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Trend Advisory

information > intelligence > insight

POS systems rise to new status

To optimize inventory, ordering and pricing, new point-of-sale (POS) systems are collecting more detailed sales and customer data at the point of purchase.



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The evolving strategy of POS

Today's POS systems must be much more than cash registers. They are becoming an interactive conduit between customers and retailers.

EMERGING TRENDS

Enabling new applications: POS systems take on new roles

Organizations are quickly incorporating new data collection and payment technologies into their POS systems so that more sophisticated analysis of sales trends may be undertaken.

SOLUTION INSIGHTS

Basic requirement: an open platform

The need to incorporate new payment and information collection technologies is accommodated by open POS systems.

I.T. BEST PRACTICES

Crafting a solution: bringing essential elements together

To take full advantage of POS data requires centralized storage of data from all retail facilities and a means to effectively manage the distributed POS systems.

UPCOMING PRODUCTS

New POS systems tout ease of use, openness

POS systems are the heart of many organizations' new operational efficiency plans and customer rewards programs. As such, new systems offer quick and accurate collection of sales data.



EMERGING TRENDS

Enabling new applications: POS systems take on new roles

For years, point-of-sale (POS) systems have played a key role in the operations of retail organizations. The systems let retailers quickly and accurately collect sales and customer information. This information is then used by enterprise resource management (ERP), supply chain management (SCM) and customer relationship management (CRM) systems to keep accurate inventory supplies in stock and to support customer focused programs such as rewards and loyalty programs.

Increasingly, retailers are looking to do more sophisticated analysis of sales data to maximize the profits on each individual product item, analysis of customer buying behaviors and to increase the efficiency of back-office accounting. For example, today, only about 12 percent of retailers invest in price optimization procedures according to a 2006 Gartner and *RIS* magazine survey of 155 retailers. Additionally, the Yankee Group, in a 2005 study of 95 companies, states that companies

can experience impressive return on investment (ROI), typically a 5–19 percent profit improvement. Also, it gives these companies a tremendous competitive advantage. However, 30 percent have either started or will start efforts in this area this year and another 21 percent will undertake price optimization efforts in 2007.

Businesses are also implementing self-service POS systems to reduce customer wait time while increasing the overall customer experience. Many are also incorporating self-serve kiosks, giving even more freedom to a customer. With these systems, customers have the ability to check if an item is in stock, scan an item for a price check or find the location of a specific item within the store.

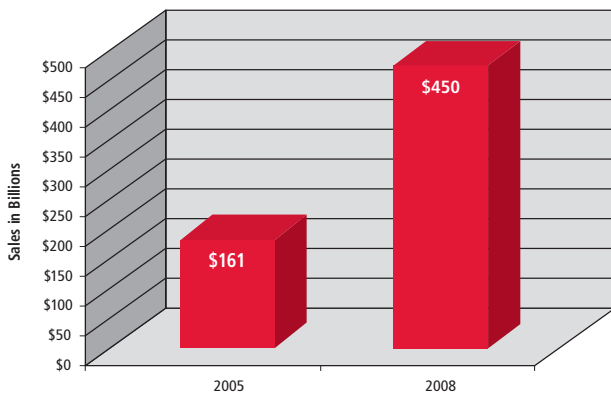
Additionally, some retailers are trying new payment technologies to speed the checkout process. While not widely used, there is growing support for payments using RFID-based swipe cards. A 2005 *CIO Insight* magazine found that swipe card pilots boost sales and increase customer loyalty. To be in the position to adopt such technology as it comes along requires an open architecture POS system that can keep up with changing requirements.

Starting with a solid base of installed open POS systems, retailers are now exploring additional complementary technology that might be leveraged to improve operations.

The areas of greatest interest include biometrics for employees at the POS, credit imaging, check imaging, ID imaging and RFID payment. All potentially deliver cost savings and many improve customer service.

According to an IHL Consulting Group survey of 77 companies, the demand for these technologies is being driven solely on the measurement of ROI.

Self-serve checkout transactions



To speed customers through checkout lines, some retailers are turning to self-serve checkout POS systems. Such systems are just one example of the new ways POS systems are being used to deliver improved customer service. (Source: IHL Consulting Group, 2005)

EMERGING TRENDS (CONTINUED)

New legislation and regulations require retailers to collect ID information when a customer purchases an item with an age requirement such as alcohol and tobacco products. This becomes a time-consuming process that slows down purchase time and hampers the overall customer experience. In some cases, such as pharmacies, pharmacists are burdened with the task of verifying and recording the age of someone buying cold medication.

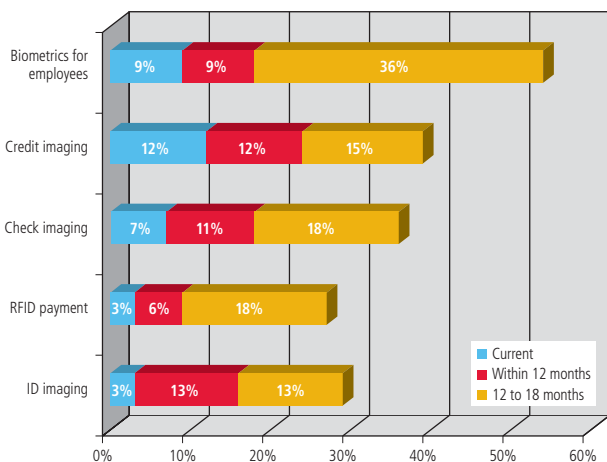
An ID imaging system, which is essentially a scanner with customized software, reads and records a license or other accepted IDs in seconds. This saves the cashier time and helps keep the checkout line moving.

Another technology becoming more popular is biometrics. This technology completes the sales life cycle by allowing sales associates access to POS systems. Using biometrics with a POS focuses on verifying an employee's time and attendance, ensuring that employee's hours are tracked appropriately. A biometric device, such as a fingerprint reader embedded in a keyboard or attached to a POS system via a USB port, identifies, confirms and matches employees, eliminating the possibility of unauthorized entries.

The biometric ID system also allows a retailer to confirm which employee made a specific sale. So when sales data is analyzed, potential problems can be spotted and addressed. For example, if one employee is found to frequently scan the same item for return, it might reveal a case of employee theft or it might simply identify a cashier who needs more training in that operation.

To understand why biometrics is gaining favor, one need only look at the recent success some retailers report in thwarting employee theft. In a 2006 study based on the responses of 42 companies operating 7260 stores, the Food Marketing Institute found that the cash register was the most vulnerable point of attack, accounting for 62 percent of employee theft. Retailers were able to decrease their total losses from theft and other forms of shrinkage to 1.69 percent of sales in 2005 versus 2 percent the previous year.

Desired new POS functionality



A survey of 77 retail organizations identified several key technologies that will increasingly be incorporated into POS systems over the next 18 months. (Source: RIS News and IHL Consulting Group, 2006)



SOLUTION INSIGHTS

Basic requirement: an open platform

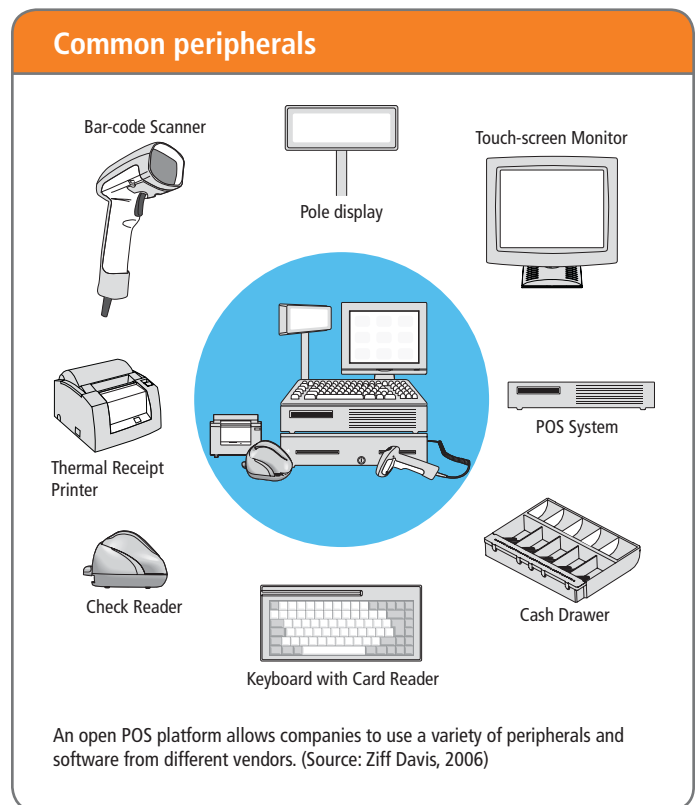
POS systems help retailers collect sales information and make strategic inventory and business management decisions. They can also help deliver more personalized customer service and accommodate new data entry and payment technologies.

To accomplish all of these things requires flexibility, and many businesses are now moving from proprietary systems to open POS systems.

The benefit of using open systems is that a POS solution can be customized using the best components from a variety of vendors, giving organizations more flexibility to implement a solution that helps meet their business need.

The typical POS solution includes a central processing unit (CPU), touch-screen monitor, a keyboard with credit card reader, cash drawer, pole display, scanner, thermal receipt printer operating system and retail application software. And there is the flexibility to incorporate new technologies and applications as they become available.

New data input options such as RFID swipe cards and ID card readers are being introduced more frequently to POS solutions. The benefit of using such devices is that they provide a quick way to accurately collect payment information and complete a sales transaction. An open POS system architecture allows retailers to easily add any new input device and its associated software.





I.T. BEST PRACTICES

Crafting a solution: bringing essential elements together

Retailers use POS data to improve the operational efficiency of their stores. It is being analyzed in new ways to optimize pricing and placement of products within stores.

However, to reap these benefits from the data requires a robust I.T. infrastructure. First, the POS systems within each retail location must be networked together using a local-area network (LAN). In many situations, the LAN is comprised of hubs and switches that support Ethernet and Fast Ethernet connections. And in some situations, POS systems are being connected using wireless technology.

Each location in a chain typically has one or more servers and onsite data storage. However, to use the data for forecasting, ordering, loyalty programs and other advanced applications requires that the data from all stores be centralized. This requires wide-area networking (WAN) technology that reaches every location. Many organizations use a mix of technologies including T1 lines, frame relay, dial-up lines, ISDN and the Internet, usually in conjunction with virtual private networking (VPN) hardware or software.

Using the WAN, data is aggregated onto storage systems in a company's headquarters. Naturally, suitable storage technology must be in place. Retailers need to select storage systems that offer the required performance at a reasonable price. The data stored on these systems must be safeguarded from corruption, hard disk crashes and disasters, so backup and recovery solutions must also be in place.

With the data stored in a central location, it can then be analyzed and used in ERP, SCM, CRM and other applications. To accomplish this requires database technology that saves POS data in suitable formats so the data may easily be assimilated or imported into analytical, enterprise and retail applications.

From an I.T. perspective, there is additional complexity that comes into play in most retailer organizations. Specifically, many organizations link their online and in-store operations at some level.

For example, a retailer might set up a connection between the two so a loyalty customer earns points on any type of purchase (in person or online). Some stores are offering the ability to buy online and pick up the merchandise in person. Others simply let a shopper check online to see if an item is available in a particular store.

For any of these applications to work requires a tight integration between the Web and in-store systems.

MANAGEMENT AND SECURITY

Managing POS systems that are spread throughout numerous, geographically dispersed locations can be cumbersome.

Simple tasks like installing new software or updating prices could drain staff resources if someone had to physically walk up to each POS and perform these tasks. And in many cases, small stores simply do not have people trained to handle these operations.

This is leading retailers to use the network connectivity that is in place to collect the POS system data for management purposes. According to the Retail Systems Alert Group (2005), 83 percent of businesses use Transmission Control Protocol/Internet Protocol (TCP/IP) networks (as opposed to disks or CDs) to distribute software to their stores.

And given that POS systems handle vast amounts of credit card, debit card and personal customer information, the systems must be protected to safeguard this information. In particular, solutions must be in place so that information is stored, shared and transmitted securely within the company.



UPCOMING PRODUCTS

New POS systems tout ease of use, openness

Retailers are increasingly incorporating POS data into new initiatives like price and inventory optimization, supply chain management, and customer loyalty and rewards programs. As new efforts are developed, the key is to have an open POS system that can quickly accommodate new data collection and payment technologies as they come along.

Additionally, the systems must also be easy to use in order to keep training costs down. At the same time, POS systems must be accurate and secure.

New POS systems meet all of these requirements via their open architecture, which supports a wide range of monitors, printers, pole displays, credit card readers, bar-code scanners and other peripherals.

A solution that meets these criteria is a system that combines the basic POS components from HP. Specifically, this solution would include the HP rp5000 POS unit, HP L5006tm Touchscreen Monitor and HP USB Thermal Receipt Printer. Together, these products form a core POS system that can ring up sales, collect customer information, and print coupons and customer receipts.



HP rp5000

The HP rp5000 is a base POS system that offers an open format that lets retailers mix and match peripherals to get a complete solution that meets their data and sales information collection needs.

HP L5006tm Touchscreen Monitor

The HP L5006tm Touchscreen Monitor speeds up the checkout process while reducing errors. When used in conjunction with a POS system, the monitor can guide cashiers through the sales process, allowing them to make rapid entries with the touch of their fingers.

HP USB Thermal Receipt Printer

The HP USB Thermal Receipt Printer offers a quiet and quick way to print customer sales and credit card receipts. The printer uses easy-to-replace paper rolls, making it a simple task that all cashiers can perform without much training.

Technical Specifications

CDW offers a wide variety of POS products like the ones below that can be used as the foundation for collecting sales and customer data.



HP rp5000

The HP rp5000 brings you the reliability, ease of use and cost-effectiveness that your business needs. Even more, it allows you to design the perfect system for your business by adding on integrated peripherals to the rp5000 base system.

A total package solution that you can customize, starting with the base system and adding HP-branded peripherals includes:

- Touchscreen monitor
- Cash drawer
- Bar-code scanner
- Receipt printer
- POS keyboard
- Magnetic strip reader

CDW 1031318



HP L5006tm Touchscreen Monitor

A 15" touchscreen monitor that allows cashiers to quickly and accurately enter sales and customer information.

- Surface Acoustic Wave (SAW) touch technology allows for accurate input through a finger, gloved hand or stylus
- USB and Serial ports enable easy device connectivity with a variety of peripherals
- Contrast ratio: 400:1
- Three-year limited parts, labor and backlight warranty

CDW 985982



HP USB Thermal Receipt Printer

A single station printer to generate customer sales and credit card receipts.

- Print speed: up to 38 lines per second (130 mm/sec)
- Compact sized with large paper roll capacity
- Clamshell™ drop-in paper loading system

CDW 986149



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