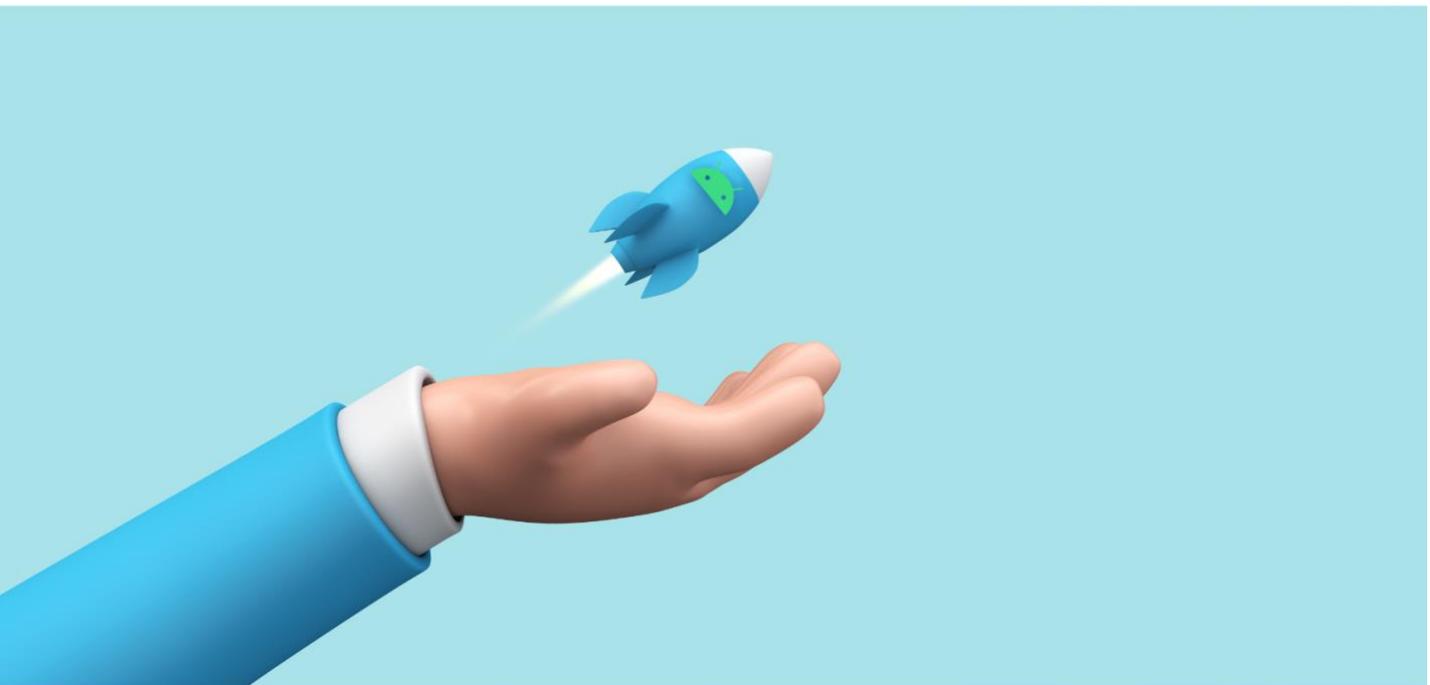


# How merchant service providers can deliver incremental value with Android SmartPOS

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# Much more than just technical features

Nobody really buys a car just because of the size of its engine. Purchasing decisions are made based on many other factors including comfort and safety level, fuel efficiency, and curb appeal. These capabilities rely on both design elements and technical features.

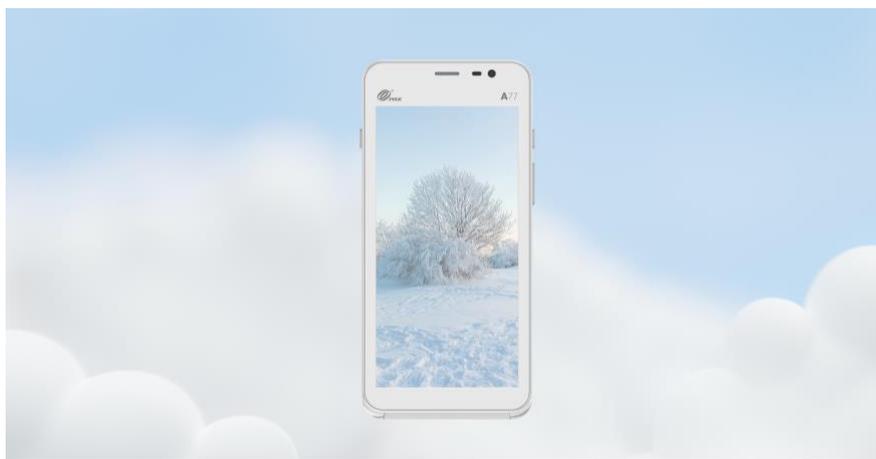
When you think of the iPhone, it is all about the brand value, aesthetics, user experience (UX), and high quality engineering - factors which ultimately persuade consumers to pick Apple.

Equally, the value delivered by a payment terminal is far more than the sum of its technical parts. Yes, the ARM processors and Android operating system used in PAX products are now enabling faster & more secure processing, but they also support multiple hardware & software features and peripherals. True value and innovation come from how these capabilities are utilized & maximized by forward thinking payment service providers, ISOs and acquiring banks who deliver Android SmartPOS solutions to their merchant base.

At PAX Technology, we are creating new opportunities for app developers to improve usability and to create merchant service differentiation. In this blog we will explore a selection of technical features and share examples of how these are delivering incremental value to customers around the world.

## Larger, colour, touch screen displays

A key objective of our [Android SmartPOS](#) range of devices is that - in addition to delivering payments acceptance excellence - they can replace multiple products with a single all-in-one device, thereby delivering financial savings and the benefits available from connected commerce. We understand that many of these, such as EPOS apps, require larger displays to support product imagery in full colour, and dynamic graphical screen layouts. Thanks to the removal of display limitations, more Android apps such as employee time management, appointment bookings, gratuity management and order processing, can now be successfully ported to PAX devices. These larger displays support a wide range of media formats and can be used to showcase logos, adverts, and video clips creating multiple customer engagement opportunities.



These high-quality displays which PAX Technology incorporates in its devices, help improve the user experience, simplifying operations, eliminating keying errors, and reducing the amount of training time needed. The inclusion of touch screen technology makes operations highly intuitive and easy to learn

and use. This is particularly apparent in the “installation & support mode”, where previously little effort was made in UX design. Field engineers no longer need to visit merchants for onsite installations thanks to the clear step by step instructions that can be displayed, allowing merchants to self-install. Another good example is how easy it is to connect a device to a local WiFi network. Reference to a manual or a call to the helpdesk is no longer necessary. Additionally, enhanced reporting options and electronic messaging services are now possible thanks to the advanced capabilities of the display.

PAX design also allows secure PIN entry directly onto the touch screen display, meaning a single device can better support both employee and cardholder usage. This enables smaller, lighter and more flexible devices to be launched. To ensure strong data security we follow PCI guidance and our products have completed all necessary certifications.

## Why cameras?



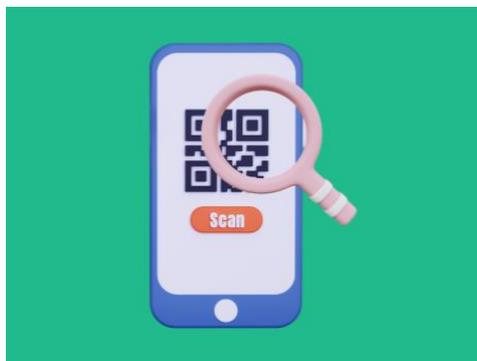
Payment terminals never used to be equipped with cameras, so why are these included now? There are several reasons why PAX took the lead in adding a camera to our devices, and indeed often include two cameras/scanners as standard - usually one at the top primarily for use by the merchant and another at the rear for interaction with the consumer.

The number of payment methods has increased considerably in recent years, and consumer preferences have also changed. Credit and debit card payments are now being supplemented with Alternative Payment Methods (APMs), including Alipay and WeChat Pay which rely on quick response (QR) code technology to initiate a payment transaction. Integrated cameras & scanners on PAX devices allows a QR code to be read quickly & efficiently, allowing a merchant to accept more in-store payment options than ever before. This prevents merchant losing sales through an inability to handle the consumer’s preferred payment method.

Many PAX customers around the world are also using the camera & scanner capability to confirm ticket and eligibility status, and to access booking records. Transport operators use cameras & scanners to ensure fares have been correctly paid, and enforcement officers can process penalty notices immediately using the same PAX device. The camera & scanner mode is also being used effectively for the redemption of meal vouchers, product coupons, and electronic gift cards. During the pandemic, the camera & scanner proved a popular way to confirm Green Pass or vaccination status. Furthermore, merchants can use the cameras & scanners to perform facial recognition for logging into ECR systems or video calling help desk when support is needed.

Cameras & scanners are an essential feature for many Value Added Service (VAS) apps, an example being the ability to capture a shopper’s passport details as part of a tax-free purchase or when making a VAT refund claim. Often registration checks for loyalty programs, or similar, can be simplified by taking photos of ID documents or providing the ability to scan card details. Increasingly, we hear about merchants using the camera to take photos of new product lines and then uploading these to their product catalogue and eCommerce sites, a task rendered easier thanks to the powerful camera technology in some of PAX’s latest releases such as the M-series [PayTablet](#) & [PayPhones](#).

# The value of including a barcode scanner



PAX provide barcode scanner options on many devices, enabling further device consolidation opportunities. This frees up valuable counter space for merchants and delivers financial savings & operational efficiencies. Barcode scanning is a core feature on our [Smart ECR and unattended products](#). Our integrated professional scanner allows faster and more accurate reading of QR codes and has advantages over a camera in environments such as queue busting, and where there is a high number of transactions or heavy adoption of APMs. We support multiple barcode reading standards providing flexibility and future proofing.

We know that some merchants also use the scanner capability to check inventory levels, to record in-store deliveries for stocktaking purposes and to check correct item pricing, as well as for bill payment purposes.

As merchants deploy more Android apps, we expect the use of integrated scanners to become more popular on our Android SmartPOS products, and for app developers to better exploit the opportunities scanner technology presents.

## Speaker and microphone

Many PAX products include speaker and microphone, in addition to a buzzer, as these can deliver tremendous value to both end users and merchants. The speaker allows clear audio confirmation alerts to be provided during a transaction, an example being a successful contactless card read or at each stage during a QR code transaction. They can also be used to notify errors or to prompt when action is required. In some regions, it is popular to identify a payment brand through a distinct audio sound - an example of this being the Mastercard sonic brand which offers an [audio alternative](#) to the visual reassurance provided by the red and orange circles.



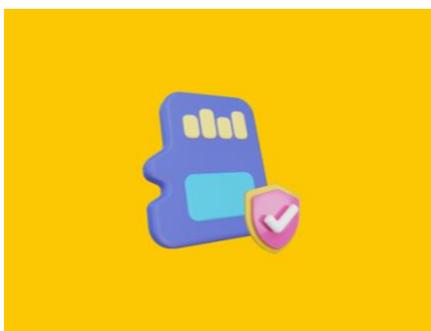
Successful app downloads from [MAXSTORE](#), our industry leading device & software management platform, are communicated by means of audio tones. A future opportunity is to enhance remote support by using the speaker and microphone capabilities to allow 2-way voice communications. In unattended environments, voice communications with the end user could also prove to be valuable.

# Accessibility mode

Our innovative [accessibility mode](#) delivers real value to those with visual impairment and helps them to avoid facing discrimination or exclusion when transacting. This function uses the Android SmartPOS touch screen and speaker. The customer is provided audible guidance, with directions, to help them find the enter & clear keys. From these known fixed locations, the user is then guided to the correct key positions. Audio messages such as “move lower” and positive audible confirmation when the correct key is found, with another audible request to “double tap”, are played for the user to hear. This advanced capability can help merchants with their Environmental, Social and Governance (ESG) responsibilities.



# SAMs and SD Cards



Security Access Modules (SAMs) and Secure Digital (SD) cards are both supported in many PAX products. These can be used by app developers to support specific national or sector specific security requirements, or to provide extended memory capabilities. One example is where Fiscal Cash Register reporting requirements can be satisfied through a Secure Fiscal SD card, opening new market opportunities for PAX devices and providing lower cost solutions for small merchants.

These card slots also enable file backup, large product catalogues, data transfer, authentication options and digital communication methods (think of WhatsApp for business) to be supported.

# Not forgetting the basics...



Of course, let's not forget some of the long-standing features which were and continue to be common to payment terminals. For example, support for an integrated fast thermal graphic printer that can be used for adverts, promotional messages and coupons, as well as traditional customer receipts and reports. (The MAXSTORE platform now provides for digital receipt storage and full data reporting, available to PSPs/ISOs/acquirers and their merchants to log-in and analyze). Also, contact and contactless smart card readers and a wide range of wireless communication technologies supporting 2G, 3G, 4G, WiFi and Bluetooth. And more relevant than ever - and as discussed in a previous [blog](#) - the value that is available from always knowing the accurate geolocation of Android SmartPOS devices.

# The PAX perspective

PAX Technology designs products to deliver maximum value & future proof investment for customers. Apart from being beautifully designed and looking great, they are easier to use, and offer high reliability & security. PAX products come packed with many advanced technical features to open up new opportunities and deliver multiple benefits to merchants, payment service providers and end users. [Security](#) is paramount at PAX, and our choice of ARM processors, Android OS and innovative feature-sets, creates the power, flexibility and opportunities for value to be delivered. Application developers can utilize all the technical capabilities we make available to unlock their full potential and possibilities.

That of PAX is a forward-thinking strategy which is far broader than payment acceptance. Our Android SmartPOS strategy is based around multiple apps running on a single device. Apps which are available through MAXSTORE, the industry's leading app marketplace and mobile device management platform. Many of these new generation apps require the advanced display, camera, speaker, card reading features and other technologies that we have described above.

The global PAX community looks forward to discussing the value we can deliver from our advanced products and services. Please do get in touch to arrange a conversation and demonstration.





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