



Rail & Tunnel Wireless Solutions

Reliable Communications Where It Matters Most

Millions of passengers travel through rail and metro networks every day. Operations teams, maintainers, emergency services and rail operators depend on reliable, mission-critical communications to keep transportation networks connected, operational and safe

From existing GSM-R networks to the transition toward FRMCS, Avari's digital DAS provides reliable wireless coverage across tunnels, stations and complex rail environments.

Engineered For Rail & Tunnel Environments

Avari Wireless combines decades of specialist engineering expertise to deliver reliable, high-performance wireless communications for some of the world's most demanding rail and tunnel environments.

Our solutions are designed for rail tunnels, metro systems, stations and complex transportation infrastructure, providing resilient communications across even the most challenging environments.

Our Capabilities



Digital DAS for mission-critical rail communications, supporting GSM-R, FRMCS, TETRA, P25 and LTE



Supporting today's GSM-R networks and the evolution to next-generation FRMCS



High-availability wireless coverage for rail and metro tunnels, stations and transportation infrastructure



Flexible architectures designed for long tunnel distances, fibre diversity and redundant operation



End-to-end expertise, from consultancy and system design through deployment and ongoing support



Extensive international experience delivering complex wireless infrastructure for major transportation networks

AVARI® VL™ SERIES DIGITAL DAS

Built for Mission-Critical Rail Communications

The Avari® VL™ Series Digital DAS is engineered for mission-critical rail communications across tunnels, stations and complex transportation networks.

Long tunnel networks can require remote units to be separated by several miles. Avari's digital transport architecture provides an extended optical link budget, while **Automatic Optical Delay Compensation** helps synchronize the antenna network and mitigate time-delay interference.

Where fibre availability is limited, Avari supports flexible **star, daisy-chain and ring fibre topologies**, providing greater deployment flexibility and resilience throughout the network.

High Availability. Built-In Redundancy.



End-to-end
redundant
configurations



Fibre
diversity



Automatic
switchover

The platform can intelligently adapt, reroute channel traffic and reconfigure signal paths in response to fault conditions, enabling self-healing operation without manual intervention.



MULTIBAND. SCALABLE. FUTURE-READY.

Avari's digital DAS supports mission-critical rail communications as requirements evolve.

Supporting Today's Networks — and Tomorrow's
TETRA • P25 • LTE • GSM-R • FRMCS

Centralized Network Management

The Avari® VL™ Element Manager (VL-EM™) provides centralized management across the rail communications network, including fault, performance, and configuration management.

VL-EM™ also supports SNMP integration, enabling connectivity with third-party network management platforms.

Enabling reliable wireless communications across rail and tunnel networks.



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