

World's First LTE-Railway Service on High-speed Train Goes Live in Korea, Supplied by Samsung and KT

Next-generation technology for smart train/metro enables high-speed, ultra-reliable communications for new train line serving PyeongChang, Korea winter sports region

Seoul, Korea – December 21, 2017- Samsung and Korean telecom firm KT announced today that the LTE-Railway (LTE-R) network for the new Wonju-Gangneung high-speed train line is now live. The activation represents the world's first application of LTE-R technology to a high-speed train, with the new line traveling up to 250km/hour (155 mph). The network will include key features such as Mission-Critical Push-to-talk (MCPTT) based on the 3GPP standards Release 13.

The new Wonju-Gangneung line, operated by the Korea Rail Network Authority (KRNA), spans 120 kilometers (75 miles) long, and will provide the public faster, easier access to the largest winter sports facilities in Korea, including PyeongChang. The LTE-R network is applied across the line's seven stations, while the solution is interoperable with legacy Trunked Radio System (TRS), Very High Frequency (VHF) systems, and the national Public-Safety LTE (PS-LTE) network.

"We are delighted to work with Samsung to provide critical communications systems for this brand new high-speed train line," said Yihan Kim, Senior Vice President and Head of Enterprise Business Performing Unit of KT. "The new line puts Gangneung only two hours away from Seoul, and LTE-R will make the journey for PyeongChang visitors a much safer and reliable experience."

"Following Samsung's first commercial deployment of LTE-R at the Busan Metro last April, this new implementation demonstrates the maturation and validation of our LTE-R solutions for high-speed trains," said GY Seo, Senior Vice President and Head of Global Sales and Marketing Team in Networks Business, Samsung Electronics. "We look forward to continued collaboration with KT in the deployment of the most innovative critical-communications technologies across the country."

LTE-R is a next-generation communications technology for smart train and metro services, enabling high-speed wireless voice and data communications inside trains, from train to ground and from train to train. In particular, LTE-R enables smooth and stable mission-critical communications – including MCPTT, group calls and VoLTE - between train personnel and control centers. In specific, Samsung has provided its radio access network operating in 700 MHz, a global band for LTE-based Public Protection and Disaster Relief (PPDR), a dedicated core network including EPC, IMS and PTT servers deployed in two control centers, as well as rugged smartphones (SM-G888N0) for professionals.

Samsung, Korea's leading LTE-R supplier, was elected as a supplier for all five LTE-R projects in Korea in 2015. Notably, its LTE-R solution is already in service on the 41 kilometer (26 miles)-long Busan Metro line 1 covering 40 stations in Korea's second largest city. Launched by Samsung in April 2017, it represents the nation's first case of LTE-R technology being used

during operation of a train/metro. Samsung is also currently deploying LTE-R on the line between Incheon International Airport and Seoul Station in the center of the Capital.

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