



Frequently asked questions on Xerafy's XS RFID tag for healthcare

DO THE RFID TAGS INTERFERE WITH HOSPITAL INSTRUMENTS WITH ELECTROMAGNETIC INTERFERENCE EMI?

Passive RFID tags do not emit any signal until activated by a reader, so emissions are quite low compared to active RFID for real time locating systems. However, a study conducted in a non-clinical setting by the University of Amsterdam and published in the *Journal of the American Medical Association* found that passive RFID technology did generate some interference with medical devices when the RFID equipment was placed very close by. A follow-up study conducted by researchers from Indiana University, Purdue University and RFID vendor BlueBean found no such interference in tests conducted in an actual clinical setting. While the risk is quite low, hospitals should conduct a thorough EMI assessment to avoid any potential interference.

CAN THE TAGS SURVIVE AUTOCLAVE STERILIZATION?

The tags are rugged and have been tested to withstand 1000 repeated autoclave sterilization cycles. The tags can withstand application temperatures between -40°F to +302°F (-40°C to +150°C). Surgical instruments can now be tracked with through the sterilization process to certify cleanliness.

IS THERE A RISK TO THE PATIENT USING RFID TAGGED SURGICAL INSTRUMENTS?

There is no risk to the patient safety in contact with RFID. The XS tags are biocompatible and materials meet non-toxic medical standards.

ARE THE RFID TAGS FDA APPROVED?

The XS Series is designed to comply with the most stringent FDA requirements for to CPG Sec. 400.210 for RFID use and ISO-10993 for biocompatibility and FCC compliance to Part 15.231a.

WHAT ARE SOME OF THE MAIN APPLICATIONS FOR RFID IN HEALTHCARE?

- Asset location
- UID unique identifier number for medical devices
- Patient Tracking
- Baby Tracking

- Surgical sponge tracking
- Surgical tray tracking
- Loss prevention
- Office management
- Patient record tracking
- Surgical navigation in minimally evasive surgery
- Laboratory specimen tracking

DOES THE SIZE OF THE ASSET AFFECT THE READ RANGE OF THE XS TAG?

The size of the asset is very important in determining which Xerafy metal RFID tag to use. The Dash XS should be used for assets with a width of less than 0.5 inches (15 mm). In addition, the length of the asset will also affect the tags read performance. For example, a tool that is 4 in (100 mm) length will have a significantly longer read range than a tool that is only 2 in (50 mm) in length.

HOW DO I ATTACH THE XS TAGS?

To properly attach the Dot-On XS and Dash-On XS, first use instant glue to place the tag on the asset, then cover the tag with epoxy resin to secure the tag in place. For assets in the medical field, we recommend using an FDA-approved USP Class VI epoxy. Using epoxy will both help secure the tag to the asset as well as help prevent damage from shock and impact. The XS tags have a horizontal polarization and should be attached to the asset lengthwise to maximize performance.

HOW DO I EMBED THE XS TAGS IN A METALLIC ASSET?

First prepare a cavity in the asset where the tag will be placed. For the Dot-iN XS, prepare a circular cavity with a diameter of 0.39 in (10 mm) and a depth of 0.1 in (2.6 mm). For the Dash-iN XS, it is ideal to create cut away recess in the asset rather than a rectangular cavity. The length of the recess should measure 0.5 in (13 mm) and the depth should be less than 0.09 in (2.3 mm). Once the cavity or recess has been prepared, place the tag in the center of the cavity or recess using instant glue and then completely covering the tag with epoxy resin, making sure that all spaces are filled. Once again, it is important to ensure a flat metallic surface is used to eliminate any gap between the tag and the asset, which can lower the read range by detuning the tag.

CAN XS TAGS BE ATTACHED TO SPONGES?

No, XS tags are designed for metallic assets and require a flat surface space of 0.24 x 0.08 in (6 x 2 mm) for the XS Dot and 0.59 x 0.12 x 0.06 in (15 x 3 x 1.5 mm) for XS Dash.

WHERE CAN I PURCHASE XS TAGS?

Please contact Xerafy at sales@xerafy.com to order tags. We sell through our partner channel so please look for the partner that can best serve you on our [partner page](#). Soon we will be offering sample on our [online store](#). For more information, please download the [Dot XS](#) and [Dash XS](#) datasheets, the [XS Series User Guide](#), and the whitepaper “[RFID Revolutionizing Healthcare with Smart Surgical Tools](#).”