SAM4s Technology Update

Choose 128GB SSD on the following SAM4s terminals:

SPT-4740
- Intel Celeron 1037U Dual Core 1.8GHz Fanless Processor
- Resistive Touch
- Card Reader

SPT-4846
- Intel Celeron 1037U Dual Core 1.8GHz Fanless Processor
- Projected Capacitive Touch
- Front Facing Card Reader

SPT-7640
- Intel Celeron 1037U Dual Core 1.8GHz Fanless Processor
- Projected Capacitive Touch
- Integrated Printer Standard
- Optional Integrated Scanner and Fingerprint Reader

TITAN-160
- Intel Celeron 1037U Dual Core 1.8GHz Fanless Processor
- Projected Capacitive Touch
- 2GB RAM Standard
- Sleek Cabinet Design
- Thin Card Reader

TITAN-560
- Intel Core i3 3.3GHz Processor
- Projected Capacitive Touch
- 4GB RAM Standard
- Sleek Cabinet Design
- Thin Card Reader

There are many advantages solid state drives (SSD) have over traditional mechanical hard disk drives (HDDs). As SSDs have become more prevalent, and prices have declined, the POS market is on the cusp of HDD to SSD transition.

Reliability

Rotating hard disk drives (HDDs) have been the traditional storage devices for POS PCs for years. SSDs have no moving parts, making them much less prone to failure. Various studies predict that HHDs fail at three times the rate of SSDs.

POS terminals can also be subject to more environmental challenges. Typically they are installed in a wide range of open environments that can be affected by climate, power, shock, vibration, liquid spills and other elements that can't always be predicted. The risk of mechanical drive failure in these tough situations is almost completely eliminated by SSD's lack of moving parts.

Speed

Since the SSD does not need to move the drive heads or spin-up the drive platter (as in an HDD), data in an SSD can be accessed almost immediately. Due to the lack of mechanical delays, SSDs provide significantly improved performance, including increased data read/write rates, faster loading of applications, and decreased system boot-up/shutdown time.

Performance

The SSD performance advantage is due to two key reasons: The first is file fragmentation. Over time files become more fragmented, requiring a HDD to perform additional seeks to retrieve an entire file. This process decreases the effective performance of the drive as compared to the SSD, which has substantially lower seek times.

The second reason is the method in which data is stored on an HDD. When data gets first written to an HDD, it is stored in the sectors close to the outer edge of the spinning platters, which move faster as compared to the sectors nearer to the center of the platter. But when the HDD fills up, the situation differs and data is written to the slower-moving inner sectors, decreasing write and read speeds up to 50%. Here is where SSDs have an advantage for not having moving parts. They are able to maintain the same level of read and write performance through the entire capacity of the drive.

Power Consumption

SSDs use far less energy than regular traditional HDDs as there is no power used to drive motors in SSDs.

Reviewing SSD Disadvantages: Cost vs. Capacity

SSD storage size is still considered expensive when compared to HDD storage size. However, most POS workstations function effectively using smaller sized SSDs.

Conclusion

Using SSD, rather than a traditional HDD may be the most cost-effective performance and reliability upgrade you can make on a POS terminal. Consider the advantages individually, as well as the overall impact of lower power strain and a cooler computing environment, an SSD will positively impact the reliability of the entire terminal.