

Understanding the value of MAXSTORE

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MAXSTORE is an innovative platform which has taken the payment industry by storm, as is evidenced by the growing number of acquiring banks and merchant service providers who are reaping the operational and financial benefits it provides.

Everybody knows that an App Store is needed in order to turn a mobile handset into a smartphone, as it provides the capabilities to digitally distribute software applications that users want to use on their smart devices. The Google Play Store was launched on 6th March 2012 to allow users to browse and download apps developed for the Android operating system. Today, 10 years later, over 3.5 million apps are available and 108 billion downloads are performed annually, with usage continuing to grow at an impressive rate.

MAXSTORE fulfils this same role for Android SmartPOS, allowing the full potential of these new generation terminals to be realised by securely delivering payment & non-payment applications to smart devices. There are already 7,000 software apps from 2,500 independent application developers being managed by MAXSTORE, for use in over 5 million Android SmartPOS terminals which are located in over 100 countries around the world.

MAXSTORE satisfies two main functions: it serves both as an **App Store Marketplace** as well as an advanced **Device Management Platform**.

How does an App Store Marketplace work?

An App Store Marketplace enables the secure distribution and management of software apps. It provides a sales channel for Independent Software Vendors (ISVs) to market their applications and a shop window for users to select apps they are interested in.

In the merchant acquiring world, MAXSTORE provides this centrally managed secure app marketplace for Android SmartPOS payment terminals, as well as generic Android devices such as tablets or smartphones. This benefits merchant service providers as it creates revenue generation opportunities from the distribution of apps, the opportunity to differentiate their offering from competitors, and reduces merchant churn rates.

Access is strictly controlled through a secure marketplace portal - called the MAXSTORE POS client which is loaded at factory level - plus an admin and developer centre. MAXSTORE is easy to use - thanks to a modern graphical user interface - and has a rich hierarchical database architecture to address the needs of multiple ecosystem participants.

A payment industry ecosystem with multiple stakeholders



Software developers make their applications available for distribution, with each app screened by PAX Technology's AppScan web security scanning service for common application vulnerabilities, cross site scripting, flash injection, outdated and insecure libraries, malware and viruses before being digitally signed with encryption keys.

Marketplace Owners, typically an acquirer or merchant service provider, decide which apps they will offer to their merchants, negotiating a fee directly with the app developer without any involvement of PAX. The marketplace owner can create their own branded, private, marketplace within MAXSTORE. This will only be accessible to the marketplace owner's appointed partners, resellers, sub-resellers and merchant accounts. (MAXSTORE also has one open Global App Marketplace for anyone to see, to help stimulate ideas for new merchant services and to facilitate direct contact with app developers).

Merchants have access to their own view of MAXSTORE, either through the Android SmartPOS or website login - the level of access is decided by the marketplace owner – allowing them to oversee which apps are run on devices deployed in their stores or outlets. (Typically, the marketplace owner tends to be an acquiring bank, PSP or ISO who are also the owner of the SmartPOS, meaning that their marketplace administrators & operators can also choose to push apps to the merchant's device without their explicit authorization)

Estate Owners who manage the supply & support of SmartPOS or other Android devices are the final stakeholder within this ecosystem. They may be granted the rights to deploy apps, but tend to be

generally more focussed on MAXSTORE's device management platform capabilities.

Which apps are available to merchants?

With thousands of apps already available across the MAXSTORE platform, and with new ones constantly being added, massive choice exists for acquirers looking to improve their merchant services.

To simplify selection, each app is clearly categorised & described. The first - and most important - distinction is between payment acceptance apps and added value apps.

Payment apps vary by country, networks and acquirers. They will have completed appropriate certifications and accreditation before being uploaded to MAXSTORE.



The most popular non-payment app categories are:

1. Sale processing apps

- Cash register app to record a simple sale
- EPOS providing richer retailing register functionality
- Sector specific sales platforms that accept payments
- eCommerce order processing
- Inventory and stock management

2. Customer acquisition & retention apps

- Loyalty and rewards
- Gift cards
- Coupons and vouchers
- Customer surveys

3. Booking and Scheduling apps

- Table reservations
- Ticket sales, bookings, and validation
- Employee management, scheduling & timesheets
- Home deliveries and queue management

4. Digital apps

- Electronic messaging
- Digital receipts
- Order@Table
- Digital contracts
- COVID health passes

5. Terminal administration apps

- Remote support services and diagnostics
- Reporting, business intelligence and analytics
- Device logistics and supplies
- Remote Key Injection

What is a Device Management Platform?

MAXSTORE delivers next generation device management capabilities through a modern digital platform which simplifies the administration of terminal estates and effortlessly improves device security. It allows the full power of Android SmartPOS terminals to be realised, as described in this earlier article.

Estate managers acquire comprehensive information through clear & simple dashboards, and have a real-time view of their devices in the field, giving them the ability to intervene much faster than with legacy POS hardware and older generations of terminal management systems. Major cost savings are achieved by keeping transactions flowing more regularly and by solving incidents remotely instead of through costly technician interventions.

We are not just talking about software loading and parameter management, because MAXSTORE offers many more capabilities than a traditional Terminal Management System (TMS) allowing Estate Owners to benefit from a far lower Total Cost of Ownership (TCO) thanks to the comprehensive range of remote support, troubleshooting and diagnostic services that are available.

Realtime data reporting is available, enabling insightful data analysis and business intelligence to be

provided. Remote Key Injection avoids the need for costly engineer site visits or for devices to be unnecessarily returned to base. Firmware can be updated Over The Air (OTA) if needed - a further previous reason for expensive returns.

MAXSTORE can manage any Android device, not just hardware manufactured by PAX, simplifying estate management and avoiding administrative system duplication.

Through MAXSTORE, apps can be launched and restarted remotely, pushed in real-time to devices, and parameter updates can be applied to groups of terminals as required. The management of bulk software loading offers further advantages. Preventative maintenance is also possible as multiple performance metrics are continually being monitored thereby minimising downtime and store disruption.

Administrators prefer using MAXSTORE because it delivers a 'zero contact' level of management, where operators can pre-configure apps, firmware version and device settings. Device batch deployment and device auto initialization are also achieved through the platform. Once a device is in the field and has network connectivity, it will connect to MAXSTORE to download pre-defined profiles and automatically perform application & setting initialization, which saves manpower resources when compared to on-site device deployment.



What are the deployment options?

A single instance of MAXSTORE manages multiple tenants, and is offered by PAX Technology as a

Software as a Service (SaaS) solution. Technically it has been architected for the Cloud and is deployed on Amazon Web Services (AWS) infrastructure to ensure high scalability, availability, and information data security.

Marketplace Owners also have the option to integrate MAXSTORE to Enterprise infrastructure management platforms using Restful API web calls if they want to make it part of a broader support system, as indeed some of the world's more innovative merchant service providers have begun doing.

How is security achieved?

Security is the highest of all priorities for PAX Technology and this is reflected in the design and deployment of MAXSTORE. The architecture and security controls prevent any unauthorised access to the platform or data held within it. When an independent MAXSTORE instance is created - whether it be for an acquiring bank, PSP, ISO or large merchant - the marketplace owner has full control over all apps and devices and can allocate authorized data access privileges.

The selection of AWS as the cloud provider recognises the importance Amazon attaches to data security and the multitude of controls put in place to prevent an attack. Secure multi-factor role-based user authentication is supported as required. Strong cryptography and digital signing are applied to control the loading and deployment of apps. Every app is required to pass a security validation before being accepted onto the platform and even then the terminal owner must approve an app before it gets installed. The MAXSTORE POS client is preinstalled at factory level and signed cryptographically to ensure it cannot be compromised. The secure key loading facilities provided by PAX have been thoroughly validated by international card networks.

Geolocation services monitor the exact location of a device throughout its entire lifecycle, enabling compliance with PCI chain of custody requirements and notification of any suspicious terminal movement or replacement. Ring fences - known as geo fencing - can be applied to restrict movement of SmartPOS devices outside certain areas, providing immediate warnings for estate owners.

The latest demonstration of MAXSTORE's high security capabilities is the recent PCI DSS security certification. This is a further differentiator from other App Store Marketplaces and Device Management Systems.



The PAX perspective

We fully understand the critical importance of App Store Marketplaces in order to enable multiple apps to run on a single device. As with mobile phones an App Store adds the capabilities needed to make a device truly 'smart'. MAXSTORE is the platform that unlocks the full potential of Android SmartPOS terminals. Simply put without MAXSTORE you don't have SmartPOS.

That is why we invest so heavily in MAXSTORE to ensure new capabilities are constantly being added for the benefit of acquirers and PSPs who serve merchants, and to ensure the highest levels of security protection. Multiple software platform releases are made each year, and our investment reflects the paradigm shift that is happening with value moving from hardware to software features and the delivery of a whole new world of value added services.

It is MAXSTORE's device management capabilities that enables the benefits of the Android operating system to be enjoyed by acquirers, payment service providers and merchants.

We have also introduced a suite of Value Added Services (VAS) that are available through MAXSTORE. These include: Air Viewer for the remote control of terminals, GoInsight to deliver business intelligence, Cloud Scan to check each app for security weaknesses, Rhino RKI for remote key injection and Cloud Messaging which is an app notification messaging service. New VAS are planned and will become available to users in due course.

A further key element of MAXSTORE is the comprehensive developer centre that provides all the tools needed for app developers to test their applications, undertake exception reporting and analysis, digitally sign apps and manage subscriptions



As customers across the world have recognised the benefits and efficiencies enabled by our solution, we are proud to be the App Store Marketplace and Device Management Platform market leader.

The global PAX community looks forward to discussing how MAXSTORE can benefit your business and explaining the many advantages of our next generation Android SmartPOS solutions. Please do get in touch to arrange a conversation and demonstration.



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