# Icomera Trackside

## Next-generation technology delivering the true Gigabit Train

Seamlessly combine Gigabit Trackside Wi-Fi and cellular networks
Built on Icomera's industry-leading X Platform for connected vehicles

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### The Challenge

Rail passengers and onboard systems increasingly expect and rely on fast, uninterrupted Internet connectivity for the duration of the train journey. The "Gigabit Train" is a vehicle with a 1Gbit/s or better connection to the Internet.

Business travellers wanting to use video-conferencing, leisure passengers wanting to stream their favourite TV and security applications streaming live HD CCTV images to central operation centers are just some of the use-cases behind the need to deliver more bandwidth to the connected rail vehicle than ever before.
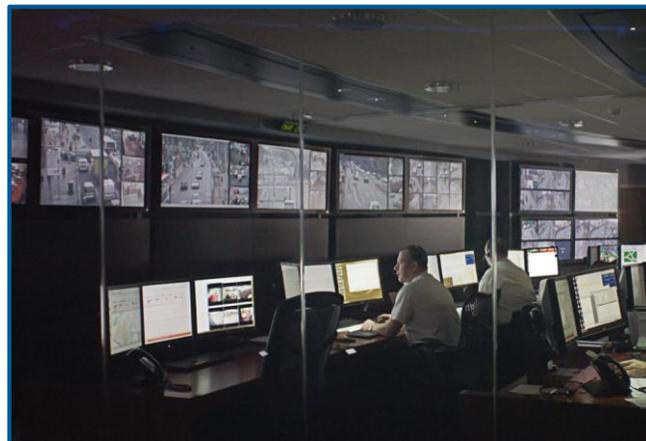
While the coverage and capacity of cellular networks is steadily improving, the scheduled network roll-outs are not currently keeping pace with the demand for the true "Gigabit Train".

### Icomera Trackside

Introducing **Icomera Trackside** - a key component in delivering the next generation of mobile Internet connectivity for Rail operators, helping to provide continuous, high-capacity bandwidth to a train along the entirety of its route.

**Icomera Trackside** supports two simultaneous 3x3 MIMO radios, each delivering a real TCP/IP throughput of over 500 Mbit/s[1]. With the aggregated capacity of the two radios, the **Icomera Trackside** solution can deliver a train<->shore connection at over 1.4 Gbit/s, with a median throughput of over 1 Gbit/s - unrivalled bandwidth for rail passengers and onboard systems. Even at a range of over 20 km between **Icomera Trackside** base-stations, the lowest throughput will be still be over 200 Mbit/s.

Icomera's modular, technologically-flexible approach allows its mobile Internet connectivity solutions to seamlessly integrate and aggregate the capacity of all available communication networks in parallel. 3G, LTE, LTE-A, Trackside and even satellite networks can all be utilised as part of a single solution.

Icomera empowers rail operators to take an iterative approach to trackside projects, as budgets or business requirements dictate - it's never all or nothing.

- Infill cellular "not-spots" over- and underground and in tunnels

- Reduce mobile data costs along the busiest areas of the rail network

- Seamless hand-over between **Icomera Trackside** and cellular networks

The extreme high performance of **Icomera Trackside**, especially the distance between base-stations, significantly reduces the CAPEX required to deliver the solution to underground or overground rail systems.

### A Proven Track Record

**Icomera Trackside** is part of Icomera's industry-leading X Platform for connected vehicles. Icomera delivers Internet connectivity for millions of passengers and thousands of vehicles every day. The X Platform includes Icomera's remote central configuration, reporting and monitoring tools for robust and best-in-class asset management.

**Please contact sales@icomera.com for more information.**

[1] Results independently verified by a third-party - ask for details