



MAGELLAN™ 800i

**MAGELLAN™ 800I**

**MOTOROLA DS9208**



**Features**

<b>PERFORMANCE</b>		
Multi Interfaces	Yes	Yes
Scan Pattern	SVGA with DSL	SVGA
Depth-of-Field: (100% UPC)	0 – 15 cm / 0 – 6 in	0 – 3.8 cm / 0 – 10.5 in
Decoding Capabilities	1D and 2D	1D and 2D
Mobile Phone Compatible	Yes	Yes
Image Capture	Yes	Yes
DL Parsing	Yes	Yes
EAS (Checkpoint)	Yes	Optional
Targeting Option	No	Yes
Scan Volume	~90 °in	~90 °in
<b>PHYSICAL CHARACTERISTICS</b>		
Dimensions (H x W x L)	15.2 x 8.9 x 8.9 cm / 6.0 x 3.5 x 3.5 in	13.9 x 8.1 x 7.8 cm / 5.5 x 3.2 x 3.1 in
Weight (Scanner only)	306.2 g / 10.8 oz	284.0 g / 10.0 oz
Size / Form	Medium / Flashlight	Medium / Box
Handheld Ergonomics (5 is best)	3	3
<b>ENVIRONMENTAL</b>		
Operating Temperature	0 to 40 °C/ 32 to 104 °F	0 to 40 °C/ 32 to 104 °F
Storage Temperature	-40 to 14 °C / -40 to 58 °F	-40 to 14 °C / -40 to 58 °F
Particulate and Water Sealing	IP52	IP50
Drop Resistance	Multiple 1.2 m / 3.9 ft drops	Multiple 1.5 m / 4.9 ft drops
<b>ELECTRICAL AND MIX FEATURES</b>		
Power	5V ±10%	5V ±10%
<b>FACTORY WARRANTY</b>		
	3 years	3 Years

**Datalogic Advantages:**

- Reading performance of the Magellan 800i imager was markedly better in performance testing.
- The Magellan 800i's SVGA imager with Digital Scan Line technology enables the product to use Datalogic's Magellan decoding library employing the best multi-line decoding capabilities. Advanced features like our patented multiple segment label stitching are available to help read poor quality bar codes.
- The Magellan 800i imager uses dimmer illumination with less LED flashing during use, making it more-user friendly.
- The Magellan 800i imager offers IP52 sealing against dust and liquids.
- Simple 'no button' design is easier for cashiers to use.
- The Magellan 800i imager's Illumix™ intelligent illumination allows the product to read bar codes faster from any item.
- EAS is standard on every unit – simplifies ordering and installation.
- The Magellan 800i imager's integrated tilting stand is infinitely adjustable with a larger range of movement. The DS9208 reader only has 5 preconfigured settings (or detents) which limit the adjustability of the scan volume.

**Competitor Weaknesses:**

- The DS9208 reader's illumination is controlled by a separate IR wake up circuit which slows reading performance. Sometimes the wake-up circuit gets out of sync with the user during scanning causing seconds of delay and user frustration. If the illumination is configured to be on all the time (like the Magellan 800i imager) the DS9208 is much brighter and very annoying visually. This setting also causes more misreads which would slow any transaction down severely.
- Datalogic's teardown of the product revealed 52 parts, including 4 PCBs, one flex cable to connect the PCB's and 14 fasteners. More parts and complexity means that more that can go wrong/break over the scanner's life.
- The DS9208 reader's trigger button is very awkward to use. It is positioned in the middle of the scanner's right side panel making it difficult to use for either left or right handed users. The targeting 'red dot' is clearly a nod to Datalogic's patented 'Green Spot' indicator used on the Magellan 1100i imager and other Datalogic handheld products. The red color tends to get washed out by the red illumination LED's.

**Synopsis:** The DS9208 scanner was clearly designed in response to the Magellan 1100i imager. It uses the same imager and processor as both the Magellan 1100i and Magellan 800i imagers. Though the DS9208 reader does have longer DOF performance - for most applications the few inches (or centimeters) at the far-field won't be much of an advantage as most items are scanned from 2 to 10 cm / 1 to 4 in. in a typical on-counter presentation application. We expected performance to be closer to Datalogic products and were surprised by how poorly the product performed in throughput testing which simulates common retail scanning transactions. It was more than 20% slower than the Magellan 800i imager. On paper the products seem very similar, but during use the Magellan 800i imager is a much more productive data collection solution.

**MAGELLAN™ 800i**



**MOTOROLA LS9208**



**Features**

<b>PERFORMANCE</b>		
Multi Interfaces	Yes	Yes
Scan Pattern	SVGA with DSL	20 lines
Depth-of-Field: (100% UPC)	0 – 15 cm / 0 – 6 in	0 – 22.8 cm / 0 – 9.0 in
Decoding Capabilities	1D and 2D	1D only
Mobile Phone Compatible	Yes	No
Image Capture	Yes	No
DL Parsing	Yes	No
EAS (Checkpoint)	Yes	Yes
Targeting Option	No	Yes
Scan Volume	~90 °in	~90 °in
<b>PHYSICAL CHARACTERISTICS</b>		
Dimensions (H x W x L)	15.2 x 8.9 x 8.9 cm / 6.0 x 3.5 x 3.5 in	13.9 x 8.8 x 7.6 cm / 5.5 x 3.5 x 3.0 in
Weight (Scanner only)	306.2 g / 10.8 oz	320.0 g / 10.2 oz
Size / Form	Medium / Flashlight	Large / Box
Handheld Ergonomics (5 is best)	3	2
<b>ENVIRONMENTAL</b>		
Operating Temperature	0 to 40 °C/ 32 to 104 °F	0 to 40 °C/ 32 to 104 °F
Storage Temperature	-40 to 14 °C / -40 to 58 °F	-40 to 14 °C / -40 to 58 °F
Particulate and Water Sealing	IP52	N/A
Drop Resistance	Multiple 1.2 m / 3.9 ft drops	Multiple 1.2 m / 3.9 ft drops
<b>ELECTRICAL AND MIX FEATURES</b>		
Power	5V ±10%	5V ±10%
<b>FACTORY WARRANTY</b>		
	3 years	2.5 Years

**Datalogic Advantages:**

- Harness the power of mobile marketing using Illumix™ intelligent illumination for reading codes from mobile phones or computer displays.
- Available in 1D or 2D models. All 1D models can be field upgraded to 2D bar codes, future proofing the customer's data collection system.
- Much better ergonomics for handheld use.
- IP52 sealing against dust and liquids provides superior reliability and minimizes downtime in harsher applications.
- Electrostatic Discharge (ESD) events from everyday occurrences are much less likely to impact performance of the Magellan 800i imager.
- The Magellan 800i imager has no moving parts for improved reliability.
- The tapered ergonomic shape and light weight of the Magellan 800i imager are very conducive to handheld use.
- Capture and transmit images to the host system using the Magellan 800i for advanced applications
- Capture and transmit images to the host system using the Magellan 800i imager or advanced applications.
- The Magellan 800i imager comes with CheckPoint EAS support inside every unit.
- The precise imaging scan volume of the Magellan 800i imager will not cause misreads due to stray laser scan lines.
- The Magellan 800i imager footprint is smaller, saving valuable revenue producing counter space.

**Competitor Weaknesses:**

- No support of 2D bar codes including PDF417.
- Laser scanners have moving parts which can be more unreliable.
- Laser scanners are not capable of scanning bar codes from mobile phones, PDA's or computer screens.
- No image capture capabilities
- Very poor ergonomics for hand held use. The large size of the product stresses the hand and makes it difficult to get a secure grip on the product. Using the trigger can be awkward and can stress the users hand especially for longer periods of use.
- Enclosures have no integrated overmold or rubber to enhance already poor ergonomics.
- Small or truncated labels are more difficult to scan.
- Checkpoint EAS is only available as a separate option.
- The LS9208 reader single line scanning mode is uncomfortable for left handed users and does not support single line scanning.

**Synopsis:** The LS9208 reader uses older laser technology for their scan engine and only reads 1D bar codes using a scan pattern made up of 20 lines (5 scan angles and 4 lines per angle). The Magellan 800i imager offers superior ergonomics, 1D/2D scanning performance and value added features which make it a much better reader for data collection systems today and well into the future.

**MAGELLAN™ 800I**



**MOTOROLA LS9203**



**Features**

**PERFORMANCE**

Multi Interfaces	Yes	Yes
Scan Pattern	SVGA with DSL	20 lines
Depth-of-Field: (100% UPC)	0 – 15 cm / 0 – 6 in	0 – 21.5 cm / 0 – 8.5 in
Decoding Capabilities	1D and 2D	1D only
Mobile Phone Compatible	Yes	No
Image Capture	Yes	No
DL Parsing	Yes	No
EAS (Checkpoint)	Yes	No
Targeting Option	No	No
Scan Volume	~90 °in	~90 °in

**PHYSICAL CHARACTERISTICS**

Dimensions (H x W x L)	15.2 x 8.9 x 8.9 cm / 6.0 x 3.5 x 3.5 in	13.9 x 8.8 x 7.6 cm / 5.5 x 3.5 x 3.0 in
Weight (Scanner only)	306.2 g / 10.8 oz	282.0 g / 9.9 oz
Size / Form	Medium / Flashlight	Large / Box
Handheld Ergonomics (5 is best)	3	2

**ENVIRONMENTAL**

Operating Temperature	0 to 40 °C/ 32 to 104 °F	0 to 40 °C/ 32 to 104 °F
Storage Temperature	-40 to 14 °C / -40 to 58 °F	-40 to 14 °C / -40 to 58 °F
Particulate and Water Sealing	IP52	N/A
Drop Resistance	Multiple 1.2 m / 3.9 ft drops	Multiple 1.2 m / 3.9 ft drops

**ELECTRICAL AND MIX FEATURES**

Power	5V ±10%	5V ±10%
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**FACTORY WARRANTY**

	3 years	2 Years
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**Datalogic Advantages:**

- Harness the power of mobile marketing using Illumix™ intelligent illumination for reading codes from mobile phones or computer displays.
- Available in 1D or 2D models. All 1D models can be field upgraded to 2D bar codes, future proofing the customer's data collection system.
- Much better ergonomics for handheld use.
- IP52 sealing against dust and liquids provides superior reliability and minimizes downtime in harsher applications.
- Electrostatic Discharge (ESD) events from everyday occurrences are much less likely to impact performance of the Magellan 800i imager.
- The Magellan 800i imager has no moving parts for improved reliability.
- The tapered ergonomic shape and light weight of the Magellan 800i imager are very conducive to handheld use.
- Capture and transmit images to the host system using the Magellan 800i imager or advanced applications.
- The Magellan 800i imager comes with CheckPoint EAS support inside every unit.
- The precise imaging scan volume of the Magellan 800i imager will not cause misreads due to stray laser scan lines.
- The Magellan 800i imager footprint is smaller, saving valuable revenue producing counter space.

**Competitor Weaknesses:**

- No support of 2D bar codes including PDF417; Laser scanners have moving parts which can be more unreliable.
- Laser scanners are not capable of scanning bar codes from mobile phones, PDA's or computer screens.
- No image capture capabilities; Small or truncated labels are more difficult to scan.
- Very poor ergonomics for hand held use. The large size of the product stresses the hand and makes it difficult to get a secure grip on the product. Using the trigger can be awkward and can stress the users hand especially for longer periods of use.
- Enclosures have no integrated overmold or rubber to enhance already poor ergonomics.
- Checkpoint EAS is only available as a separate option; The LS9203 does not support single line scanning at all.

**Synopsis:** The LS9209 and LS9203 readers use older laser technology for their scan engine and only read 1D bar codes using a scan pattern made up of 20 lines (5 scan angles and 4 lines per angle). The Magellan 800i imager offers superior ergonomics, 1D/2D scanning performance and value added features which make it a much better reader for data collection systems today and well into the future.

**MAGELLAN™ 800I**

**METROLOGIC ORBIT MS7120**



**Features**

<b>PERFORMANCE</b>		
Multi Interfaces	Yes	Yes
Scan Pattern	SVGA with DSL	20 lines
Depth-of-Field: (100% UPC)	0 – 15 cm / 0 – 6 in	0 – 20.3 cm / 0 – 8.0 in
Decoding Capabilities	1D and 2D	1D only
Mobile Phone Compatible	Yes	No
Image Capture	Yes	No
DL Parsing	Yes	No
EAS (Checkpoint)	Yes	Optional
Targeting Option	No	No
Scan Volume	~90 °in	~90 °in
<b>PHYSICAL CHARACTERISTICS</b>		
Dimensions (H x W x L)	15.2 x 8.9 x 8.9 cm / 6.0 x 3.5 x 3.5 in	14.9 x 10.1 x 10.4 cm / 5.9 x 4.0 x 4.1 in
Weight (Scanner only)	306.2 g / 10.8 oz	400.0 g / 14.1 oz
Size / Form	Medium / Flashlight	Large / Sphere
Handheld Ergonomics (5 is best)	3	2
<b>ENVIRONMENTAL</b>		
Operating Temperature	0 to 40 °C/ 32 to 104 °F	0 to 40 °C/ 32 to 104 °F
Storage Temperature	-40 to 14 °C / -40 to 58 °F	-40 to 14 °C / -40 to 58 °F
Particulate and Water Sealing	IP52	IP30
Drop Resistance	Multiple 1.2 m / 3.9 ft drops	Multiple 1.5 m / 4.9 ft drops
<b>ELECTRICAL AND MIX FEATURES</b>		
Power	5V ±10%	5V ±10%
<b>FACTORY WARRANTY</b>		
	3 years	3 Years

**Datalogic Advantages:**

- Harness the power of mobile marketing using Illumix™ intelligent illumination for reading codes from mobile phones or computer displays.
- Available in 1D or 2D models. All 1D models can be field upgraded to 2D bar codes, future proofing the customer's data collection system.
- Much better ergonomics for handheld use; The Magellan 800i imager has no moving parts for improved reliability.
- IP52 sealing against dust and liquids provides superior reliability and minimizes downtime in harsher applications.
- Electrostatic Discharge (ESD) events from everyday occurrences are much less likely to impact performance of the Magellan 800i imager.
- The tapered ergonomic shape and light weight of the Magellan 800i imager are very conducive to handheld use.
- Capture and transmit images to the host system using the Magellan 800i imager for advanced applications.
- The Magellan 800i imager comes with CheckPoint EAS support inside every unit.
- The precise imaging scan volume of the Magellan 800i imager will not cause misreads due to stray laser scan lines.
- The Magellan 800i imager footprint is smaller, saving valuable revenue producing counter space.

**Competitor Weaknesses:**

- No support of 2D bar codes including PDF417; Laser scanners have moving parts which can be more unreliable.
- Laser scanners are not capable of scanning bar codes from mobile phones, PDA's or computer screens; No image capture capabilities.
- Very poor ergonomics for hand held use. The large size of the product stresses the hand and makes it difficult to get a secure grip on the product. Using the trigger (on MS7180 models) can be awkward and can stress the users hand especially for longer periods of use.
- Enclosures have no integrated overmold or rubber to enhance already poor ergonomics.
- Small or truncated labels are more difficult to scan.
- Checkpoint EAS is only available as a separate option.

**Synopsis:** The Orbit scanner is one of Metrologic's older presentation scanners. It uses laser technology for the scan engine and only reads 1D bar codes with a scan pattern made up of 20 lines. It can be picked up to scan bulky items but is extremely cumbersome. The Magellan 800i imager delivers superior ergonomics, future proofed imaging based performance and features capable of providing more value and flexibility.

## Special Competitive Section: Competing Against 2D Full-Array General Purpose Handheld Scanners

### Symbol DS6700, Honeywell 4600r, Honeywell MS1690 Focus, Honeywell Xenon 1900

As imaging technology matures, full 2D handheld scanners come down in price, and 2D bar codes (like PDF417) migrate into retail point-of-sale applications, the Magellan 800i imager will be competing against all of these scanners more and more. Today's full 2D handheld scanners are generally more expensive than the 800i imager (handheld readers usually require hands-free stands or bases) and compromise 1D label performance in favor of point-and-shoot omnidirectional 2D label scanning. The greater the variety and quantity of 2D bar codes in any given application, the more appealing these scanners will be. The 800i imager is optimized to read 1D/2D bar codes in retail environments on the counter, completely hands-free. Typically, the 800i imager will excel in applications where the items being scanned are more efficiently handled and presented to the scanner instead of using a handheld scanner.

#### Datalogic Advantages:

- The Magellan 800i imager is optimized to scan both 1D and 2D bar codes totally hands-free. Full array 2D imaging scanners have been optimized more for handheld scanning than on-counter presentation scanning. Throughput testing consistently shows 2D handheld scanners to be significantly slower than any of Datalogic ADC's presentation scanners, including the 800i imager. In addition, for hands-free use, all of the 2D handheld scanners must be put into a bulky stand or base which adds cost, weight, and requires more valuable counter space at the point-of-sale.
- Scan volume optimized for either 'sweep' or 'presentation' style scanning. Full 2D imaging scanners will struggle to read bar codes when they are 'swept' in front of them. This forces cashiers to change their scanning technique to match the scanner and ultimately slows cashier productivity. In fact, 'motion tolerance' is a big problem for 2D handheld scanners, but not the case for the 800i imager.
- The 800i imager is ready for hands-free use out of the box. Full 2D handheld readers have to be programmed for hands-free stand mode. In addition to this additional programming, many of the label detection methods used for 'stand mode' by the 2D handhelds are very slow. These scanners are designed to be triggered and aren't optimized for hands-free use.
- The 800i imager is compatible with Datalogic ADC's value added software featuring host diagnostics and host download for improving store operations and customer satisfaction.
- The 800i imager comes with a versatile integrated tilting stand that can be fix-mounted. All of the 2D handheld hands-free stands do not allow the scanner to be locked into the stand for a fixed scanning application. This can comprise safety depending on the application.
- The 800i imager's footprint is much smaller, saving valuable revenue producing counter space over any of the 2D handheld hands-free stands.
- A Magellan hands-free scanner allows store associates to focus more on customer service since they do not have to touch the scanner most of the time.

#### 2D Handheld Advantages and How to Compete:

- While Datalogic ADC designed the Magellan 800i imager to be picked up for handheld use, some customers may prefer handheld ergonomics, particularly if they have a significant portion of larger or awkward sized items. In this case, a Datalogic handheld scanner may be a better option.
- Most of the 2D handheld scanners will have a longer depth-of-field on UPC/EAN/JAN labels. This can actually be a problem in small POS environments causing the cashier to constantly position the scan volume to avoid unintentional item scans. Most cashiers scan items very close to the scanner rather than farther out in the scan volume when scanning hands-free. The 800i imager's precise scan volume has been optimized for small to medium POS applications.
- Handheld readers are typically rated for higher (5 ft or 6 ft) drop specifications. The 800i imager is rated for multiple 1.2 m / 4.0 ft drops to concrete which is sufficient for its intended use on the counter.
- In some areas, these products have as much as a five year warranty. The 800i imager can be sold with an extended warranty contract or a Datalogic handheld with the same warranty period can be used.