

Title: **Retail POS Scanners: Laser or Linear Imaging?**

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Executive Outlook

Retail POS Scanners: Laser or Linear Imaging?

It wasn't too long ago that POS scanning options for the retail industry were simple: if you wanted to capture a barcode, you could choose to use a laser scanner or a contact scanner (also known as a CCD reader). However, if you wanted to read an item with any range involved, you needed to use a laser scanner, as it was the only effective methodology that could capture barcodes with a distance of up to 12 inches.

Lasers have always been ideally suited for logistics and warehouse applications where distance and range have been issues. Today, however, new technology has been developed that has resulted in major improvements to a host of POS products, including linear imaging scanners.

There are several benefits that linear imaging scanners now offer to retailers, including range, less maintenance costs, fewer public safety issues and a higher cost/savings ratio, making them a very attractive alternative to laser scanners. The similarities are in range (up to 12 inches), they read the same symbologies and connect to all of the same POS systems. (As a side comment, it should be noted that this is true only for handheld scanners: laser is still the only option for multi-directional scanners.)

But linear imagers also offer a big advantage over laser scanners in that they have no moving parts, meaning less maintenance over time. In a laser scanner, the laser light is focused through a lens and reflected off an oscillating mirror. Linear imagers use Light Emitting Diodes (LEDs), illuminate the barcode then the sensor decodes the barcodes. This reduction in moving parts can translate into considerable savings in servicing costs, meaning a faster return on investment over laser scanners.

Another advantage is that, because linear imagers use LEDs, they do not have the public safety issues experienced with lasers. It has been definitively proven that laser light can damage human eyes if it is directed directly into them.

Perhaps the biggest benefit offered by linear imaging scanners over laser scanners is that they are more economical, with savings of up to \$150 per scanner. For large retail applications that require many POS handheld scanners, this has considerable merit.

So the \$64,000 question is, "Which one is right for my business?"

There is no cut and dried answer. If your retail establishment has any POS that requires scanning in an outdoor location, you should choose laser handheld scanners – they will outperform most linear imaging scanners in direct sunlight. However, for all other applications, you have the option of choosing linear imaging or laser. When looking at the overall implementation of hand held scanners, ask yourself three questions:

- "Which expense will produce a greater return on my investment?"
- "Do I need the ability to scan over a distance greater than 12 inches?"
- "How much will servicing the units add to the initial investment?"

The answers will give you all the information you need to make an informed and correct decision for determining whether laser or linear imaging is best for your application and needs.

| ([Tim Sawyer is Manager of Cipherlab Australia](#), a leading innovator in AIDC technology. CipherLab offers both laser and linear imaging handheld scanners. For more information, call [1300-CIPHER](tel:1300-CIPHER) or [1300-247 437](tel:1300-247437) or visit us at www.cipherlab.com.au.)