

Broadband over Copper

Case Study



Broadband over Copper Administrator of Railway Infrastructure, Spain



“The successful integration of the ASMi-52 has proven that we made the right choice.”

Carlos Rincon, Telematics and Telephony Operations Manager, ADIF

Goal

To connect remote sites to broadband network using copper infrastructure

Solution

RAD's ASMi-52 SHDSL modems

Benefits

- Interoperable with existing installed base
- Flexible and cost-effective
- Provides high immunity to background noise and enables transmission of multiple SHDSL lines on the same physical cable
- Offers extended distances and variable data rates
- Ensures connectivity for all mission-critical railway applications and services

Spain's National Railway Connects Remote Sites to Broadband Network over Copper Infrastructure with RAD's ASMi-52 SHDSL Modems

Spain's Administrator of Railway Infrastructure (known by its Spanish acronym ADIF, an acronym for Administrador de Infraestructuras Ferroviarias) is a public company charged with the responsibility of managing the country's railway traffic and administering its infrastructure. In contracting new infrastructure, ADIF is specifically obliged by law to apply the criteria that optimize available resources in assuring the public interest, meeting society's needs with maximum quality and guaranteeing the security of users and the global effectiveness of the Spanish railway system.

ADIF's telecommunications infrastructure is based on a nationwide fiber optics network that serves RENFE, Spain's national railway, and its railway stations, control points, signaling, data, and telephony, while also providing dark fiber services for the country's main telecom operators. Recently, ADIF decided to connect RENFE's remote sites and offices to that broadband network using existing copper infrastructure.

To do so, ADIF selected ASMi-52 intelligent SHDSL modems from RAD Data Communications. The ASMi-52 SHDSL modem enables ADIF to proceed with its network improvement plan, which will allow it to be ready to rollout the types of new services that will be required in the future. Within one year ADIF will have connected approximately 150 links using the ASMi-52 SHDSL modem. “Interoperability with our existing installed base was one of our primary concerns,” explained Carlos Rincon, Telematics and Telephony Operations Manager at ADIF. “The successful integration of the ASMi-52 has proven that we made the right choice.”



data communications

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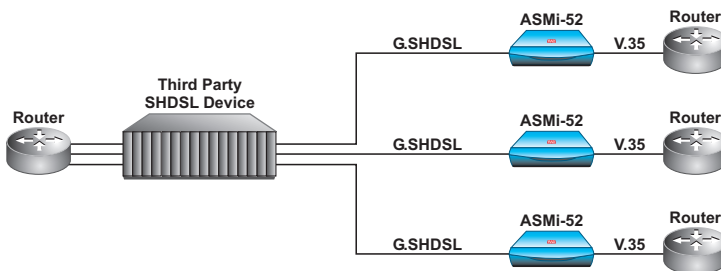
Javier Alonso, Product Manager, Dominion Ingeniería



“The flexibility and cost-effectiveness of the ASMi-52 were the keys to providing a very effective solution to allow ADIF to bring the benefits of its high speed fiber optic infrastructure to remote sites over copper,” noted Javier Alonso, Product Manager at Dominion Ingeniería, the RAD distributor that proposed the solution to ADIF.

The ASMi-52 SHDSL modem complies with ITU and ETSI standards, to extend the range of digital interfaces. It offers extended distances and variable data rates up to 2.3 Mbps over 2-wire and 4.6 Mbps over 4-wire. The SHDSL modem uses TC PAM-16 line coding, equalization, adaptive filtering and echo cancellation to compensate for line impairments, bridge taps and mixed cabling. This provides high immunity to background noise and enables transmission of multiple SHDSL lines on the same physical cable.

“RAD offers a wide range of communication solutions for transportation networks in general and the railway industry in particular,” stated Jose Aronson, Regional Sales Manager for Iberia at RAD Data Communications. “Our diverse and innovative standards-based products provide connectivity for all the mission-critical applications and services required in today’s railway environment.”



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