



4G CONNECTIVITY IN VENDING MACHINES

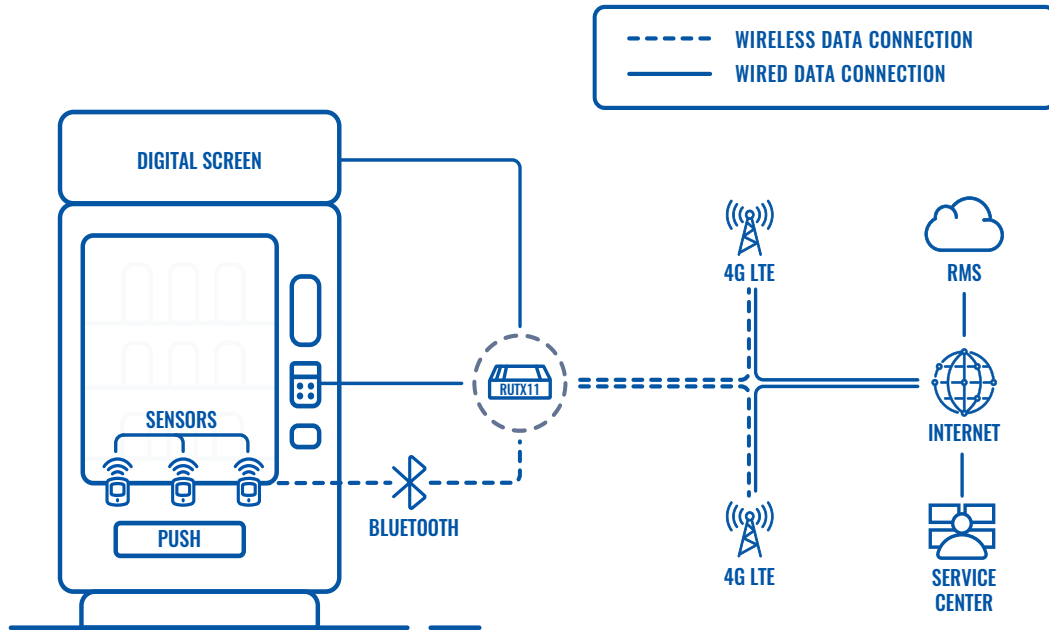
SUMMARY

The worldwide vending machine market is valued more than 5.8 billion USD and will grow to nearly 7 billion USD in 2024, according to the MarketWatch. The habits of the people are changing. Due to the faster pace of life, everybody is trying to save as much time as possible. This leads to a shift in buyer behavior; more and more customers buy drinks, food, and other products from vending machines since it is simpler and way faster than going to a grocery store.

CHALLENGE

Because the market is so big, many companies are focusing on installing and maintaining vending machines. These operations require many different employees, starting from engineers who will program the vending machine or personnel who will refill goods, beverages, or food if it runs out. All of those companies are trying to cut expenditures to make their businesses more profitable and find new ways how to improve the maintenance of vending machines. Some are trying to put sensors for monitoring the content of vending machines, some are using innovative payment methods, and some companies are using vending machines with digital screens, which opens up possibilities to generate additional income from advertisements. All vending infrastructure innovations have something in common; they require reliable and secure internet connectivity, which empowers all smart devices used for operating and maintaining vending machines.

TOPOLOGY



SOLUTION

Connection reliability is the most crucial feature for the vending machine market since all parts of the solution are connected to one single device. As we can see in the topology above, the main elements that are connected can include Bluetooth sensors for temperature, humidity and stock levels, digital screen for advertising, payment terminal for electronic payments, and the controller responsible for the overall operation of the vending machine. If the machine lost connectivity to the Internet, most of these solution components would stop functioning. Installing a professional cellular router, like RUTX11, vending machine operators and integrators can connect all parts of the vending solution to a single device and have internet backup because RUTX11 is equipped with 4G LTE Cat 6 with 2 SIM cards supported. The whole solution can be monitored via RMS, which gives the possibility to get notifications and alerts if something unexpected happens. Also, RUTX11 works as a gateway to the service center, allowing operators to monitor the stock levels inside the vending machine and make efficient decisions for refilling the machine.

BENEFITS

- Versatility - RUTX11 is perfect for this solution since it is compatible with different devices including Bluetooth sensors, payment terminal and digital screen using Ethernet and Wi-Fi interfaces
- Reliability - Dual SIM is an essential feature for internet backup and reliable connectivity, ensuring that connection is not lost even in the event of cellular operator disruptions
- Remote management - RUTX11 is fully compatible with Teltonika Networks Remote Management System (RMS) which enables robust remote monitoring and management capabilities
- Security - RUTX11 supports advanced firewall, access control and multiple VPN options, such as OpenVPN, IPsec, and others – essential for ensuring electronic payment functionality

WHY TELTONIKA?

RUTX11 series routers from Teltonika Networks are equipped with Bluetooth for easy sensor/beacon integration and Dual SIM functionality, which provides maximum connection reliability. It is capable as an Internet backup source for the most vital part of a vending solution – electronic payment transactions. Finally, RUTX11 is empowered by a very functional operating system – rutOS, which is easy to work with without any specialized training, allowing connected vending deployments to be easy and scalable.

