# insignia's guide to:
# Handheld Barcode Scanners

Looking to purchase a new handheld barcode scanner? Scanners today provide greater functionality, convenience and durability than ever before. Whether it will be used for retail POS, warehouse inventory management or to improve order picking accuracy, there is a wide range of scanner options available. This Buying Guide can help you to choose the right device for your application.

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# BARCODE SCANNERS OVERVIEW

Handheld barcode scanners are portable and designed for easy, one-handed operation, generally using a trigger mechanism for simple aim-and-scan operation. Offering flexibility and freedom of movement, handheld scanners are ideal when scanning at a distance or scanning cumbersome items which are difficult to manoeuvre in front of a fixed scanner. They are straightforward to install - in most cases you just plug in the cable and you are ready to start scanning.

Handheld scanners can be compared to a computer keyboard, they are a device used to enter data into a computer or operating system, as opposed to a mobile computer which runs an operating system and is equipped with a built-in scanner.

To determine the best handheld barcode scanner for your application the following questions can assist in your decision making.

• *What kind of barcodes are being scanned?* E.g. 1D, 2D

• *What is the working environment?* E.g. Warehouse, Point of Sale/Cash Register

• *How often will the scanner be used?* E.g. Hourly, constantly, only when receiving or picking

• *Will it remain in the one position or do you require mobility?* E.g. Cord or Cordless scanner
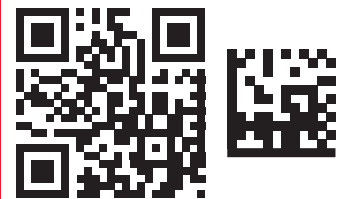
## One-Dimensional (1D) Barcodes

Linear style, and represents data by varying the width and spacing of parallel lines. Examples of 1D barcodes includes **UPC & EAN** barcodes (Retail), **GS1-128** (Supply Chain), **ITF-14** (Packaging), **GS1 DataBar** (Retail & Healthcare)

## Two-Dimensional (2D) Barcodes

Uses 2D symbols and shapes, and can represent more data than a 1D barcode. Examples of 2D barcodes includes **QR code** (Retail, Entertainment, Advertising), **DataMatrix** (Electronics, Retail, Government)

# SCANNER TYPE

## Laser Scanners

● Are the most well-known type of scanner.

● Scan traditional 1D barcodes

● Work by using a laser-beam light source, and the barcode is decoded by a photo diode which measures the light reflected back from the barcode into the laser.

## Linear Image Scanners

● Work more like a digital camera capturing the image and then decoding it, (just like a smart phone).

● Only read 1D barcodes

● Have the advantage of reading barcodes on any surface, including digital devices and can even read damaged or poorly printed barcodes.

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## *Area Imagers*

- ● Capture the barcode as an image before analysing and decoding it.

- ● Read 1D barcodes as well as 2D barcodes, which contain significantly more information in the code.

- ● Have omni-directional reading capability, where the orientation of the barcode doesn't need to be positioned to suit the scanner, resulting in faster reads and less time spent aiming the scanner.

- ● High-performance Area Imagers can also capture and transfer images, like signatures or a photographic image, useful for proof of delivery or evidence of a damaged shipment.

# CONNECTIVITY

*insignia's handheld barcode scanners have a range of connectivity options including USB, LAN and Bluetooth*

The information that has been decoded from the barcode will need to be transferred to a computer, cash register or host operating system. The simplest and most cost-effective method to communicate is via a USB cable. Corded systems offer easy plug-and-play installation.

Handheld cordless scanners communicate wirelessly with a base station or charging cradle which is connected to the computer via a cable. Again they are simple to install, just plug the base station into the host computer then pair the scanner to the base station.

Cordless scanning offers freedom of movement and productivity gains, especially if you are scanning outdoors, on-floor or have a cross-facility application. Additionally, cordless scanners eliminate the clutter of cables and potential trip hazards of corded devices.

If your application is particularly scan intensive or requires continuous scanning for long periods of time, consider the battery life in the scanner's specifications.

Some cordless scanners have Batch Mode functionality which allows you to keep scanning even when working outside the wireless range of the base station. The scanned information is stored in the device's memory and later transferred to the host computer when within range.

Some handheld scanner models have a stand accessory which allows for presentation scanning. This enables 'hands-free' scanning, and there is no need to hold the scanner, just wave the barcode past the scanner to read the code.
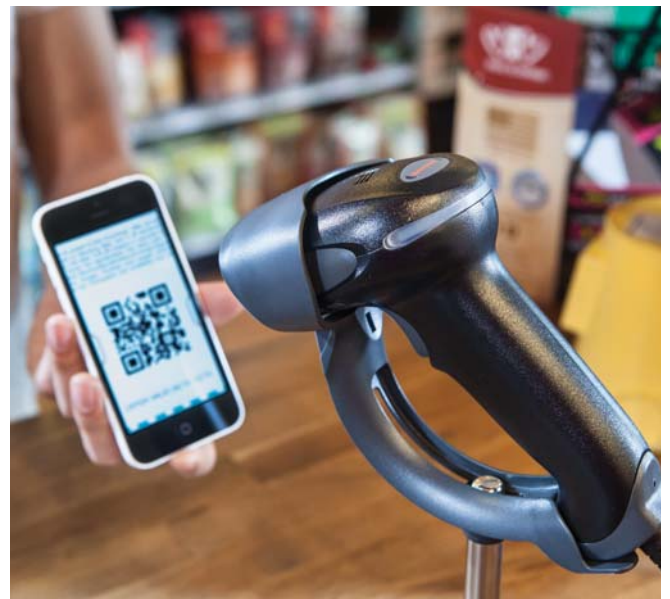
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# RUGGEDNESS

There are handheld scanners available for all working environments. Basic models are designed for retail, office or light industrial use. Scanner manufacturers know that scanners do get dropped and knocked, so even standard models are designed to survive drops onto concrete.

For demanding, industrial environments, there are handheld scanning devices that are designed with IP65-seals to withstand dust and water. These tough scanners are built to tolerate 5000 x 2m drops, even in freezer conditions.

In less challenging environments scanners are sometimes mistreated so investing in a more rugged design can prove a wise decision when comparing not only the cost of a replacement scanner, but also the cost of the downtime from being without a scanning device.

# CONCLUSION

insignia stocks a wide range of handheld scanners from the world's leading brands. If you have further barcode scanning questions our sales team would be happy to discuss your data capture requirements, whether it is scanning, or even printing barcode labels.

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# ABOUT INSIGNIA

We know how important your business is to you and how different it is from the next. This is why we work directly and collaboratively with you to understand your situation and needs, so we can create barcode and label solutions tailored to add genuine value to your operations, and help build your market competitiveness.

Since 1968, insignia have been providing identification solutions to Australian industry. Our family-owned values, our people, our products and our services are the reasons we've become the nation's leading manufacturer of labels and tags, and distributor of top-tier thermal printing, coding, marking and scanning brands, including Honeywell, Datamax-O'Neil, Zebra, Bixolon, Intermec, Datalogic, Carl Valentin, and Domino.

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