



Children's Checkin Kiosks

PURPOSE

At a recent ISC event I talked about how our Children's Ministry did their checkin kiosks. Our buildings are all multi-use. Faith doesn't build a building unless it can be used 24x7x365. As such having large checkin kiosks and cabinets permanently mounted to the wall or taking up valuable floor space wasn't an option. Our solution also had to require limited storage when it wasn't in use.

We set out to find a way to provide a portable checkin kiosk that was easy to setup, store, and maintain. Unfortunately none of the products available on the market fit our needs. They were all too bulky when deployed and required a lot of floor space to store.

SOLUTION

Our solution was to build custom cabinets that would hold the printer and a touch screen of some sort. That cabinet would then hang on the wall and be easy to remove. The cabinet size would be small enough to fit into a rolling upright cabinet limiting the amount of floor space required to store the kiosks when they are not in use.

The kiosk mounts to the top of a cabinet containing the printer. The labels come out the front of the cabinet and the top opens allowing easy access to the printer inside.

HARDWARE

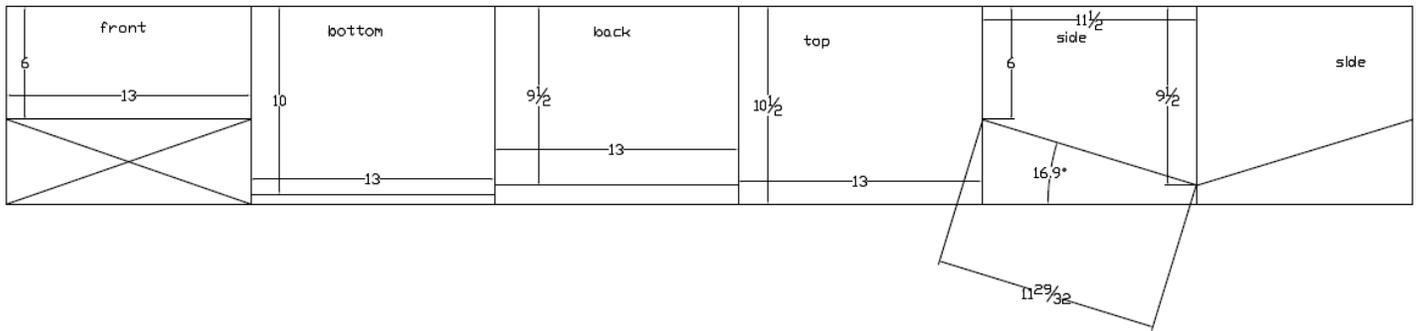
For printers we chose the Godex DT4 thermal printers (<http://www.godexintl.com/en/product/type/model/DT4>). For the tablet we purchased refurbished Microsoft Surface Pro 2's. They are the 64 GB model but have more than enough power to run checkin. The RT models wouldn't work as they can't run the .NET application for checkin. Buying refurbished tablets saved thousands as we were able to get each one for \$199 in a closeout sale.

To mount the tablet to the cabinet we purchased X-Grip cradles from RAM Mounts (<https://www.rammount.com/products/xgrip/surface>) along with their cradle arms and bases (<https://www.rammount.com/part/RAM-B-201U-C>). This gave us the solution we were looking for.

The printer connects to the tablet via USB. The cabinets hang on the wall using flush furniture hooks. When the cabinets are removed all that is left on the wall are the furniture hooks.

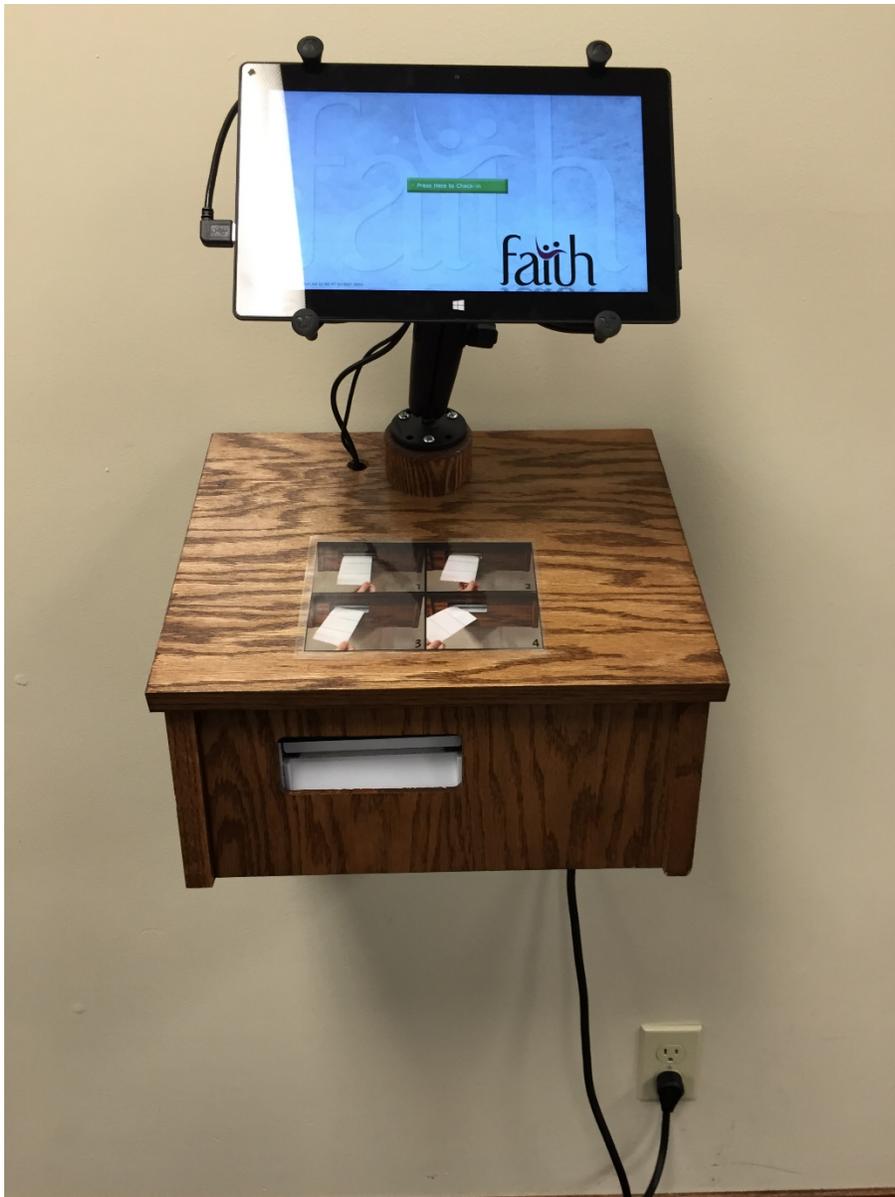
An engineer in the church then build the cabinets in his woodshop. Here are the cabinet specs. These can be easily modified if you have a larger or smaller printer or tablet.

This is an image of the AutoCAD specs for the individual cabinet pieces.



IMAGES

Here are pictures of our solution. This is a cabinet hanging on the wall ready for use.





This is what the cabinet looks like with the tablet laid down.



The top of the cabinet lifts up and you can see the power strip, printer, and extra roll of labels. Changing the labels fast and easy. The printer is attached to the bottom of the cabinet using the mounting points on the bottom of the printer and a few screws. This ensures the printer doesn't slide around in transport or get pushed back by the user.



The kiosks are stored in an upright cabinet on wheels. With the tablet folded down the kiosks fit on the shelves and can be locked in the cabinet for security. For deployment the cabinet is wheeled around the building as the kiosks are setup and taken down.



Here is a look inside the cabinet with the kiosks stored.

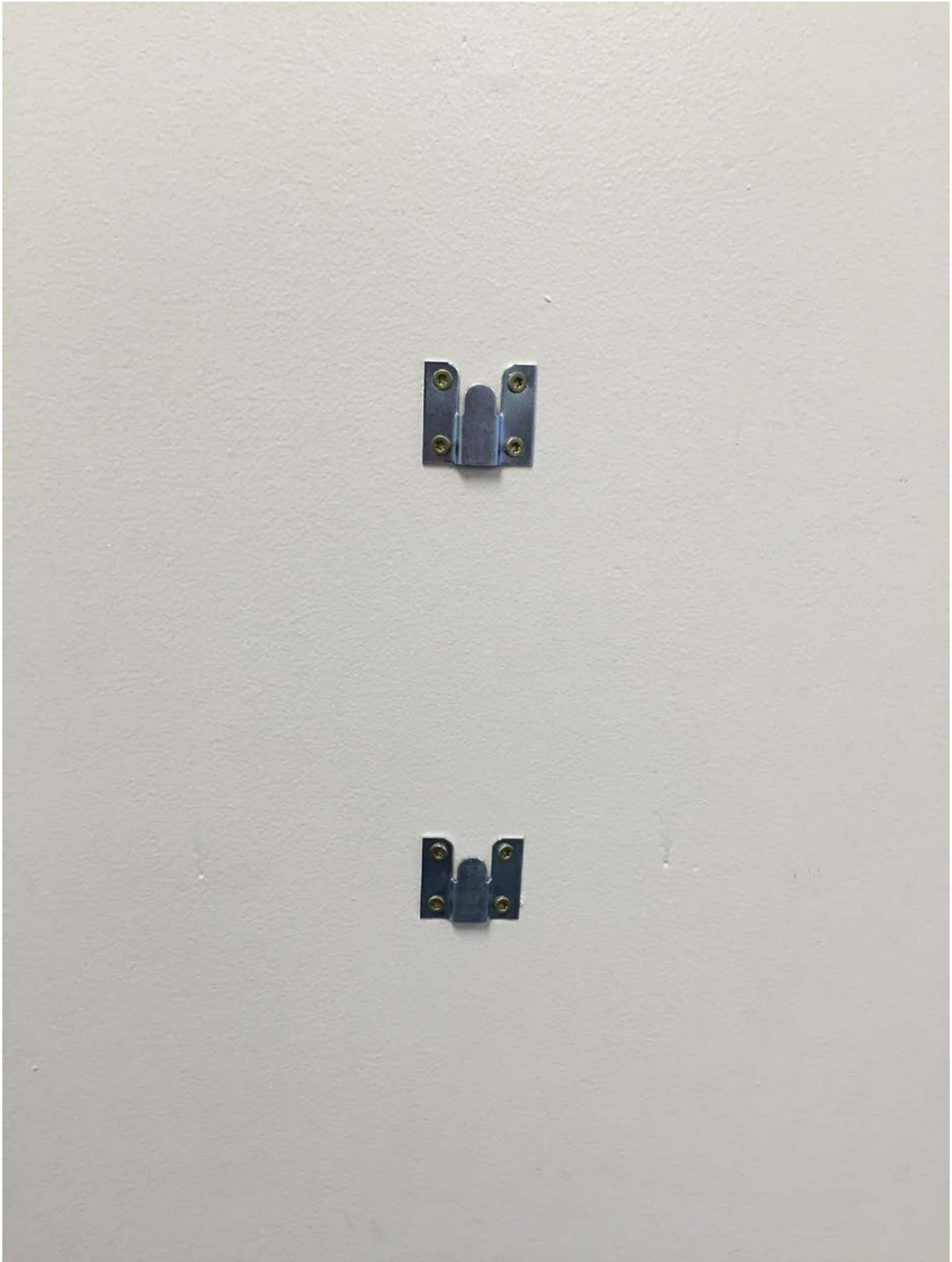




The kiosks hang on the wall using these hooks. The carpet pads are to keep the kiosk level and prevent the wood from scratching the drywall when the kiosks are setup and taken down.



All that's left on the wall when the kiosks are taken down are these mounts.



SOFTWARE

In order to make the kiosks as idiot proof as possible we use software by Inteset to automatically manage the boot and loading process. All that has to be done during setup is plugging the cabinet in and turning on the tablet. The Inteset Secure Lockdown does the work of loading the .NET application for checkin. It then locks down Windows so you can't do anything but run the checkin application. You can't exit it either. If anything goes wrong you just power cycle the tablet and it refreshes the .NET application and restarts the way you want it.

<http://shop.inteset.com/lock-down-windows-with-inteset-secure-lockdown>

A few notes:

1. Disable Windows Updates or the tablet may end up endlessly restarting or prevent the network driver from loading before Inteset takes over.
2. Disable the ability to zoom via a Windows Registry hack. This one caused some fun for us until we disabled it.
3. Make sure you keep the same printer with the same kiosk. Windows tries to install a new printer driver each time so if you mix them up your labels may not print correctly. We labeled each printer and tablet with a letter to ensure they stay together.
4. Remove all power off settings.
5. Set a screensaver with instructions to tap to checkin.
6. Make sure the default Windows account doesn't have a password. This allows Inteset to automatically boot up to the proper account.
7. Disable auto rotate.
8. Turn off UAC.
9. Disable Bluetooth.
10. Set the print driver to use the right label and size.

In order to access the checkin software back end we added an on-screen keyboard that you can get through Inteset. If you know where to tap on the screen you can enter the code and access the kiosk software to re-print a label or fix something. We can do everything we need via the touch screen so a keyboard or mouse isn't necessary.

CAVEATS

While this solutions works well we have learned a few things we thought we'd pass along.

1. We had to add a few electrical outlets in order to be able to place the kiosks where we wanted them.
2. This system is very flexible and allows us to easily relocate kiosks for special events like Vacation Bible School, Winter Break Ministries, etc.
3. Our Godex printers have a tear bar so we use perforated labels. This works well but with users tearing the labels off in different ways it is easy for the labels to become misaligned in the printer. Our biggest support issue is opening the cabinet to realign the labels.
4. During transport the labels also shift around so they have to be aligned each time the kiosk is installed. It is a simple process to open the printer top and push the guides towards the center but it has to be done each time.
5. While the tear bar printers were cheaper we believe a printer that cut the labels automatically would be less work to maintain as users wouldn't have to figure out how to tear the label off themselves.