



RADIO
FREQUENCY
SYSTEMS

Case Study

Hong Kong

China

When it comes to early adoption of new communication standards Hong Kong is without question one of the world leaders. 5G coverage is available for over 90% of the population with 6.9 million subscribers using 5G. Alongside mass commercial rollouts by the region's main operators, infrastructure operators have invested significantly in delivering coverage in the hardest-to-reach areas.

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At RFS, we are proud to have worked extensively on projects across Hong Kong to deliver quality, comprehensive coverage.

Here are just a few examples of how RFS contributes to the full connectivity landscape:



Overview

Hong Kong International Airport (HKIA), one of the world's busiest airports, required an upgrade to its wireless communication infrastructure. The airport needed to improve coverage and capacity for private and public safety radio networks, with equipment covering a wide range of frequencies as Hong Kong continues to lead the way on 5G roll-outs.

Solution

RFS took care of all cabling requirements using a combination of RADIAFLEX and CELLFLEX solutions. As one of the first markets to commit to 5G RFS developed a specific 1 ¼ inch cable operational up to 3.8 GHz to meet the spectrum requirements. RFS also tailored indoor devices to address frequencies ranging from 617MHz to 6000MHz as required for the project.

Result

The upgraded wireless infrastructure at the airport met all KPIs for the project and contributed to Airport Authority HK being awarded the Gold Award for "Best Innovation for Future Enterprise" in the CAHK Star Awards 2021.



Overview

RFS has been working with rail and metro operators in Hong Kong for decades to meet connectivity needs. This has included deployments for many lines including, the West rail link, the Kwun Tong line extension, the South Island line, the Shatin to Central line, and the High-Speed Rail link to Mainland China, plus 4G and 5G upgrades in stations across the metro network.

Solution

How RFS approached each project depended on the specific needs of each line. However, what was consistent across all the metro and rail tunnel deployments in Hong Kong was the need for complete coverage across the length of the tunnel. RFS delivered a traditional passive solution using its best-in-class cable. This gave maximum reliability with lower costs and power consumption than alternatives using active equipment. As a result of RFS's reputation in the tunnel, to date, more than 1000 km of RADIAFLEX leaky feeder/radiating cable and 2000 km of CELLFLEX feeder cable have been installed across the region.

Result

The RFS solution gave metro and rail operators the infrastructure to support multiple frequencies, from 350MHz to 2700MHz. It allowed them to address the complexity of the landscape and serve 4 MNOs and support all standards from Tetra to 5G to WIFI and CCTV, all in confined tunnel environments.



Overview

Along with rail and metro tunnels, RFS also has a large footprint across Hong Kong's car tunnels with deployments including; Tseung Kwan O Tunnel, Tate's Cairn Tunnel, Cheung-Tsing Tunnel, Tseung Kwan O-Lam Tin Tunnel and Tuen Mum-Chek-Lap-Kok – Hong Kong's longest tunnel. The needed connectivity to support AM and FM frequencies and mission-critical coverage for emergency services.

Solution

RFS has been able to deploy RADIAFLEX leaky feeder/radiating cable across Hong Kong's car tunnels to deliver both mission-critical coverage and address specific issues with radio coverage. Tunnel operators had to find a way to overcome the challenge that AM/FM antennas were too big to be installed in tunnel environments. RFS utilized RADIAFLEX as a way to deliver coverage across the full length of the tunnels it worked on in Hong Kong.

Result

The result was comprehensive coverage for mission-critical and radio frequencies in the tunnels it worked on. The success of the deployment can be seen in the large and growing footprint RFS has across Hong Kong's car tunnels.

*“It is a privilege to be involved in so many high-profile projects across Hong Kong. **Not only do our deployments support mission critical deployments that ensure the safety of citizens as they move across the city, but the commercial connectivity allows Hong Kong to remain a world leader in 5G.** We are looking forward to continuing to work with bodies across Hong Kong on projects, including the HK International Airport third runway expansion and MTR 5G upgrades to new and existing lines.”*

Cherry Chen, Sales Manager Hong Kong at RFS

Complete Portfolio of Cable solutions



Here are just a few examples of where RFS cable is supporting multiple essential, but completely different services in a single city. At RFS, we have a complete range of solutions that can be used to suit deployments across a city; from airports, to university campuses, to stadiums, and beyond. You can see this in more detail on [our interactive connectivity landscape](https://www.rfsworld.com/landscape-map) (<https://www.rfsworld.com/landscape-map>).





Lifetime Connectivity

At RFS we specialize in the design and manufacture of premium, future-ready cable solutions for customers across the globe. With over 120 years of heritage in the industry, we build reliable and long service life connectivity systems. **Because we care about our collective future.**

- We design innovative cable solutions that deliver best-in-class connectivity while tackling network pain points and offering a lower Total Cost of Ownership.
- We bring passion and expertise at every stage, from R&D to installation, to meet our business partners' expectations.
- We deliver the communications foundation for digital transformation across a range of industries including oil & gas, mining, and rail.
- We are changing the perception that all cable is created equal and demonstrating the potential of premium solutions.
- We offer a dynamic and stimulating working environment that promotes diversity and fosters personal and collective accomplishments.
- We are committed to sustainability with greener manufacturing processes and designing long-life equipment with low-energy consumption to support our customers' climate goals.