



CASE STUDY

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# Groundbreaking Power Distribution Meets Mechanical Mastery at LIRR Jamaica Station



**Industry**  
Transportation Networks



**Solution**  
PCX  
RX548 to power 5G  
RX554 to power PoE switches for Wi-Fi

## Introduction

Groundbreaking power distribution meets mechanical mastery at the newly renovated **Long Island Railroad Jamaica Station in Queens, New York**. Led by a prominent neutral host provider of high-speed Wi-Fi and cellular services, the project integrated VoltServer's Digital Electricity® platform and Faber Industrial Technologies' engineering expertise. The result? Unparalleled wireless connectivity for 4G, 5G, and public Wi-Fi across the station's six island platforms.

## Project Overview

### The Facility

Jamaica Station is one of North America's busiest rail stations. Its strategic location connects travelers to various destinations across Long Island and Manhattan.

Jamaica Station has the same issues as many public transit terminals, including poor wireless connectivity due to congested urban spaces, concrete infrastructure, and often-underground platforms. Unlike open outdoor environments easily covered by a single macrocell, these environments require small cell densification to overcome signal barriers. Balancing renovation work with uninterrupted commuter flow amidst weekday ridership exceeding 200,000 passengers adds complexity, necessitating innovative solutions and meticulous planning.





## IMPLEMENTATION DETAILS

### Distance Considerations

VoltServer's equipment powers nearly 60 kW of loads, including PoE switches, 4G, and 5G radios. To get the system up and running, Faber developed testing procedures to verify power going to the PoE switches and AC units, as well as continuity between the circuit breakers and cable.

### Installation and Training

The renovation was a masterclass in two teams adjusting on the fly with modifications to keep up with the many moving parts of the project. Despite the technical prowess behind the system, perhaps the project's biggest achievement was overcoming the nature of the working environment. Jamaica Station is the fourth-busiest rail station in North America, with weekday ridership exceeding 200,000 passengers. There are no "off-hours" available for installation crews to work with limited interference from pedestrians. Faber streamlined the process by building and shipping the fully furnished head-end racks and load-end cabinets with VoltServer's equipment. With all components prewired and secured, the team had to mount the cabinets, pull in the cable, and terminate it.

### Results and Future Expansion

The project's success lies in its ability to deliver reliable connectivity in a high-traffic environment. With the implementation complete, the system is poised for future expansion and upgrades to meet the station's evolving needs.

### Conclusion

The collaboration between VoltServer and Faber has resulted in a cutting-edge communications infrastructure at Jamaica Station. The project successfully overcame challenges with power distribution and equipment organization by leveraging VoltServer's Digital Electricity platform and Faber's mechanical expertise. The result is a network that ensures seamless connectivity for the station's hundreds of thousands of daily commuters, setting a new standard for mobile densification in public transit hubs.

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or call **888-622-8658**

