



## Integrating Hardware into Your Existing IT Infrastructure

### FIRST THINGS FIRST

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The most common technical challenge that we have here at the EMP Tech Group. A customer wants to incorporate new hardware into their operations, but the data going to this hardware, and being collected by the hardware has to work with existing business software. This software can run the gamut from Quickbooks to Oracle. How do we help the customer with this dilemma? Lots of ways, and we break it down by hardware type below.

### 1 BARCODE SCANNERS

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A little cheat, picking the easy one first. If anything that we sell is plug and play, this is it. Plug the USB cable from the scanner itself, or from the Bluetooth cradle to your PC, the driver self-installs, and the scanner works. Most of the time...unless you are trying to scan into a PLC, or a MAC, or a mobile device, then you might need our help.





## 2 LABEL PRINTERS

Stepping up the complexity a bit, label printers are a one-way street of data, but your business software needs to get data to your label printers. There are a couple of ways to do this, one is to send printer strings in the printer's native language to the printer. But that is not done as frequently, more often, a commercial label printing software package is used. If you reach out to us at the EMP Tech Group, that is almost always BarTender. So, how does it work? You install BarTender, either locally, or in the cloud, set up your label formats, connect them to the data source that holds the information that you need printed, and then either initiate the print from the workstation in BarTender, or from the Business Software. Just like the Barcode Scanners, you can probably do this yourself, but you may need help from EMP. Particularly if you are trying to print from a PLC, over the network, be it wired or wireless.





### 3 MOBILE COMPUTERS

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Now, it is starting to get fun. Particularly if you are trying to use gun style or cell phone style mobile computers. Also, if your OS is Android, and not big Windows. So, 3 ways this can work. First, is to have an application that is made to natively run on the device. You launch the application, and it takes care of getting data to and from your back-end system. Second is to run a browser application. It can be run in most any device and makes the application OS agnostic. Third is to run old fashioned Terminal Emulation. Yes, you can still get TE software to run on Windows, Android, or iOS, and there are still many companies running the back end servers that run with TE.

Lots of additional challenges that EMP can help with. Like using DataWedge on the device to allow the barcode scanner to work with your application. Wireless set up and security to get your devices seamlessly working in your wi-fi environment. Mobile device management software like SOTI to help you manage large fleets of mobile devices. And the one most often forgotten is managing devices as they go in for repair and come back totally wiped. You have to have a plan to get OS, applications and settings done for returning repaired devices.

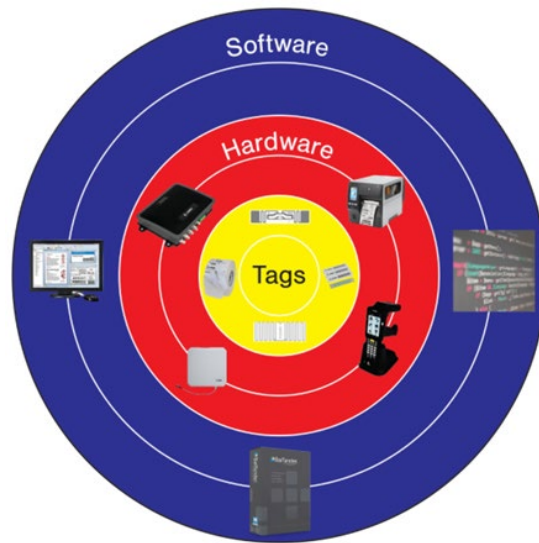




## 4 RFID

The challenges keep getting bigger. Everything up to now dealt with single scans, or single labels. Also, you could look and see what you are doing. Squeeze the trigger, red light appears on the barcode, the scanner beeps, the data appears. Something your existing software can usually handle. Not usually the case with RFID.

RFID goes more like, squeeze the trigger, hundreds of beeps happen, tons of data appears, and you cannot tell what is what. What you wanted to read, what you didn't want to read, where the data should go. And that is with a mobile computer where you have more control. Put a fixed RFID portal out there, and you have data appear out of nowhere.





## 5 THE HODGE PODGE

Those are the main categories, but nowhere near all the hardware that we sell. Fixed mount barcode scanners, label print and apply, inkjet and laser printing, machine vision, Real Time Locating Systems, mobile power carts. How do you get all these products to work in your IT Environment? Sometimes it is tricky.



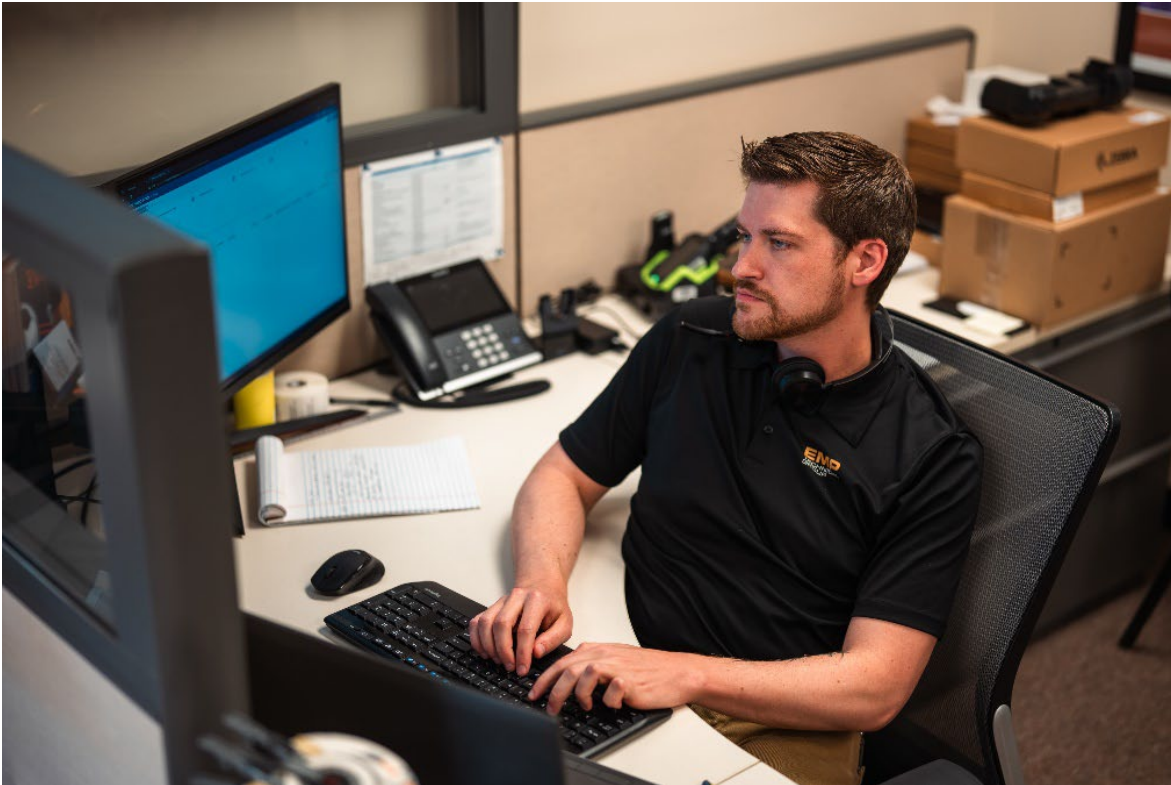


## 6 WE HAVE THE ANSWER

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Over the years we have developed a standard methodology for helping customers with this. Not a standard, one size fits all solution, but a standard methodology to help find the best way to integrate new hardware into your operations. First, we explore your existing software, to see if there is a way that new hardware will work with what you already have in place. Sometimes, there are additional modules to your existing business software that you can purchase and use to solve the problem. If existing software is not an option, then we will help you search for off the shelf software to get the job done. Particularly with label printing, we usually have a solution. With Mobile Computing, we will often use our trusty rapid development application called MCL. There are several RFID Middleware applications on the market that we can turn to as well.

If the first two options fail, we are more than capable of writing a custom application for your requirements. This can many times be the best solution particularly if the scope of what is needed is not too large. Our team has written hundreds of applications for your customers, so we might already have a code base that will make custom coding attractive.



## 7 HIRE AN EXPERT

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The EMP Tech Group specializes in helping you get the hardware technologies that we sell to work in your environment no matter what your needs are. Our team has hundreds of years of experience helping customers with a bridge between automation hardware and existing software. [www.emptechgroup.com](http://www.emptechgroup.com) is always the best way to reach us.