

DESIGNED TO FIT

TABLETS USHER IN AN ERA OF POS FREEDOM AND CHOICE

Foint of sale has looked the same, and functioned largely in the same way, for decades. But that's all changing as digital innovation rapidly transforms technical capabilities and in turn, consumer expectations. Mobile devices now deliver unprecedented power and access to information, putting consumers squarely in the driver's seat in choosing how, when, where and what to buy, and at what price. They expect the businesses they patron-ize to be at least as technically capable as they are.

The digital revolution also enables new approaches to POS architecture. No longer must the POS device sit anchored to one spot, requiring local access to all of the data it needs to process transactions, keep money

and data safe and serve basic customer needs within its own proprietary ecosystem. New form factors, operating systems and reliable high speed Internet connectivity mean POS can be freed of its tethers, both physically and virtually.

Today, all of the power of a traditional big iron or PC-based POS system fits comfortably into devices a fraction of their size. But making that streamlined form factor work at the POS has been cumbersome, until now. New advancements are transforming the tablet and similar devices into highly functional POS systems that offer all of the capabilities of traditional POS, and then some, without complex integration tasks, unsightly cabling, closed computing environments, PCI compliance or high costs.

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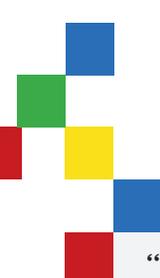
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FITTING THE SPACE: EVOLVING POS FORM FACTOR

Traditional POS terminals are rapidly losing ground to tablet-based solutions. Tablets are typically classified as mobile POS in industry research, but they can actually be used as streamlined countertop devices, as portable devices, or rapidly be switched from one to the other as the need arises. IHL Research projects a 320% increase in shipments of mobile POS from 2013 through 2017, according to its report, *Mobile POS: Hype to Reality*. SMBs are leading the way: the report found just 15% of mobile POS (mPOS) installs are in enterprise-sized companies, but by 2018 they are projected to account for 38% of POS installs. 451 Research predicts a 32% compound annual growth rate for mPOS through 2019.

Solution providers are also seeing this trend. In VSR's 2015 POS Study, mobile POS was said to be the number three driver of new POS investments. Adding mobile POS (49%) was the second most cited reason for buyers upgrading POS, after PCI compliance.



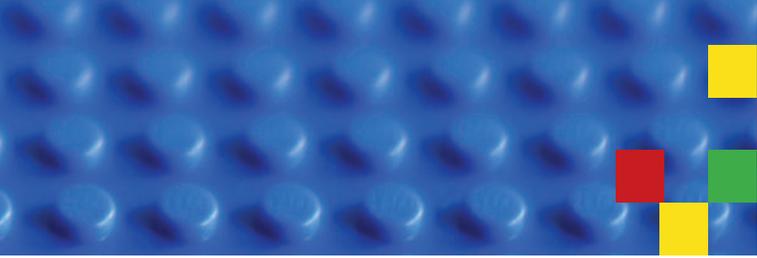
“Now we see options like PowaPOS that bring the peripheral functionality with a unique, sleek, countertop design which complements the evolving, robust features of tablet solutions we see in the market today.”

— MATTHEW INAN, DIRECTOR OF
BUSINESS DEVELOPMENT AND SALES
OPERATIONS, E-NABLER

“Changes in consumer shopping behavior and the advent of digital technology have radically changed the very nature of the point of sale (POS),” Boston Retail Partners says in its 2015 POS/Customer Engagement Survey. “Instead of a simple transaction device, the POS now needs to serve as the link to customer information, shopping history and purchasing behavior across all channels. Unfortunately, many retailers still try to utilize the same POS system from ten or even fifteen years ago. This often leads to associate and customer frustration because of slow transactions, lack of information available to associates and potentially increased theft and fraud.”

Older POS systems come with high maintenance costs and technical limitations and also consume valuable counter space. As fixed position devices, they cannot be used to bring the POS to the customer. The software architecture designed to run on these devices often uses payment processing software that places the entire device in scope for PCI compliance, adding costs and management burden to users. And older, purpose-built POS devices often lack the connectivity and browser capability needed to access cloud-based applications for real-time customer and inventory data in support of robust marketing and omnichannel retailing.

Tablets overcome these limitations because they are built highly user friendly and access the Internet. Tablets not only lend a cool factor, but reduce training time because the interfaces are familiar and intuitive — a critical factor in retail and restaurants, where annual staff turnover can top 300%. Tablet POS can be set up quickly, making it ideal for pop-ups and mobile businesses in addition to storefronts. Most new tablet-based POS systems offer subscription-



based, hosted POS, considerably lowering the barrier to entry for POS users of all sizes.

The recently published VSR POS Study found that 41% of solution providers agree that the future of POS lies in SaaS/Cloud/On-demand delivery of POS with in-store server back-up, and 49% foresee a hybrid POS platform and e-commerce platform.

Resellers also report widespread enthusiasm for tablet POS among their customers. SMBs lead the way, but enterprise acceptance is growing.

“There is a shift forming within the POS industry as retailers modify their thinking from the implementation of a traditional POS system lasting ten to twelve years, to other options such as mobile POS where less costly technology is not expected to last as long, allowing more flexibility within the retailer’s environment,” Boston Retail Partner’s 2015 POS/Customer Engagement Survey also found.

PRODUCTIZING THE TABLET

The tablet’s familiar interface and streamlined form factor have been drivers for use at POS, but until now transforming a tablet into a fully functional POS device has added bulk back into the equation. A tablet needs a dock to place it at the right height and angle for countertop use — a dock that often makes it more difficult to use the tablet as a mobile POS device. Turning a tablet into a POS station also requires the addition of a card reader, a cash drawer, a bar code scanner, a printer, and sometimes a customer display, all competing for the limited ports available on most tablet models if they are not wirelessly enabled — and each requiring a separate integration by the software developer for each operating system used. The mass of cables and peripherals significantly detracts from the streamlined look and reduced footprint that initially attracted buyers.

These obstacles not only defeat some of the tablet’s inherent benefits, but add cost and time to POS set-up — a significant issue for SMBs.

“In earlier days there were limited options in stands and enclosures for tablets,” says Matthew Inan, director of business development and sales operations for e-Nabler, which develops eMobilePOS software. “They simply enclosed and housed the

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tablet itself. Now we see options like PowaPOS that bring the peripheral functionality with a unique, sleek, countertop design which complements the evolving, robust features of tablet solutions we see in the market today.”

This innovation fills a market gap between traditional all-in-one POS terminals and lightweight tablets surrounded by a jumble of POS peripherals. It combines the former’s rugged, purpose-built design with the latter’s modern, connected platform:

- A swivel stand that not only holds a removable off-the-shelf tablet, but also houses a receipt printer, Bluetooth bar code reader and PIN pad in an elegant, streamlined form factor.
- A single power cable to support all of these plus the cash drawer.
- A vertical footprint that minimizes use of valuable counter space.
- Plug and play functionality that works right out of the box.

Such innovation enables ISVs and solution providers to present a professional, ruggedized POS product that combines the appeal of a tablet with the utility of a well-designed all-in-one form factor.

“We’re finally seeing someone get all-in-one right,” says Jason Seed, president of Kounta USA, which develops cloud-based tablet and phone POS software. “PowaPOS got it right because of the tablet. That changed the game. For the first time we saw a really powerful all-in-one with a single power supply that cleaned up the desktop and made it much more presentable than the old fashioned POS environment.”

“If you compare the PowaPOS solution versus the solutions out there in the marketplace, they kind of look kludgy and pieced together because they are,” says Chester Ritchie, US senior vice president for payment processor Worldpay. “With PowaPOS, you slide a tablet in there and it all goes well together. It doesn’t sound like a huge thing, but it is when you’re an integrator you’re dealing with all those pieces and trying to make it look decent. It’s a big deal to the merchant because that’s where they’re dealing with the customer. They spend a lot of money on the internal designs of their stores, so they don’t want some kludgy piece of hardware sitting there.”

In Boston Retail Partners’ survey, which is dominated by chain retailers, 63% of participants report plans to increase investment in mobile POS by 2016 and 57% plan increases in tablet purchases. In contrast, 50% plan to decrease investment in traditional POS terminals. On the other end of the spectrum, a 2015 survey by web-based consultancy Software Advice, primarily of one-store retailers, found 85% calling tablet their



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platform of choice for POS.

“Tablets are easy, familiar and not overbearing,” says Justin Guinn, market research associate for Software Advice. “Some PC-based POS can look a little daunting. We think we will start to see more and more industries using tablet and phone-based POS.”

Across the spectrum, the market is turning aggressively toward tablet and mobile POS.

SIMPLICITY FITS: EASIER LEGACY TO TABLET MIGRATION

Early on, mobile/tablet POS solutions presented several challenges to both POS buyers and the channel:

- Hosted delivery and direct sales channels
- New mobile operating systems designed for consumer applications
- Feature-light POS software intended to work across a wide range of POS users
- Lack of peripheral drivers
- Limited ports
- Cluttered appearance due to mismatched components, multiple power cords and cables, etc.
- Challenges in migrating data from old platforms to new

Over time, many of these challenges have been mitigated. Some upstart mobile POS companies discovered the channel and began to embrace it; others emerged with a 100% channel-only model. Developers have recognized the need for hybrid solutions that allow POS to function even when an Internet connection is lost. Mobile POS developers have had time to add depth and specialization to their product offerings, so that several now rival long-standing traditional POS applications in functionality.

“Rather than requiring merchants to do a piecemeal installation of products, if you can provide chip card and mobile payment capability and security tools like encryption and tokenization to protect security, that’s a great suite of services to offer the merchant. Doing it all together increases the value.”

— JASON OXMAN, CEO AT THE
ELECTRONIC TRANSACTIONS
ASSOCIATION

Now solutions are emerging which make integration of tablet POS solutions easier. For some time now, mobile POS software developers have needed to employ separate software development kits (SDKs) for each peripheral they certify for their application. Now solutions are available that incorporate all peripheral drivers into a single SDK, significantly simplifying development tasks. Powapos’ SDK, for example, includes software APIs, documentation, sample code and applications for scales, shopper displays and payment devices in addition to printers, cash drawers and bar code scanners. The SDK works with Android, iOS and Windows Mobile.

The Powapos SDK includes an abstracted interface to all devices that are part of the Powapos architecture, as well as the server functionality. Abstracts and groups are related functionality by type (PED, peripherals and server). Functional groups share the same behavior independently of drivers in use, and available drivers/servers can be swapped or added to allow flexible deployments.

“It makes development very fast and convenient,” says e-Nabler’s Inan. “In one fell swoop we can integrate all communications from tablet to printer, bar

code scanner, payment device and cash drawer. It’s a single SDK for all peripherals,” addressing the vast majority of devices an ISV or solution provider may want to specify.

“I call Powapos the Apple Computers of POS hardware, because they’ve consolidated everything into a single, nice-looking unit, and as an integrator, you don’t have to deal with anyone else. It’s just one SDK. It’s a pretty slick solution you’re putting out the door,” says Worldpay’s Ritchie, a former reseller. “Back in the day, we all had to purchase some middleware, and then figure out which hardware works with that middleware,” Ritchie continues. “It was usually so complicated that we had to call in the bank guys. Today when you get that tablet, the only thing you have to do is type in the merchant ID from the processor and you’re ready to take payments.”

EASING THE TRANSITION

Another key development is the introduction of low-cost and powerful Windows-based tablets. Because many POS software packages were developed in Windows, this allows ISVs and solution providers to adapt the user interfaces of these products to work on the tablet/touch form factor. That enables them to stay on trend with tablet products while leveraging their significant investment in software development.

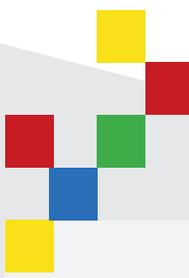
Most enterprise-level POS buyers start out by augmenting traditional POS with tablets, says e-Nabler’s Inan, so they want mobile POS to integrate easily with their current environments, including fixed POS and back end systems. Windows Mobile facilitates this.

Offering Windows tablet solutions also opens up new markets among merchants who could not previously afford full-blown POS systems. For SMBs, operating tablet-based POS means gaining access to powerful, cloud-based back-end management software that was unaffordable via a licensing model. Cloud-based mobile POS solutions integrate easily with commonly used packages such as Sage and Quickbooks, and migrating data from older systems to these newer platforms can be accomplished easily.

Finally, there is the maturing and growing sophistication of mobile POS software itself. While light-

weight upstarts are plentiful, the most well-established tablet POS packages have passed the five-year mark. In that time, developers have adopted many of the features and functions found in traditional POS software. Through their own code and via cloud-based integration with backend management software, some of these solutions are now quite robust, and many have been customized to meet the needs of specific sub-verticals.

“It’s correct that here are a couple of hundred tablet POS solutions that are very simple, with people looking to solve the simplest and most ubiquitous problems — scan the bar code, checkout and pay,” says Kounta’s Seed. But multi-location packages such as their rival Micros in sophistication and functionality including POS, labor and business management, franchise management and integration to many other backend applications, he says. “There are people like us emerging at half the price.”



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— JUSTIN GUINN, MARKET RESEARCH ASSOCIATE, SOFTWARE ADVICE

FIT FOR THE PAYMENT: LANDSCAPE GETTING POS OUT OF SCOPE

High profile security breaches have raised public awareness of the many flaws with the current payment infra-

structure in the United States. Experts predict the cost of magnetic-stripe credit card fraud will rise to \$10 billion or higher this year, for example, because of the lack of security, and that’s just the hard costs. No merchant wants to land in tomorrow’s headlines and suffer the damaging impact to their customers’ trust.

But merchants and solution providers alike have found it difficult to understand and comply with the evolving PCI standards intended to make payment more secure.

The advent of EMV, growth of NFC use, and the introduction of tokenization and point-to-point encryption into payment are welcome news to address these gaps. According to The New York Times, in Europe, which has significantly preceded the US in adoption, EMV technology has driven a 65% reduction in card fraud. Surveys by Visa show 63% of consumers want a chip card as soon as possible.

NFC, the contactless version of EMV, extends its benefits with the added convenience of wireless payments and smartphone wallets.

But along with interest in EMV, NFC, tokenization and encryption come concerns about the cost and complexity of implementation.

Unfortunately, solution provider and payment ISV experience with chip cards is close to non-existent. Many are as eager as merchants to work with POS solutions that distance the hardware and software from payment processing, and make implementation of new devices simple.

“With the dawn of EMV payments, how integration to payment devices is handled is becoming a true challenge in our industry,” says e-Nabler’s Inan.

The current gold standard lies in solutions that employ these technologies to get POS hardware and software out of scope — removing any contact with the sensitive data that lies at the heart of payment transactions and security standards. That exempts the merchant and solution provider from many of the hands-on tasks of ensuring compliance.

One innovative approach to meeting this need comes through Powapos' single SDK. In addition to managing all POS peripheral integration, the Powapos SDK establishes an out-of-scope environment for integrated payment applications by providing a secure and firewalled interface to PCI and EMV compliant devices. It also includes certified interfaces to several widely used payment processors. The SDK handles all of the communication between the POS software and the PIN pad or other payment device for all types of payments, including mag stripe, EMV, NFC and debit, gathering the required data and forward-ing it to the selected processor.

“By virtue of integration to the Powapos system we can isolate the interface to payment devices, and for all intents and purposes keep the rest of development isolated away from what could be a challenging and difficult integration from POS,” says e-Nabler's Inan.

Powapos' solution “is in the cloud, so by using their SDK the ISV doesn't have to worry about storing that information locally and being in scope,” says Worldpay's Ritchie.

For POS software developers, Powapos SDK saves thousands of dollars they would otherwise pay in ongoing assessment and certification fees to ensure their packages are PCI compliant.

For both ISVs and solution providers, the Powapos SDK also gives them the flexibility to align with the processor of their choice. “The ISV or VAR is able to form a close relationship with a processor, and using Powapos allows them to do that because they support multiple processors,” says Worldpay's Ritchie.

Alternatively, solution providers and ISVs can leave the choice of payment provider up to the merchant under this model. This can be key in situations where the merchant prefers to maintain a long-standing processor relationship, removing it



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as an obstacle to greenlighting a POS replacement project. This can also be a particularly strong selling point for solution providers competing against “free” tablet POS solutions that are sponsored by a specific processor. The ability to offer EMV upgrade together with POS and quickly remove liability will be a strong selling point for solution providers selling to SMBs.

In fact, it's the “M” part of this group that may be most in need.

Ingenico has predicted that most Tier 1 merchants will be ready for EMV by the October 2015 deadline, and small merchants will gain EMV through pre-packaged solutions, but mid-size will be the last to adopt. According to an Ingenico-authored article on Mobile Payments Today, “These merchants often rely on third-party systems integrators that, on the whole, are not as knowledgeable about EMV. We think that this class of merchant will represent the long tail of this issue. Based on our field work, we predict that most of these merchants will not be prepared for EMV until well into 2016.” Ingenico recommends mPOS as a path to faster EMV adoption.

“We can integrate any Bluetooth payment device that works with our iOS or Android or Windows solutions without having to impact the rest of the functionality of the POS and without having to worry about being within PCI scope and deliver [customers] an EMV certified payment solution,” says e-Nabler's Inan. “The form factor design of Powapos allows us to integrate the payment device on the same unit, alleviating the clutter and making a well-organized and designed system.”

Solution providers and ISVs that want to align with a particular processor can still do so. EMV requires certification with each individual processor and card brand, but the Powapos approach takes care of that with multiple vendors.

“Obviously integrators and VARs and ISVs want to be full-service solution providers,” says Jason Oxman, CEO at the Electronic Transactions Association. “Rather than requiring merchants to do a piecemeal installation of products, if you can provide chip card and mobile payment capability and security tools like encryption and tokenization to protect security, that’s a great suite of services to offer the merchant. Doing it all together increases the value.”

In addition, “EMV gives you the capability to add mobile payments acceptance to a transaction,” says ETA’s Oxman. “So if you’re looking to install EMV for a merchant, you can do mobile acceptance along with it.”

UNLOCKING THE KEY TO POS TRENDS

POS solution providers are experiencing rapid change as market affinity is building for tablet-based POS. As the tablet’s price, connectivity and streamlined form factor attracts more and more buyers, solution providers need to craft product offerings that tap into three key trends:

- 1) A truly tablet-friendly all-in-one that streamlines the previously cluttered appearance of tablet POS.
- 2) Out of the box functionality that makes POS simple for ISVs to integrate and solution providers to install.
- 3) Easy-to-integrate payment processing that distances the POS solution provider and ISV from PCI compliance headaches.

PowaPOS’ solution incorporates all of these trends. It “increases the credibility of the solution,” says e-Nabler’s Inan. “It’s sophisticated, future-forward, sleek and convenient design of the system definitely adds to the credibility of the solution to win the interest especially of the enterprise class that has been on the fence for years” about tablet POS. “PowaPOS raises the bar.

ABOUT POWAPOS

PowaPOS is a division of Powa Technologies, an international commerce specialist focusing on technologies to transform the retail market. The Powa suite includes PowaWeb — a powerful cloud-based eCommerce platform, PowaTag — an innovative payment enablement application, and PowaPOS — a sophisticated tablet-based POS solution.

PowaPOS is the first truly all-in-one point of sale system designed specifically to take advantage of the growing demand for tablet-based payments. With just a single power cord, merchants can power up the PowaPOS T25 and its beautifully and intelligently placed peripherals, from its thermal printer and 2D scanner, to the rugged cash drawer and swivel position sensor.

The PowaPOS T25 is also the first purpose-built, all-in-one hardware platform designed to support all operating systems: iOS, Android and Windows. With the PowaPOS hardware platform, businesses can now have all the power of an advanced POS system in a sophisticated, space-saving, and cost effective design.

PowaPOS provides:

- 1) **Scalability:** Flexible enough to grow with the business and adapt to changing times, evolving software, and individual merchant needs.
- 2) **Security:** Built in ports integrate most EMV-ready and NFC payment devices. Our advanced design and the powerful PowaPOS SDK means current and future security requirements are met.
- 3) **Simplicity:** The days of mismatched components and cumbersome set-up are gone. By integrating key retail peripherals, all powered by a single cord, PowaPOS is ‘plug and pay’ right out of the box.
- 4) **Speed to market:** With its single API, integration to the PowaPOS SDK is streamlined. Access to powerful POS applications to payment processing to PowaTag and more are all available via one integration.

With PowaPOS, tablet POS has both form and function, finally. Visit www.powa.com/powapos to learn more.

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