

Finding The Right Manufacturer For Your RFID Hardware

Tamara Harris, RFID Wizards



As in any consideration when trying to produce a product, there are a number of factors that need to be considered in selecting a manufacturer.

Cost, quality, reliability and deliverability are just a few. When looking at manufacturing RFID hardware, however, all of the above factors and more should come into consideration. In this article we'll talk about what you need to look for in an RFID hardware manufacturer and why.

Universal Standards in Manufacturing

If you've ever had anything manufactured, then you know there are certain things you should expect from *any* manufacturer:

1. the knowledge and skill to take your schematics and turn them into a product,
2. outstanding quality control,
3. on-time and consistent delivery,
4. *reasonable* and *consistent* cost,
5. and good customer service.

In our increasingly borderless society having a manufacturer who understands and complies to not only their country's regulations but with import and export rules of any country is a must. Manufacturing RFID equipment has much more to take into account.

Regulations, Standards and Compliance

ISO, EPC, RoHS, CSG2. These are just a few of the acronyms you will encounter in the world of RFID and wireless technologies. Standards and compliances developed for everything from communication protocols and allowable frequency ranges to hazardous material and transmission or output power restrictions, of which you

Finding The Right Manufacturer For Your RFID Hardware

Published on Industrial Maintenance & Plant Operation (<http://www.impomag.com>)

need to be aware before you start making and distributing your RFID products either nationally or internationally.

ISO Standards

Chances are that if you've developed your product you've already looked into a number of ISO and other standards. ISO ([The International Organization for Standardization](#) [1]) has issued standards covering everything from how to track animals such as cattle (ISO 11785) to the air protocol interfaces (ISO 18000 series) allowed for tracking assets in a supply chain to protocols for entire systems such as RTLS (Real-time Location Systems - ISO/IEC 24730). These are all international standards that must be adhered to in RFID hardware design and manufacturing. (For a more comprehensive list of ISO RFID Standards click [here](#) [2]).

Keeping up with all of the standards is tough enough, especially when dealing across multiple RFID application arenas and across international borders. Having a manufacturing company that understands ISO standards makes life a little easier and helps ensure that the right products get delivered to the right place, helping your company avoid not only embarrassment but possibly steep fines or even worse, seized goods!

Frequency Allowance - Do you have a license for that range?

And what about frequency restrictions? No matter what technology you are working with whether your market is passive UHF or active Wi-Fi there are restrictions and regulations set around the actual frequencies your systems can communicate across. This means that tags and readers designed to operate across a range of allowable frequencies in one country may not be allowed without special permission - if allowed at all - in another country. Let's take UHF for example.

UHF for EPCglobal Class 1 Generation 2 or ISO 18000-6C tags is defined as a range starting from 860MHz to 960MHz. In North America, this range is unlicensed across the 902MHz to 928MHz range only. In Europe the unlicensed range is restricted to 865.6-867.6. And in some countries the entire UHF range is restricted due to military or other government use. This means that a reader developed to operate on the North America frequency may be completely illegal in Europe and a tag designed specifically for operation in North America may not perform as well in Europe. Consider what happens if your manufacturer should ship a NA certified reader to Europe? Besides the expense of having to receive the wrong reader and reship the *right* reader, there could be other replacement costs and customer satisfaction issues.

ETC, ETC, ETC

Then there are transmit, or output, power restrictions. What?! That's right. While some countries have frequency restrictions others have power restrictions and some countries...have both. It pays to know this - or have a manufacturer that does. And don't forget RoHS ([Restriction of Hazardous Substances Directive](#) [3]). This is the restriction of the use of certain hazardous substances in electrical and

Finding The Right Manufacturer For Your RFID Hardware

Published on Industrial Maintenance & Plant Operation (<http://www.impomag.com>)

electronic equipment, for example - lead content, and is a standard issued by the European Union and compliance is *mandatory*.

Conclusion

As we stated above, there are several things that need to be considered when trying to find the right manufacturer for your product(s). And we just hit the tip of the proverbial ice-berg. However, having a little knowledge can go a long way. Doing a comparison between RFID manufacturers in relation to their expertise and experience can help you in weighing your decisions. With that in mind, remember the following:

- First, visit the manufacturer's website. See what services they offer, what product development they've done in the past and who some of their clients are.
- If they already develop RFID equipment, find out what kind of quality and consistency they've had in manufacturing and delivering those products. Some manufactures, when asked, may agree to give you reference contact information so you can talk to some of their clients directly.
- Don't forget costs. Costs should be competitive with other RFID manufactureres. However, keep in mind sometimes paying a higher cost gains you more.

Some RFID hardware manufacturers, such as [Chung Nam Electronics](#) [4], offer many of the above criteria along with additional services and also have a number of desirable industry certifications.

Whatever your choice - remember - it pays to do your research *ahead* of time.

Copyright (2010) [RFIDwizards.com](#) [5]. All Rights Reserved.

Source URL (retrieved on 04/19/2015 - 2:50pm):

<http://www.impomag.com/articles/2010/02/finding-right-manufacturer-your-rfid-hardware>

Links:

[1] <http://www.iso.org>

[2] http://rfidwizards.com/index.php?option=com_content&view=article&id=242:iso-rfid-standards-a-complete-list&catid=227:standards

[3] http://en.wikipedia.org/wiki/Restriction_of_Hazardous_Substances_Directive

[4] <http://www.cne.com.hk/service.php>

[5] <http://www.rfidwizards.com>