

WIRELESS BROADBAND IN MOTION FOR RAIL AND METRO

POWERING VIDEO SURVEILLANCE & INTERNET ACCESS ON-THE-MOVE
REACHING SPEEDS OF UP TO 100 MBPS · 200 KM/H



Fiber inMotion™ is a train-to-wayside communications solution that ensures continuous high-speed wireless connectivity between the rolling stock, the tracks and control center. Fiber inMotion enables rail and metro operators to enhance security and safety by transmitting real-time video from onboard the train to the control center and from the level crossing or train station to the rolling stock operator.

With RADWIN Fiber inMotion solution public transport operators can improve the passenger experience by offering high-speed internet access and multimedia services.

RADWIN Fiber inMotion solution consists of powerful base stations deployed along the tracks that connect to mobile units installed onboard the rolling stock. The solution operates in challenging outdoor conditions and underground tunnels.

Providing long-range coverage and unmatched capacity, RADWIN's railway-grade systems support connectivity for virtually any transportation scenario whether in railways, metro lines, bus systems and more.

Operational Applications

- Real-time CCTV transmission
- Level crossing detection
- Onboard ticketing

Passenger Services

- High-speed internet access
- Passenger Information Systems (PIS)
- Multimedia entertainment

Solution Highlights

- Up to 100 Mbps
- High speed - up to 200 Km/h
- Guaranteed bandwidth per train/car
- Full scale uplink/downlink configurable asymmetric traffic
- Long range coverage - up to 10 Km between base stations
- Seamless handover
- Rugged & reliable
- Superior performance in underground tunnels



High-Speed Internet Access



On-Board CCTV



Real-Time Transmission to Control Center

SPECIFICATIONS

- High Capacity:
 - Up to 100 Mbps per base station
 - Up to 100 Mbps per train/car
- Full scale uplink/downlink configurable asymmetric traffic
- Speed: up to 200 Km/h
- OFDM technology
- 2x2 MIMO/Diversity
- Low and constant latency
- Range: up to 10 Km between base stations
- Full network redundancy
- Network synchronization in tunnels and above ground
- Frequency range: 2 - 6.4 GHz
- Channel bandwidth: 5, 10, 20 & 40 MHz
- Max Tx power: 25 dBm/316 mW
- Quality of Service (QoS) - 802.1p, Diffserv
- Network synchronization based on GPS and 1588v2 protocol
- Service class definition per train/car
- Data Security - AES 128
- MTBF > 240,000 hours
- Power consumption < 25 Watts
- Base station/Mobile unit weight: 1.8 Kg/3.6 lbs
- Operating temperatures: -35°C to 60°C / -31°F to 140°F
- Fully outdoor solution - IP67
- EN 50155 and EN 50121 certified for rolling stock and trackside applications

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