

Controlling Stock Movements

The CheckMate™ RFID Portal

CheckMate delivers a customisable gateway solution for managing stock.

The latest generation of manufacturing ID technologies makes it possible to track the movement of items at the same time as identifying them. As well as reading the data held on contactless electronic tags, some tag readers can detect the direction of movement of tags. So, an RFID enabled gateway or portal can determine if tagged goods are moving into or out of a room, on to or off a vehicle or from one part of a storage area to another and back again.

Portal based radio frequency identification (RFID) solutions create the possibility of new approaches to managing valuable stocks or any items whose whereabouts needs to be controlled.

To simplify the installation of portal based solutions, CoreRFID Manufacturing ID Solutions has created CheckMate™ RFID portals, a customised RFID based gateways for monitoring stock and finished goods movement.



The RFID Gateway

We are all familiar with the idea of a gatehouse, somewhere that goods can be checked in or out. Now automatic systems can carry out this task, making it easy to check goods that are leaving or arriving, increasing the accuracy and speed of collecting information about items and reducing the costs of checking goods in or out by removing the need for physical, manual, checks.

RFID enabled portals allow the implementation of systems that track the movement of goods or people. The data collected at portals can be used by corporate information systems, updating employee records, booking stock in or out, for example.

RFID portals need careful design. Account needs to be taken of the items being moved and the size of the gateway, for example. With today's technology there can rarely be a standard solution. The software of portal systems also needs careful development. Integration with ERP systems in real time or batch modes needs to be carefully thought out, and consideration must be given to the management of the portal system, allowing it to continue data collection in the event of a back-end systems failure, for example

The benefits are faster, cheaper, more accurate tracking of assets.

The CheckMate Portal

To address these problems CoreRFID developed the CheckMate portal. CheckMate supports applications that monitor and manage goods and people passing between rooms, areas of a site or into or out of stock yards or warehouses.

CheckMate portals are based on the use of ultra high frequency (UHF) RFID tags which can be read rapidly and from a distance. Tags can be passed through the portal at rates of hundreds per second, making CheckMate portals a practical proposition for detecting multiple items or for pallets moving through the portal on forklift trucks.

A CheckMate portal can be used to prevent or control the removal of sensitive documents from one part of a building; it can detect whether goods are being received or despatched through a loading bay; or it can check attendees arriving at or leaving an exhibition.

CheckMate RFID portals include an easy to implement software system that can be linked to access control, time management, asset control or stock systems, allowing information on item movements to be used in corporate information systems. The software has a management console and off-line support system that provides for simple reporting and allows the portal to collect data for later batch transmission.

Each CheckMate installation includes an antenna array designed for the specific customer location and application and an appropriate UHF RFID reader. The type of antennas depends on the dimensions of the gateway and the nature of the goods (and their associated tags) being moved. Using a CheckMate portal, items can be tracked into or out of a building. Where required the portal can use readers which detect the direction of travel, so that it can determine which way goods are moving through the portal.

Assets are identified with the necessary UHF RFID tags. CoreRFID are able to provide tags suitable for use with a wide range of items, making CheckMate portals suitable for many different applications. CoreRFID specialist tags include:

- Tags for embedding in wood
- Tags for attachment to metal
- Tags for high temperature environments
- Tags for returnable plastic containers
- Tags for glass or rubber items
- Printed tags for document folders
- Tags for items containing liquids
- Tags for attachment to steel tube or concrete
- Tags for vehicles (e.g. fork lift trucks or trolleys)
- Staff identity tags (e.g. badges and wrist bands)

The data collected can be used to update maintenance schedules, asset registers, or rental billing systems as necessary. Data from the CheckMate portal application can be easily imported into common business applications such as SAGE and SAP or into database solutions such as Oracle or Microsoft SQL Server.

About CoreRFID Manufacturing ID Systems

CoreRFID Manufacturing ID Systems help save costs and improve delivered product quality in a wide range of manufacturing environments. To learn more about how we can help with your particular production issues, contact us today:

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The Benefits

The CheckMate benefits are:

- Items checked in and out without paperwork
- Easy to use by staff
- Time-stamped movements for each device, person or package
- Reduces errors in documenting movements
- Simple integration with other IT

A CheckMate portal gives greater control over stocks, tools or other assets.