



THE ANTENNA

RM-WLF

Wideband
Surface Mount Antenna



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CASE STUDY

Bicycle-Sharing System Launched with RM-WLF

a Mobile Mark Heavy-Duty Wideband LTE Antenna.

THE CUSTOMER

They are Well known for operating mobile application that enables vehicles for hire in many cities across the United States and Canada. This company is expanding their business into other areas such as Motorized Scooters, Bicycle-Sharing System, and Food Delivery.

The Bicycle-Sharing System is deployed throughout major cities in the United States by leveraging on existing carrier's cellular networks and their proprietary wireless kiosks for tracking bicycle usage, credit card payment and cloud data analytic/processing using the Mobile Mark Heavy-Duty RM-WLF Wideband LTE Antenna.

THE CHALLENGES

- High-Speed data throughput for exceptional user-experience
- Must be able to operate under a wide range of extreme weather conditions
- Extremely hard to remove, theft-deterrent

State of the Art Bicycle-Sharing Kiosk demands heavy-duty and high-performance antenna that can tolerate a wide range of weather conditions from extreme heat to ice buildup, to strong wind and yet always be ready to perform at high-speed data throughput to provide end-user with seamless user-experience. Also, since the antenna element is exposed to open environment, it must be fully secured to the Kiosk cabinet with tamper-proof features that are virtually impossible to remove from the outside by unauthorized personnel.

THE ANTENNA MANUFACTURER

Mobile Mark, Inc. designs and manufactures mobile, infrastructure and device antennas for wireless applications from 30 MHz – 7.2 GHz. During customer's development process, Mobile Mark's engineers are available for consultation with RF technical expertise to ensure that the customer's wireless system is utilizing the antenna performance to its fullest potential.

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THE SOLUTIONS

- Wireless LTE wideband frequency compatible with U.S. cellular carriers
- All multi-band antenna elements in one housing package
- Heavy-duty package that can withstand harsh environment
- Tamper-Resistance & Anti-Theft package

Mobile Mark's Heavy-Duty RM-WLF Wideband LTE Antenna is designed for wireless LTE technology where multi-broadband is vital for high-speed data throughput application. The RM-WLF antenna elements are protected by rugged housing made from tough ASA composite material intended for outdoor environment that can withstand high impact usage, extreme outdoor weather condition, and UV resistance to maintain consistent color patina over time. RM-WLF antenna is surface-mounted onto the cabinet via milled metal stud for strength & durability and secured by locknut and rubber gasket to ensure proper sealing for water ingress protection (IP67). RM-WLF antenna installation and removal can only be accessed from the inside of the cabinet to safeguard tampering from unauthorized personnel.

THE ANTENNA

- RM-WLF: Heavy-Duty Wideband LTE Antenna for LTE/HSPA (694 to 894 MHz, 3 dBi gain) and AWS/5G-ready/LTE (1.7 to 2.7 GHz, 5 dBi gain)
- Measurements: 1.75" (45 mm) diameter x 3" (76 mm) tall, recommended drilled hole 5/8" (16 mm)

Mobile Mark's Heavy-Duty RM-WLF Wideband LTE Antenna is designed with efficiency, longevity, and toughness in mind for Cellular application where performance and reliability are uncompromised. With In-house electrical testing facilities, including an in-house anechoic chamber, Mobile Mark's engineers tested and verified the antenna's RF characteristics per specifications. Our in-house mechanical testing capability ensured that the antenna meets the rigorous Shock & Vibration testing standards.

By Cham Phoy, Product Manager