

**YOFC's New Leaky Coaxial Cable
Supports Wuxi Metro Signal Coverage**



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Project Background

Build the first 5G metro network with 4 leaky cables in China

- The total length of Wuxi Metro Line 3 is 48.62 km, of which the first phase is 28.5 km, and there are 21 stations, all of which are underground stations. The first phase of the project was put into operation in October 2020
- In the early stage of project construction, the subway company set requirement to achieve the goal of "Gigabit" smart subway



Project Challenges



5G high-frequency signal

- Due to the cut-off frequency, the traditional leaky cable used for 4G network cannot support the 3.5GHz high-frequency band used by 5G



Gigabit downlink rate

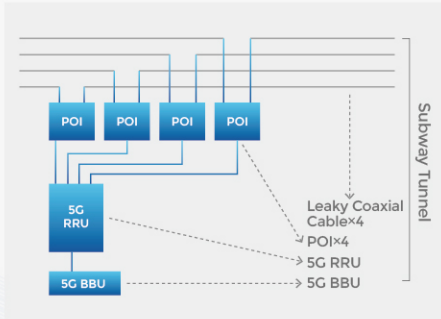
- Traditional 4G network cannot provide gigabit downlink rate in subway tunnel coverage scenarios

Solutions

With the development of 5G mobile communications, the frequency band used for wireless communications has expanded to high frequency bands.

The 5G frequency bands in China are mainly concentrated in 2.6GHz and 3.5GHz. While the huge flow of people in the subway operating area requires a huge amount of data connection. This is a high traffic area with key competitiveness for mobile operators, and it is also a key area for 5G signal's indoor coverage, and the special antenna "leaky coaxial cable" is the popular way of signal coverage in subway tunnels.

In order to meet the needs of customers, Wuxi Metro Line 3 innovatively adopts the 4T4R indoor coverage solution by using 4 leaky cables for the first time to construct 5G network of metro. Among them, the interval tunnel adopted 4 new 1-1/4" full-band leaky cable from YOFC. Through 5G full-band POI, 5G multi-channel MIMO networking is realized, and the 5G signals of China Mobile, China Telecom and China Unicom are simultaneously activated and fully covered.



	Characteristics of bandwidth
	Low attenuation
	Uniform radiation field strength

The RFXT 1-1/4" radiation leaky cable independently developed by YOFC features wide bandwidth, low attenuation, and uniform radiation field strength. It can effectively solve the simultaneous coverage problem, supporting the bandwidth range from 700MHz to 3700MHz.

YOFC's leaky cable products have carried out a number of innovative designs, and the specification and performance has exceeded the domestic YD/T2491 industry standard. Also, the strict selection of raw materials and production process control ensures product performance and quality.

Customer Value



Compatible with multi-operator signal coverage

- 4 leaky cables simultaneously carry the 5G signals of China Mobile, China Unicom, and China Telecom, realizing the simultaneous activation and comprehensive coverage of the 5G signals of the major operators



Meeting high bandwidth requirements

- The average rate of 4 leaky cables measured on site is 42% higher than that of 2 leaky cables, and the average downlink rate reaches 970Mbps, helping the subway company to achieve the goal of "Gigabit" smart subway



Providing project reference and experience

- The technical solution and implementation process of the project has been solidified into Wuxi 5G subway line construction standards and technical specifications after inspection and confirmation, and guide the follow-up Wuxi subway line 5G communication system construction, which also provides a reliable reference and valuable experience for the construction of Metro 5G in both China and overseas markets



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