

RFID Infrastructure

Introduction

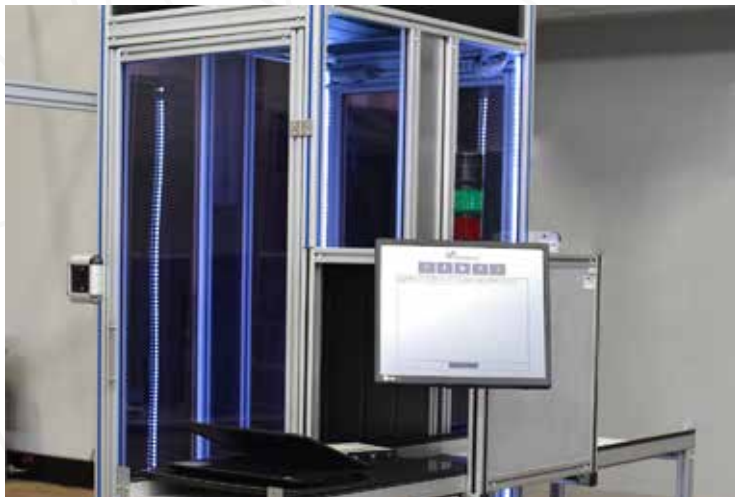
Synertech has established and maintains a comprehensive capability focused on the design, build, implementation and maintenance of RFID-enabled infrastructure that guarantees the cost-effective delivery of a wide range of performance-enhancing business applications and management information systems.

Traxsense

Synertech's Traxsense software platform brings to life innovative, automated monitoring and tracking solutions by providing clients with dashboards and analytics to easily track all assets and to monitor business performance indicators. Smart sensor enabled assets are transformed into intelligent data sources. These smart assets are connected in real-time which provides organisations with controlled and auditable IOT information. Traxsense not only provides for immediate management decisions, it also harnesses the power of data analytics for business optimisation.

Background

It is internationally acknowledged that the installation and establishment of an RFID-enabled infrastructure in physical locations such as office blocks, warehouses, stock yards, factories,



Asset Access Management Portals



processing plants and other commercial and industrial facilities provides a foundation for organisations to cost-effectively implement a wide range of highly-efficient and productive business solutions.

For example, infrastructure deployed to support an RFID-based asset tracking and management system in a corporate office park can be used as a foundation to manage operating expenditures associated with lease or rental agreements for items such as office automation equipment and high-value IT consumables etc.

The same system used to track and manage high-value assets can also be used to track and manage consignment stock. Although different systems may require a mix of active and passive technologies, with careful planning there is every possibility that an RFID infrastructure can accommodate a wide range of applications focused on business-critical data and information that can be shared and also integrated into the organisation's ERP system and other mainstream business applications.

Clients that select Synertech's approach to RFID and regard an RFID-enabled infrastructure as a platform on which they can implement several benefit-driven applications, will realise significant cost reductions in the medium to long term. They will

also greatly enhance their ability quickly and easily commission new projects that deliver an ever-increasing return on investment at a constantly reducing cost of ownership.

Capability overview

Integrated into the turnkey delivery of solutions and services that are the hallmark of Synertech's commitment to customers, the company's ability to design and install a comprehensive RFID-enabled infrastructure covers, among others, the following elements:

- **Portals** - Used for the automated monitoring and data collection from tags and other specialised transponders deployed to serve client specific applications across the enterprise and throughout facilities such as offices, factories, stock yards, production plants etc. Portals supplied by Synertech cater for all requirements, including fixed and mobile. Off-the-shelf or custom-designed and manufactured portals can range in size from hand-held devices to gantry-style portals in stock yards or bulk materials handling facilities such as weigh bridges etc.
- **Communications and connectivity** – Fixed network or wireless links from readers at data collection points to monitoring or control centres as well as connectivity and integration of RFID-based solutions into mainstream business applications such as ERP systems. Communication capabilities include the provision of ICASA certified and approved radio frequency (RF) modules and elements such as modems, readers and antennas. Communication networks and connectivity encompass seamless access to information from anywhere in the world using virtually any web-enabled device
- **Back-up and redundancy** – Extensive research and development investments have been made by Synertech into developing business continuity solutions that guarantee the availability of RFID-based solutions. These solutions include battery-powered back-up, uninterruptable power supply systems, solar-powered energy sources and standby-power generation with fully automated failover



Smart Storage Range is integrated with RFID systems



RFID system tracks the location of assets and stock



RFID Powered Intelligent Portal

- **Specialised storage devices** – Based on the SmartShelf range of storage devices that provide unique solutions to the turnkey management of high-value assets and specialised inventory in a totally secure environment, the company can integrate these solutions into any appropriate infrastructure

Summary

Synertech's infrastructure design and installation capabilities enable, among others, the following scenarios to be successfully addressed in the process of creating business value based on RFID solutions:

- Item identification, authentication and tracking in buildings
- Tracking of personnel movement
- Goods receiving and dispatch points in warehouses and stock yards
- Monitoring and management of choke points in buildings or in processes
- Production lines and process measurements
- Integration with weighing equipment
- Integration with CCTV, number plate recognition, personal biometric devices etc.
- Linked to security systems as part of personnel movement tracking and access control

Backed by the Synertech's commitment to after-sales service excellence, an RFID-enabled infrastructure supplied by Synertech will guarantee a significant return on investment and dramatically reduced cost of ownership for a wide range of profit-enhancing and performance-boosting RFID management solutions.

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