

**SATO**  
Powered On Site /

**PJM**



## SATO PJM RFID

The only RFID technology you don't have to work around

[satoeurope.com](http://satoeurope.com)

Blood Bags Management



## A SHORT INTRODUCTION...



### WHAT IS PJM RFID TECHNOLOGY?



**Advanced HF Technology**  
compliant with ISO 18000-3 Mode2



Name:  
**Phase Jitter Modulation (PJM)**



Made in Australia  
by **SATO**, Tags  
made in Japan

## WHAT ARE THE CORE ADVANTAGES OF PJM?

- ✓ Guaranteed 100 % read accuracy
- ✓ Ability to work down to -80°C
- ✓ Retrofittable
- ✓ Radiation hard memory unaffected by medical grade sterilisation with gamma, X-ray or e-beam
- ✓ Fastest RFID Technology able to identify hundreds of tags per second.
- ✓ PJM RFID tags large memory capacity allow for complete product information to be stored, not just the item code
- ✓ Performance is unaffected by liquids and cells
- ✓ Designed for stacking - Even tightly packed items will be accurately read
- ✓ 3D Orientation – 3 Dimensional reading field
- ✓ Safe for use with all blood products and biological agents



## WHAT ARE THE ADVANTAGES OF PJM TAGS?

- ✓ Large Memory Capacity
- ✓ Wide temperature range down to -80°C
- ✓ Can withstand medical grade Gamma, E-Beam and ETO sterilisation
- ✓ Can identify hundreds of tightly packed items regardless of placement or orientation

# International Standard for Blood Transfusion Safety



## PJM RFID is the right solution for blood management

\*PJM stands for Phase Jitter Modulation



- ✓ ISO/IEC 18000-3 recommended by ISBT\* \*Vox Sanguinis April 2010.
- ✓ PJM tags able to hold the full ISBT 128 data set and recipient data.
- ✓ Works across the full range of temperatures experienced in transfusion medicine.

### Batch process items quickly and accurately

PJM RFID can identify and communicate with large numbers of tagged items effortlessly and without any compromise in performance or accuracy.



Example: PJM RFID tunnel can identify up to 600 items per second. Increases work speed and improves efficiency when batch processing.

\*Reading speed may vary according to use environment and item

### Handle tightly packed items with ease

PJM RFID performance is unaffected by the orientation, or how deeply packed, stacked or layered items are. Process items without the need for special packing, sorting or placement.



Various items in random orientation



Multiple closely packed items

### Operates in the presence of liquids and metals

PJM RFID offers performance and accuracy not achieved by other RFID technologies when handling items containing liquids or packages containing metals.



PJM RFID tags attached to blood bags

## Complete solution for Vein-to-Vein transfusion management from SATO

- ✓ SATO offers solutions for all steps in the blood transfusion supply chain from blood donation to transfusion. Flexibly design systems for all facilities according to your needs.
- ✓ Automate transport and temperature record taking for blood units to ensure full traceability and uncompromised audit trail.
- ✓ Achieve real time visibility of inventory at all blood storage locations with PJM RFID and enable resource sharing between facilities.



## BLOOD DONATION

### ① Challenges

- Audit trail record keeping
- Temperature monitoring & logging

### ✔ Start RFID tracking from donation

Achieve a complete vein-to-vein audit trail with transfer and temperature records by combining PJM RFID together with temperature loggers.



### ✔ Ensure donor and donation information is linked

Ensure transfusion safety by securely linking donor and donation information with SATO donor ID and wristband print solutions.



## HOSPITAL

### ① Challenges

- Labour intensive manual record keeping & stock takes
- Blood unit traceability and inventory visibility
- Cold chain and first-expiry first-out compliance

### ✔ Real-time inventory visibility, full traceability

Always know where and what your inventory is and be sure correct handling procedures have been followed.

Eliminate the need for manual searches and worrying about incorrect or missing unit transfer logs.

### ✔ Automate record keeping with PJM RFID

Proper record keeping is essential for transfusion safety. Automation with SATO's PJM RFID solution ensures more time is spent at the patient's side.

## BLOOD CENTRE

### ① Challenges

- Manual receipt & dispatch scanning is time consuming
- Inventory management without real time inventory visibility
- Ensuring first-expiry first-out procedures are followed
- Audit trail record keeping

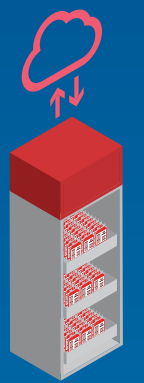
### ✔ High speed batch processing with tunnel readers

Increase the speed and efficiency of receipt & dispatch operations by batch scanning with PJM RFID.



### ✔ Enable real-time inventory visibility across the entire blood supply network

Storage with PJM RFID functionality enables you to locate any unit(s) instantly, streamline picking and dispatching operations. Automatic alerts will be triggered should an error be detected ensuring accurate and expedient deployment of critical inventory.



### ✔ Ensure cold chain & FEFO compliance

Track and log all movement of blood units and automate cold chain and FEFO compliance tracking by using PJM RFID enabled storage



# RETROFITTING FURNITURE

- ✓ If you want to implement PJM RFID in your facility, you don't have to change your appliance furniture. We can retrofit your agitators, fridges and freezers, as well as shelves in your cold and freezer rooms so you can implement PJM RFID easily.
- ✓ We adjust what you have so you don't have to buy new appliance furniture.
  - Saving money
  - Easy to implement
- ✓ The interior space of the agitator, fridge and freezer as well as shelves in your cold and freezer rooms will remain unchanged after retrofitting.



## High speed identification of stacked items with PJM StackTag™

One of the key advantages of SATO's PJM RFID systems is the ability to identify tags on items when multiple items are stacked, or closely located, even in the presence of liquids or ice. We provide a number of tag formats and tag sizes to suit different applications.

A number of popular tag types are available. Depending on volumes, new tags can be designed for particular applications. Typically, tags are provided as bare inlets, transparent adhesive labels or paper adhesive labels.



## PJM RFID Open Shelf system for tracking and management of blood and medical devices.

### 100 % ACCURACY

Designed for use where fast accurate real time unattended/remote visibility of products is required, our PJM RFID Open Shelf system is flexible to be installed as a fixed-in-place or mobile solution to manage owned and consigned stocks.

PJM RFID technology conforms to ISO 18000-3 Mode 2 and is completely safe to use with all biological agents and materials. This system is ideal for managing blood, blood products, sterile orthopedic implants & devices and can be used by medical drug dispensaries for managing medical products.

### BENEFITS:



RFID tags can be presented in any orientation



RFID field unaffected by liquids

# PJM Hardware



**MSTRP-6464, 5050, 4040  
Tunnel Reader**



**MDR-4330AT  
Desktop Reader**



**Tags**



**PJM RFID  
Open Shelves**



**MDR-1109  
Desktop Reader**



**Retrofit Kits**



**CL4NX Plus Printer**



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