

CUSTOM RFID TAG SOLUTIONS



Call 866-669-7590



So You're Considering RFID...

Everyone talks about RFID tags – those tiny chips that enable you to track an item's whereabouts. RFID can create a positive return on investment through better inventory management, reduced waste and access to a product's pedigree. The key to implementing a successful RFID solution lies not just in the tags but in the overall system. In turn, the design of the system is dictated by what you are trying to achieve. Sometimes RFID is not the answer because it can be complex and costly. On the other hand, if your operation has expensive assets or significant inventory that can benefit from economies of scale, RFID may be the perfect solution. Let's walk through what goes into an RFID solution and see if it is cost-effective for your needs:

WHY RFID

An RFID system can increase return on investment through improved supply chain efficiency and inventory control. A secondary benefit is theft prevention.

Effective RFID solutions need to be installed at each production facility. This means each factory, warehouse or retail outlet will need access to a database, printers/encoders, readers, portals, software and infrastructure, as well as RFID labels or tags. You also will need middleware and integration services.



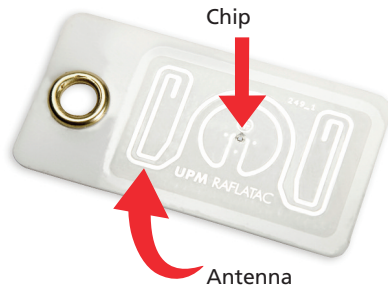
Here's an estimate of those costs for an entry level solution:

RFID Software	\$18,000 - \$25,000
Fixed Readers	\$2,500 each, depending on the features
Hand Held Readers	\$3,500 – 5,000 each, depending on the features
Infrastructure		
Installation & Education	..	\$12,000-\$15,000
Tags/Labels	\$ Depends on inlay, material, size & quantity



RFID TAG INLAYS

The brain of an RFID tag is its inlay, which has two basic parts: the chip and the antenna. The chip stores information about the item to which it's attached and then uses the antenna to send that information to the RFID reader.



The chip and antenna size you need depend on things like how far away your readers will be from the tag and what the surrounding environment will be. An RFID tag going on a warehouse shelf does not need to be as durable as one going to an offshore drilling rig. In addition, liquids shorten the transmission range of an RFID tag, whereas metal can either absorb or reflect the energy.

Placement and orientation of the tag in relation to the asset may also influence performance.

Is the tag going inside a cabinet, outside a drum? What works in one circumstance may not in another. That's why you should test the tags in the field before making a large-scale purchase.



MATERIALS

In order for the inlay to be attached to an asset, it has to be packaged into some kind of label or tag. Some inlays are small and inconspicuous and made to look like part of the packaging - if you see them at all.

Others are attached to wires that can be embedded in concrete or other materials. How the tag will be used and in what environment help determine the best materials for your job.

The cost of an RFID tag depends on several factors, including size of the inlay, the size of the tag and material it's made from, whether you're also printing a barcode and/or logo on the tag, and the quantity you're making.



An armored steel tag that can withstand welding temperatures will be more expensive than a small plastic tag. A vulcanized rubber tag that goes over a pipe will be more than a ceramic tag.

Here is a list of common RFID tag materials and approximate costs:

RFID Tag Materials	Price Range per Tag (USD)
Inlay (memory chip & antenna)	0.12 - .25
Label or Overlay	0.50 - 1
Ceramic	4 - 9
Fiberglass	5 - 12
Plastic	3 - 7
Silicone	5 - 9
Rubber	7 - 15
Weldable Metal	9 - 16

TAG SIZE

Size matters. A one-inch rubber RFID tag is less expensive than the six-inch version. The size of the asset and field conditions help determine the best tag size.



QUANTITY

Like with most items, the more you buy the lower the price of each item.

ENVIRONMENTAL IMPACT

Since setting up an RFID system is a significant investment, you will probably want to have a qualified technician conduct a site test to identify sources of RF interference from motors, cordless phones, high-voltage cables and other electronics. To obtain optimal performance, you'll want to avoid areas where you can't get a clean signal.

RFID SOLUTION

A few last points to remember: *Set your goals for the system ahead of time and stick to them. See if your budget and timeline will enable you to develop a cost-effective system. Contract with a manufacturer with a proven track record once you decide to go ahead.*

