



CHECKPOINT & ROBUSTEL ROLL OUT COAST-TO-COAST 4G FOR USA RETAILER

A 1000 site success story from Checkpoint Systems, Inc. & Robustel

About Checkpoint

Checkpoint Systems, Inc. is one of the only vertically integrated RF/RFID solution providers for retail, delivering software, hardware, labels, tags, service, and connected cloud-based solutions. Checkpoint is a global leader in EAS and radio frequency identification (RF and RFID) technology solutions across a diverse range of markets including apparel, grocery, electronics, DIY, health & beauty, cosmetics, craft, logistics, drug, discount and specialty...

Checkpoint installs on average 30,000 global installations annually, and has 11,000 connected stores worldwide.

In recent years, a desirable addition to the standard EAS proposition is to add remote monitoring to derive customer insight and valuable footfall information. This is then presented in an easy-to-assimilate fashion courtesy of Checkpoint's software.

Adoption of the service can be hampered by non-availability of an internet connection in store (diligent IT Departments often cannot allow 3rd party equipment on their WAN) & this is when an independent, low cost 4G solution becomes essential to realise value from a 'connected store'.

Solution Overview

Checkpoint’s ‘pedestals’ have an Ethernet interface that can connect to a 3rd party router such as the Robustel R2000 used in this project.

The R2000 router provides a resilient 4G connection to the internet with a SIM that allows connections to both the AT&T and T-Mobile networks.

With a reliable internet connection in place, 3 x cloud-based services can be used as follows:

- Checkpoint’s Store Operations can monitor the entire estate of EAS pedestals worldwide and provide additional insights from sensors like footfall counters as part of its service.
- Checkpoint’s Network Operations Center can use a VPN connection to connect in remotely to any store at any time using the R2000 as the gateway to the pedestal and associated equipment.
- A recently added addition to the system is a connection to Robustel’s router management platform - RCMS. This free service gives unparalleled estate-wide monitoring and ability to perform over the upgrades of all software in the store.

Solution Topology

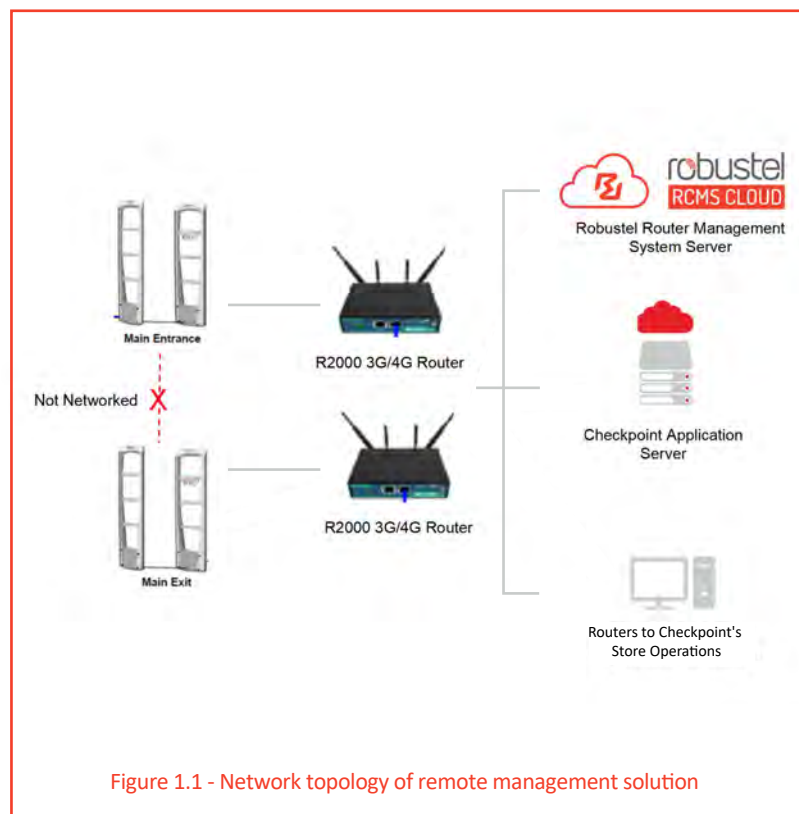


Figure 1.1 - Network topology of remote management solution

ROBUSTEL FEATURED PRODUCT R2000 3G/4G Router



- 3G/4G router with wifi & Dual SIM capability
- Free Microsoft Azure hosted cloud platform
- Data-Guard v2 application provides enhanced functionality for Roaming SIMs
- Fully programmable with extensive SDK environment
- Global versions available

BUSINESS CHALLENGE 1

In-store availability of 'free' internet access



One of the biggest challenges of installing 'internet-connected' hardware into 3rd party retail outlets is the availability of an internet connection. In fact, it's often a binary answer from the retail chain IT Dept 'yes you can', or, for security reasons - 'no you can not piggyback on our corporate network'.

When companies like Checkpoint are confronted with the latter, it can be a tough quandary. Either desist with the 'internet connected' piece which is often a big part of the value - prop, or alternatively, install your own solution using 4G.

The 4G solution can seem trivial at the outset but can quickly become a complex pandora's with hidden risks related to airtime over usage, reliability, hardware CAPEX, airtime OPEX, system architecture and setting up of the solution for maximum resilience.

In this respect, Robustel offered a turnkey consultancy service, providing end to end consultancy helping Checkpoint and its customer to avoid the many pitfalls.

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Robustel worked very closely with Checkpoint Systems in the design, integration and even the SIM selection for a robust 4G solution across the USA, sharing their expertise at every turn.

For one particular retailer we rolled out over 1000 Robustel routers and they have delivered flawless performance since being installed, which allowed us to get estate-wide 4G connectivity in place very quickly and very cost-effectively.

Joe Esposito, VP Customer Operations
Checkpoint Systems, Inc.

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BUSINESS CHALLENGE 2

Reliability of 3G/4G internet access

Checkpoint's systems are generally located inside retail outlets like supermarkets, drug stores, dollar stores, big-box retailers and apparel stores - a nice environment for humans, but often not such a nice RF environment for cellular devices trying to reach surrounding cell towers. Metal clad buildings can do a good job of attenuating radio waves at a variety of frequencies including those used for 3G/4G communications.

Robustel provided guidance on the choice of a roaming SIM that could connect to both the AT&T and T-Mobile networks in the USA, opting for an 'unsteered' roaming SIM that is optimised for best possible chance of a connection - not for the network operator's commercial benefit as is generally the case with 'steered' roaming SIMs. This solution instantly improves overall estate uptime as, quite simply, two radio networks are better than one!

Using a roaming SIM combined with good antenna choice/placement & optimised router configuration helped to deliver a very high uptime across the 1000 router estate allowing Checkpoint to focus on their core competence – delivering an exceptional EAS experience for the retailer.

BUSINESS CHALLENGE 3

Capital cost of 1000 x 4G routers

Due to the number of stores requiring internet connectivity, over 1000 x 4G routers needed to be purchased. At this scale, the absolute cost of each router becomes a key consideration for the feasibility of such a roll-out.

Price/Performance ratio is critical in such an application as buying 'cheap' can result in a disaster due to poorly written firmware or non-industrial build quality.

Conversely, the cost of an 'over-engineered' solution can negatively impact the business case upfront and 3G/4G connectivity - a key enabler of the Internet of Things - can be out of the reach of some projects.

The Robustel R2000 was able to hit a very aggressive price-point to fit the business case as well as providing highly stable long-term communications.

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Although trivial in principle, connecting a large estate of retail outlets always comes with its challenges. The Checkpoint team invited us to help make sure that all considerations - antenna type and location, router config, network architecture, roaming SIM type + more were well scrutinised prior to deployment. It is testimony to Checkpoint's diligence & professionalism and Robustel's high product quality that the 4G solution continues to provide uninterrupted connectivity across the length and breadth of the USA.

David Evans, Global IoT Solution Architect
Robustel

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About Robustel

Robustel are one of the world's leading manufacturers of industrial quality solutions for the IoT and M2M market. Robustel's portfolio of award-winning solutions are comprised of: Wireless Modems, Routers, Gateways, EDGE Computing, Cloud Software and End-to-End IoT solutions.

With a state-of-the-art production facility in Guangzhou, high quality products and services make up Robustel's corporate DNA. Maintaining an ISO9001:2015 Quality Management system and a sophisticated approach to quality control, planning, assurance and improvement has seen Robustel granted with numerous global certifications, including: CE, E-Mark, FCC, PTCRB, AT&T, Verizon, Anatel, IC, Rogers, GCF, TRA, RCM, iDA, NBTC, Postel, Sirim, CCC and Telec.

Today Robustel's solutions can be found in every corner of the 'Connected World' providing IoT solutions to industries as varied as: Security, Vending, Retail, Utilities, Oil & Gas, Industrial Production & Automation, Transportation, Environmental Services and Healthcare.

To learn more about how Robustel can help your business save money and improve efficiency through IoT, please visit www.robustel.com or email info@robustel.com for more information

