

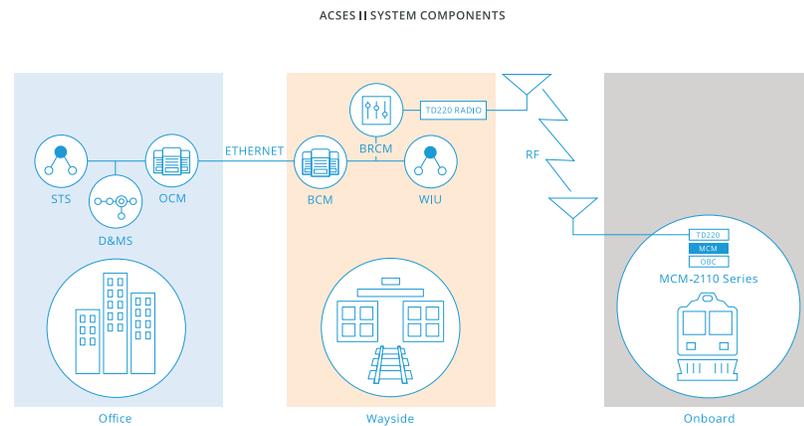
Helping Freight Railways Achieve Critical Interoperability with Positive Train Control Along the Northeast Corridor

Challenge

The Northeast Corridor (NEC) passenger rail authorities are at different stages of upgrading to the Federal Railroad Administration (FRA) approved and compliant ACSES II system. Amtrak has already deployed their ACSES II Positive Train Control (PTC) system. Now when tenant railways need to travel on Amtrak ACSES II or other NEC tracks, they require the onboard system to achieve interoperability, ensure safety, and meet PTC mandates. A Class 1 railroad operator running on portions of the NEC required a PTC ACSES II onboard system for their locomotives to continue to serve their customers. How can rail operators achieve interoperability quickly and easily?

LILEE Solution

The Class 1 railroad operator initially encountered some of the challenges in achieving onboard interoperability using a multi-vendor solution on Amtrak owned territory. The Class 1 railroad operator contacted LILEE to deliver a solution that matched the existing infrastructure already deployed by Amtrak, as LILEE provided the operational ACSES II compliant communication solution from the back office to the wayside base stations. LILEE delivered a Mobile Communications Manager (MCM-2110) that was installed onboard the locomotive.



The MCM-2110 Series facilitates transfer of ACSES II messages to and from the ACSES wayside network through the data radio link provided by the GE-MDS TD220X radios. The MCM-2110 Series is responsible for managing the transfer of data to/from the TD220X radios and the On Board Computer (OBC). An OBC simulator can be included during testing to simulate the OBC or for data logging.

LILEE's technical support team provided the assistance needed to configure the system and supported testing in both lab and field environments with good results. LILEE also provided onsite support for commissioning the locomotive on the NEC. The Class 1 railroad operator established successful communication between the locomotive and the NEC trackside base stations, a requirement in meeting safety mandates for operation along the NEC.

The Class 1 railroad operator is delighted with the LILEE MCM-2110 solution

LILEE coordinated with Amtrak to ensure the correct configurations; no testing time was wasted during track time. LILEE filled the need and provided the Class 1 railroad operator a timely, appropriate solution, increasing safety and efficiency along the NEC. LILEE also provided field testing to ensure the locomotive would operate correctly on the NEC. This important step increased the confidence that when the locomotive was released after the ACSES II modification it would be ready for revenue service.

Results

The delivery of the LILEE MCM-2110 to the Class 1 railroad operator, the first of multiple scheduled deployments of the CMU-2100 family, continued LILEE's implementation of solutions across the NEC, and provided demonstrated interoperability between onboard, wayside base stations, and back office locations.

The LILEE CMU-2110 provides a platform for messaging system interoperability for ACSES II systems, is scalable to support multiple wireless paths, and is compatible with multiple radio systems.

The Class 1 railroad operator is delighted with the LILEE MCM-2110 solution; it is working as anticipated with the existing ACSES II system on Amtrak. The LILEE MCM-2110 has allowed the Class 1 railroad operator to achieve desired interoperability on the NEC, thereby increasing safety and efficiency. The LILEE MCM-2110 has effectively and consistently shown reliable, proven compatibility with the ACSES II PTC radio system, and the highest degree of remote systems management capability available; it has exceeded expectations in the NEC.

LILEE offers the MCM-2100 and the MCM-2110 for customers operating along the NEC. For tenant railroads operating along the NEC, LILEE is the only proven option for interoperability with the ACSES network.



About LILEE Systems

LILEE Systems delivers integrated, open, and reliable industrial IoT wireless connectivity solutions incorporating hardware, software, and services for fleet management, telematics, cargo services, and safety. LILEE's T-Cloud is a unified, virtualized platform to support asset management and analytics for sensors and field communications across multiple vertical markets. LILEE is headquartered in Silicon Valley, with offices in Taipei and Amsterdam.

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