Five Considerations When Connecting Your Smart Terminals to Cellular Networks

The advent of smart terminals has taken payment technology into the future. They allow merchants to accept more payment methods, such as Apple Pay and Google Pay, and do more than just process payments. And just like any mobile device, smart point-of-sale (POS) terminals depend on reliable and secure wireless connectivity.

In this dynamic environment, POS deployers, acquirers and payment service providers need to make careful, well-informed decisions about network strategies and global connectivity solutions. Here are five critical things to keep in mind for the successful deployment of smart wireless terminals.

Configuration 1

Modern smart terminals have come a long way from the credit card machines with the big keypads and tiny screens. Remember, the Android operating system that powers these devices was originally designed for mobile phones, not payment terminals. Configuring smart terminals is therefore much different and more complex than it was with legacy terminals. Android terminals come with their own peculiarities and unexpected behavior, and those without experience can quickly run into issues.

Data Needs 2

POS devices are no longer used merely as payment processing terminals. Smart terminals go beyond just processing payments and enhance the customer experience with more capabilities—like integrating digital loyalty card functions—and help drive digital transformation at businesses. Some smart terminals even come with an app marketplace, which enables merchants to download and integrate everyday business tools with payment processing.

Some POS manufacturers also like to run background services on their smart terminals—for example, mapping/location services. Unfortunately, it's not always obvious which services the terminals actually need to function, and which are extraneous, or even exactly which background services are running on certain terminals.

In addition, merchants doing more with their smart terminals will have higher data needs than those just processing payments. Erring on the side of buying too much data, rather than too little, can seem to make sense. But data isn't free, and overbuying across a terminal estate can lead to burgeoning costs.

A right-sized data plan is therefore critical, but to get there, you need technical knowledge of how much data your terminals actually need—or a partner that has gained that knowledge through deep experience with Android smart terminal estates.

Connectivity

3

Given the wide-ranging functionality of smart terminals and potential for high-data needs, proper connectivity becomes essential. Wi-Fi has its disadvantages, with issues delivering consistent broadband speeds and security. After all, merchants can ill afford delays and transaction errors caused by poor connectivity.

Virtually all new Android payment terminals come with cellular connectivity as standard. But one of the biggest challenges with using cellular connectivity is variable service and signal quality.

A network provider that offers fully managed services with high uptime, performance, and redundancy can provide reliability while removing the complexity of managing cellular connectivity. This in turn can help to simplify the deployment and management of smart POS terminals.

The SIM Itself

4

You may be considering the "put a SIM in everything" strategy, which has become popular during deployment of smart terminals. That's because it's quicker and easier to install onsite terminals onto cellular connectivity, which can create cost efficiencies.

Plus, having a SIM in every POS terminal automatically ensures backup connectivity if a merchant's Wi-Fi goes down, which can save your help desk from having to field calls from merchants looking to troubleshoot their Wi-Fi.

But the right kind of SIM is important. If a carrier experiences an outage, a SIM that "prefers" that specific carrier also goes down. At a minimum, look for a multi-operator SIM that can roam freely between the networks, but for maximum resilience choose a SIM card that can automatically switch between operators based on the quality of the data channel, such as TNS' Roam+ Smart SIM, which is part of the TNS Global Wireless Access solution.

Public or Private

5

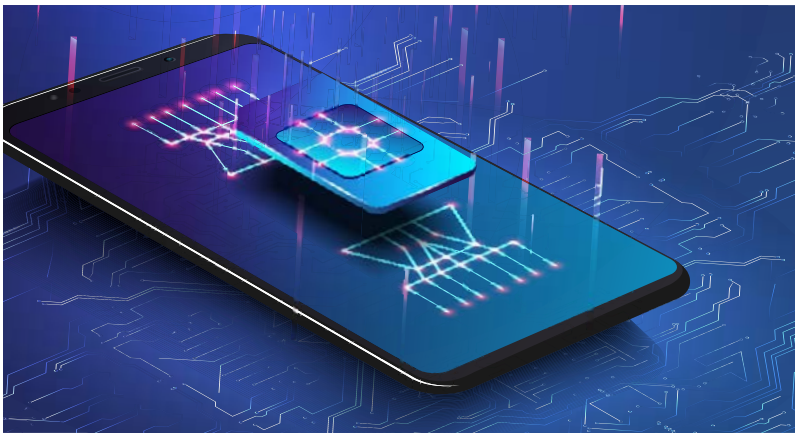
It's something of a paradox: Smart terminals need access to internet services, but you don't want to connect them directly to the internet with a SIM.

That's because internet-facing SIMs add a level of risk to your business. Some proportion of internet-facing SIMs will always fall victim to misuse (for example, by being repatriated from their POS terminals to live in mobile phones or Wi-Fi hotspots), meaning you end up with a higher-than-necessary bill.

A private Access Point Name (APN) solution that can handle the complex requirements for routing the internet facing traffic is required. A network provider that supports your terminals on a private APN also can control how much access the Android background services have, and limit the terminal to connecting to only the endpoints it actually needs to function.

Additionally, data usage is another area where a private APN comes in handy. No internet-facing SIMs means no SIM misuse, which means no billing surprises because of higher-than-normal SIM data usage.

The right infrastructure is needed for merchants to optimize smart terminals. They are looking for performance and reliability, and only the proper connectivity will allow you to meet their expectations.



TNS offers a range of connectivity solutions that can help your business maximize your smart terminal deployment.

For more information, please email **solutions@tnsi.com** or visit **tnsi.com**