

# What to Look for in Servers for Point-of-Sale Systems

*Consistency, long product life and multiple use capability are keys to success*

By Steve Grady VP Customer Solutions, Equus Computer Systems

Hospitality and retail companies face numerous hardware challenges in their highly competitive and ever-changing environments. They need highly-configurable and cost-effective point-of-sale (POS) systems that are secure and reliable. In selecting the right server for their POS system, they should look for platforms with three key characteristics: consistency, long server life, and the ability to handle multiple needs simultaneously to drive down costs.

## Server as the backbone of the point-of-sales system



A point-of-sale (POS) system means different things to different people – as there is not a definitive POS configuration. Many technologies roll up into a typical solution, including networking, in-store Internet access, multi-function POS devices, customer kiosks, digital signage, hand held devices, as well as back office servers connected to a data center in cloud.

POS configurations and hardware tend to vary among three general application categories: table/hospitality/restaurants; retail (convenience store/grocery/chain); and medical (including dental and veterinary). In general, POS technology has shifted from closed proprietary solutions to more flexible solutions that give the retailer or restaurant owner better control and understanding of store operations. Most recently, POS solutions have begun to provide direct interaction with the customers, for example, tablets for ordering and paying.

While not as glamorous as these new tools and toys, the back end server remains the backbone of the POS solution. Depending upon the application, servers can provide multiple functions – a terminal, digital signage player, and a back office PC.

It should be noted that there is nothing innately different in a server used for a POS system than one for other industry verticals. There are some unique features, like connectivity and providing the required number of ports, but at its heart it is no different than a normal server. What makes a difference is the ability of the customer server platform to meet the required level of control over operations.

## Rely on a server expert to configure solution based on technology and sales needs

Many resellers rely on large industry players like ScanSource for terminals, handheld devices, cash drawers, printers, power products, and other peripherals. While these POS giants may also offer backend servers, resellers frequently recommend that customers instead obtain their servers from a server expert. Many resellers are uncomfortable with buying their servers from the same

vendor from whom they buy their cash drawers. Resellers should be looking for servers that are not tied into any particular software or hardware.



The Nobi Retail i3104 is a compact computer specifically configured for the retail back office environment where space is limited.

For example, Equus builds cost effective servers for all POS applications. Examples include local POS servers, data center servers, and cloud infrastructure servers for companies ranging from nationally recognized grocery and restaurant chains, to hometown diners and convenience store chains. The focus is on close interactions with resellers and a high level of customer service that allows each reseller to customize and configure exactly what their end users need.

Sometimes an end user company wants to use RAID (array of independent disks), or perhaps they want multiple network cards because they have an internal network and a credit card network that must be kept separate. Or they want

to run Windows 7 on their server and have found that larger server manufacturers do not offer servers with desktop software.

Hardware product managers work with each reseller to determine the required specifications and review the server hardware configuration options available. With this approach, resellers maintain an enormous amount of control over the server product they procure. Acting as a co-developer, product managers come up with a POS server solution based on resellers' unique technology, sales, and customer preferences.

### **Cost reductions from running desktop operating system on servers**

For many POS end users, there is a distinct cost advantage to selecting servers that are approved to run both the desired POS software and a desktop operating system on a server platform. This can be especially beneficial for companies running on slim margins. Rather than having to purchase sophisticated servers and other hardware resources, they can combine functions into one piece of hardware and save significant dollars. The ability to provide a platform server with a desktop operating system means end users do not have to support multiple different platforms.

This makes a lot of sense, since in many instances there is no real need for complicated servers – these are just machines that are connected. No one is logging in, there is no active directory, and no need for replication and directory services. The servers simply need to share some files. So, the server side has minimal requirements. But – and it is a big but – end users still need the reliability a server can give, since desktop computers are not designed to run 24/7, with multiple hard drives.

There are many examples of POS resellers experiencing frustration with larger server manufacturers who do not know enough about the ins and outs of the POS business to be able to help them select the right server. Price and product availability may vary from month to month,

or even week to week. Resellers have no control over which hard drives or video cards will ultimately end up in their servers.

Server experts like Equus enable resellers to lock down the precise unique configurations they are looking for, while still providing pricing competitive with major manufacturers.

### **Standardization removes risks inherent in customization**

Standardization means providing the fewest number of product views to cover the greatest number of solutions. Equus has developed numerous solutions where the end user customers may get 3-4 boxes, all using one motherboard/platform, or at most two platforms. One might be in a smaller case, used up front at a checkout. One might be a workstation, like a low end back office server that can also be used by the restaurant manager for other tasks. This experience means end users can get the unique configuration they need while removing the risks inherent in customizing each server – like learning that one or another USB or network card does not work as required.

A huge advantage of this approach is that the end user does not have to support four different separate computers, each on different road maps. The need to support multiple images can be frustrating, as can the need to maintain multiple stacks of inventory for spare parts. Hardware product managers work directly with Intel, motherboard manufacturers, case designers, and component manufacturers, to lay out very detailed road maps and life cycles that resellers can count on.

### **Threat management and security concerns affect server selection**

Security is one of the most important issues facing POS end users. Most are already compliant with Payment Card Industry Data Security Standard (PCI DSS) requirements, but there are many other aspects of threat management and security now being integrated into POS systems, albeit slowly.

Unfortunately, POS systems are lagging behind in security technology. The reasons are twofold: resellers do not like change and store owners balk at spending money on technology, running as they do on thin margins. Software companies have had to embrace these security measures and update their software, so they are starting to come around to the need for change. As they do so, resellers will also evolve to meet end user customer requirements.

There is a trend towards virtualization as a way of providing a higher level of security on back end operations. Virtualization is an excellent way of securing the POS environment, especially for those with multiple locations. Virtual servers by their nature are very secure. All vendors now want to secure credit cards, using mobile payment and digital wallet services, and to do so they will need secure virtual machine (VM) servers with hardened operating systems.

It should be noted that the lack of “appetite” for buying new technology was greatly exacerbated by the 2008 market crash, which affected restaurants and retail stores very badly. After many years in the doldrums, there has been a resurgence in sales. This already seems to be leading to

an increase in purchase of virtualized infrastructure, with the security improvements that go with it.

Another trend that is having a major effect on security is the move to cloud-based, rather than local, infrastructure. In the past, if someone walked into a fast food restaurant and grabbed a computer and walked out the back door, the thief would be able to obtain an enormous amount of information. Many now still have a computer on premise – but it does not house information; it has all been stored with the credit card processors.

### **Resellers can provide what end users need**

POS resellers need to be able to customize cost-effective servers that are stable, with long life performance, and managed technology roadmaps. Equus' platforms have been field-tested with many of the top-selling POS software packages, so resellers have access to a variety of computer server building blocks to provide winning end user solutions.