunity testing.
- **EN 45545-2 R22/R23** – Housing materials passed fire, smoke and toxicity requirements.
- **EN 45545-2 R24** – PCB material passed applicable fire-performance testing.
- **EN 45545-2 R15/R16** – Cable passed flame propagation, smoke and toxicity testing.
- **IEC 60068-2** – Passed environmental testing for low temperature, dry heat and damp heat.

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