

WiFi and Mobile Computing Specialists

www.ensign-net.co.uk

01929 556 553



CASE STUDY: Bacardi



Ensign Delivers Multiple Secure and Resilient Wireless LAN Infrastructures Across Bacardi's European Production Facilities

Bacardi Limited is a company steeped in history, boasting a rich family heritage that spans seven generations. From their humble beginnings in 19th Century Cuba, where founder Facundo Barcardi Masso pioneered the very first clear or "white" rum, that remains Bacardi's flagship spirit to this day, Bacardi Rum has become one of the world's most recognisable brands. Over the years, Bacardi Limited have significantly expanded their portfolio to include over 200 separate brands and labels, all of which are produced, bottled and distributed from 27 facilities located around the globe.

The Challenge

- To completely design and install wired and wireless infrastructures throughout four European Bacardi production facilities.

Systems, Applications and Products

In order to achieve a higher-level of control over their business processes, Bacardi began implementing SAP (Systems, Applications and Products) solutions within their American-based production plants under the management of enterprise technology integration specialists, IT21 Solutions.

The Solution

- Secure wireless LANs, consisting of 3500 access points with CleanAir Technology.
- Atex approved enclosures within hazardous environments.

As the SAP project broadened to encompass Bacardi's sites outside of the United States, IT21 Solutions required a UK counterpart to deploy wireless LAN infrastructures to multiple production facilities across Europe. With a proven track record in the warehousing, manufacturing and distribution sectors, and as a valued partner of the industry's leading manufacturers, Ensign were the perfect fit for both IT21 Solutions' and Bacardi's requirements.

The Results

- A fully-secure and reliable warehouse Wi-Fi infrastructure, providing resilient coverage to the Bacardi workforce and their mission-critical data capture devices.

Coordinating closely with IT21, Ensign were asked to provide comprehensive and resilient wireless network coverage to Bacardi's sites in Pessione, **Italy**, a 19th Century site where the renowned Martini brand is made; Geneva, **Switzerland**, where Bacardi produces many of the raw ingredients used in their products; Glasgow, **Scotland**, where the Dewar's Scotch Whiskey brand is blended, bottled and packaged; and Buxtehude in **Germany**, a large Bacardi rum distillery located on outskirts Hamburg. Having already implemented mobile handheld solutions within each location, Bacardi's remit to Ensign was to achieve robust wireless coverage, which would ensure the roaming capabilities of warehouse staff and their devices.

Ensign Communications Ltd
20/21 Sandford Lane, Wareham
Dorset, UK, BH20 4DY

Tel: +44(0)1929 556 553

sales@ensign-net.co.uk
www.ensign-net.co.uk

Challenging Environments

The Design and installation of warehouse wireless networks is often characterised by unforeseen and difficult networking scenarios, to which innovative and workable solutions must be found. This was exemplified by the Bacardi Martini site in Italy, where the liquor has been made since the mid-19th century. A mixture of old and new buildings, the location was challenging to radio frequency mapping due to its solid construction, along with the requirements for ATEX control of devices used within the potentially explosive sugar store.



Hazardous Environments

When stored in large quantities many food substances such as sugar, can produce a highly explosive dust, making electronic device installation and subsequent usage a potential hazard. As sugar is one of the key components in the liquor fermenting process, this was a core consideration for Ensign. Their design team were mindful to include ATEX approved enclosures, which would house the wireless access points, into the finalised network designs. By encasing the access points in this way, any potential risk of explosion as a result of sparks from the wireless equipment was mitigated.

As with all projects of this magnitude, wireless site surveys were the foundation on which the networks would be designed and built, as they form the blueprint for a reliable, resilient and high performance wireless LAN. Completion of the physical site surveys by Ensign's UK team determined the optimum number of access points and their best possible location in order to meet the coverage requirements stated by Bacardi.

Ensign conducted each site survey based on Bacardi's prerequisite of unrestricted radio coverage throughout each site and the wireless LANs were designed to extend the existing Warehouse Management System (WMS) into what were previously uncovered areas. Implementing this degree of extended coverage across the sites would provide the pre-existing barcode scanners and handheld devices with further roaming capabilities, allowing warehouse managers to utilise more space and to ultimately achieve increased workforce efficiency.

To provide resilience for what would become a critical business application, during the site surveys, self-healing capabilities were built-in to the network design through an overlapping of coverage from one cell to the next. This process allows the controller to boost the power of any access point adjacent to one that may have undergone a power failure or other such fault.

Network Implementation

Communication is always the critical factor on large, international, projects of this nature, and a constant dialogue between Ensign and their American counterparts was essential to the ultimate success of each deployment.

A highly experienced installation team from the UK carried out the installation work, liaising with both IT21 and Bacardi local and Head Office staff to enable a swift and efficient installation whilst minimising any impact on the day to day running of each site. An IT21 representative, said: "Working with Ensign, we knew we could relax, they have a proven track record in the warehousing sector and were the best guys for the job".

Technology & Results

In order to provide Bacardi's production sites with industry-leading coverage, the Cisco 3500 wireless access point was selected for its high-performance connectivity capabilities and innovative CleanAir Technology, which make it ideal for mission-critical and mobility-driven environments.

Helping enterprise networks to achieve stable, uninterrupted coverage, Cisco's CleanAir enables access points to actively seek out, and subsequently avoid, sources of radio interference. This technology provides Bacardi's mobile workforce with unprecedented levels of performance and reliability, helping them to reduce processing errors and to achieve growth in daily output through a significant reduction in network downtime

Both Bacardi and IT21 were pleased with the outcome of the project, Rick Mental, Principle Partner at IT21, said: "The Ensign team remained focused on the task and worked well with the local Bacardi teams".



Dorset (Head Office)
20/21 Sandford Lane, Wareham, Dorset, BH20 4DY

Liverpool (Northern Office)
Unit K1 Sinclair Way, Prescott Business Park, Prescott, Merseyside, L34 1QG

sales@ensign-net.co.uk | 01929 556 553 | www.ensign-net.co.uk