

**Product: PowerScan® PM8500**

**Product Bulletin Number: PB20090630**

**Dated: June 30, 2009**

**General Availability: July 15, 2009**

**Public Announcement: July 24, 2009**

## Introducing the PowerScan™ PM8500 Cordless Area Imager

### Overview

The PowerScan PM8500 area imager cordless scanner has been created for customers requiring mobility and versatility in the work place. In the handheld scanning market, few segments are still showing any growth rate or continued development of new solutions. In particular, this market is experiencing a progressive erosion of the 1D bar code use in favor of the 2D bar codes and a growing need for mobility. The new PowerScan PM8500 imager is the answer to both market needs as it offers omnidirectional reading of 1D and 2D bar codes combined with the unlimited mobility guaranteed by the Datalogic STAR Cordless System™. It blends the best of the existing capabilities of the PowerScan 8000 family:

- The rugged mechanics that are common to all models
- The outstanding 1D and 2D bar code reading capability guaranteed by the Mega-Pixel sensor, already proven on the corded PowerScan PD8500 models
- The reliability and versatility of the Datalogic STAR Cordless System™, the proprietary Radio System that has been a key part of the PowerScan PM8300 reader success in the market place



### Features and Benefits

#### Designed for Productivity

Versatile and easy to install, intuitive and ergonomic usability, reliable and accurate in the long-term make the PM8500 is ideal for all industrial applications. These outstanding characteristics perfectly summarize the main features offered by the PowerScan PM8500 family.

The operator's comfort and productivity are essential in any scan-intensive application and are facilitated by the ergonomic handle and the well-balanced weight. The successful Datalogic patented 'Green Spot' and the double 'Good Read LED' are distinctive characteristics of all PowerScan 8000 models, offering reliable and intuitive feedback to the operator in any working condition or noisy environment. The built-in metal hook is useful to suspend the reader on an elastic reel, making the scanner easily accessible.

#### Outstanding Performance on 'real life' Bar Codes

The PowerScan PM8500 readers' users can rely on fast and accurate bar code reading. It is available with three optical options: **Standard Range** and **High Density** models are for typical bar code reading conditions (for medium and high

resolution code respectively) and the **Wide Angle** model offers a wider field-of-view allowing the capture of larger and longer codes. The operator productivity is further increased by the omnidirectional reading capability, which allows faster operation for 2D as well as for 1D bar codes. Shown below are some highlights of the PowerScan PM8500 imager reading performance.

### Maximum Resolution:

	1D Codes	PDF417	2D Codes
PM8500-HD	2 mil	3 mil	4 mil
PM8500	4 mil	4 mil	6.6 mil
PM8500-WA	5 mil	5 mil	7.5 mil

### Reading Depth-of-Field:

	1D: 5 mils	PDF417: 10 mils
PM8500-HD	4.5 to 8.0 cm / 1.7 to 3.1 in	3.0 to 13.0 cm / 1.1 to 5.2 in
PM8500	7.5 to 15.5 cm / 2.9 to 6.1 in	4.0 to 25.5 cm / 1.5 to 10.0 in
PM8500-WA	2.5 to 10.0 cm / 1.0 to 3.9 in	1.5 to 21.5 cm / 0.6 to 8.4 in

### Reliability and Accuracy in the Long Term

Datalogic Scanning's PowerScan PM8500 reader is suitable for the most demanding and toughest industrial applications, both indoors and outdoors. The rugged mechanics of the PowerScan PM8500 reader have been developed and tested to withstand extreme shock conditions, while maintaining reading performance and accuracy.

The enclosure is a balanced mix of co-molded plastic and rubber to protect the 'internal core'. All relevant internal parts are additionally wrapped and suspended inside a protective rubber shock absorber to minimize the transmission of unavoidable shocks.

The PowerScan PM8500 readers are fully protected against dust and rain to assure that key components remain clean and dry even in extremely harsh conditions.

**Drop Resistance:** tested to resist to 50 drops from 2.0 m / 6.6 ft to concrete

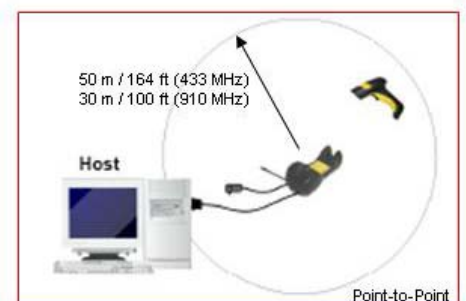
**IP Protection:** IP65 (without display); IP64 (with display)

**Operating Temperature:** -10 to 50 °C / 14 to 122 °F



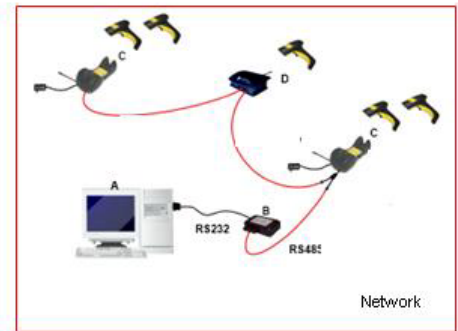
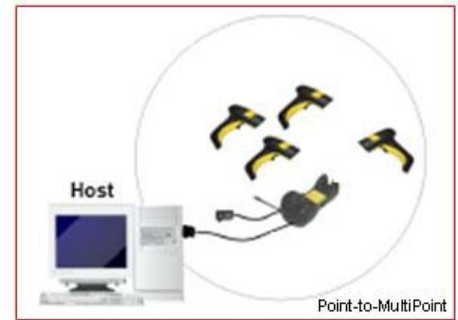
### Superior Radio Features

Operators requiring mobility in a manufacturing plant, warehouse or distribution center can benefit from the versatility of the proprietary Datalogic STAR Cordless System™. It offers scalable solutions to solve anything from simple point-to-point applications to complex networking projects. In the simplest point-to-point applications, the operator benefits from the maximum



mobility freedom without the entanglement of the cable, increasing efficiency and productivity. With the network capability offered by the Datalogic STAR Cordless System, more than 100,000 sq. meters / 1,076,391 sq. feet can be covered with up to 16 base stations. Automatic seamless roaming allows the user to move freely from one base to another. The PowerScan PM8500 readers use the same radio protocol and the same cradle already available for the PM8300 readers. A new firmware version is necessary on the cradle to manage some of the features that are specific for the PM8500 readers. The new firmware has already been released for production but existing cradles can be easily updated using Datalogic Aladdin™ configuration software. The compatibility between PowerScan PM8300 and PM8500 readers and the ability to share the same cradles makes the transition from 1D bar codes to 2D bar codes smoother, preserves the customer investment and reduces dramatically the total cost of ownership (TCO) of the system.

- **Radio Range:** 50 m / 164 ft (433 MHz); 30 m / 100 ft (910 MHz)
- **Point-to-Multipoint:** Up to 32 scanners connected to the same base station/receiver
- **Networking:** Up to 16 cradles and 256 scanners connected to the same host



## Versatility of Use

All of the PowerScan PM8500 readers can communicate with base stations BC8030 and BC8060 based on software release 3.00 or later. All cradles already in field can be easily updated via the Datalogic Aladdin configuration software available on the CD ROM which is part of the PowerScan PM8500 imager package. They are both featured with a built-in multi-interface to make the installation easier and protect the investment (just plug in the cable and select the interface). Available interfaces are: RS-232, Keyboard Wedge, Wand Emulation and USB in the **BC8030 Base Station**. The **BC8060 Base Station** includes the same 4 interfaces plus the RS-485 interface used in creating networking multiple cradles to expand the radio coverage and increase mobility.

The PowerScan PM8500 reader can also work in batch-mode (i.e. off-line; not connected to the base station). In this case, the data is stored in the internal memory. Over 1 MB of memory is available for data storage and the total number of stored codes depends on the bar code length. Data in the batch memory can be scrolled through on the display using the up and down arrows and deleted in cases of errors simply by using the enter key. The batch mode can be:

- **Automatic:** Data is stored in the internal memory whenever the scanner is out of radio range. Data is transmitted as soon as the operator again enters the radio range and reads a bar code or presses the trigger.
- **Manual:** Data is forced with a configuration command. Data is stored in the memory until a 'start normal batch transmission' or a 'disable batch' command is read.

The versatility of the PowerScan PM8500 reader is further improved with the full set of accessories inherited by the PowerScan PM8300 reader family, including the removable and separately chargeable batteries (single and multiple

chargers available), hands free stand, desk/wall holder and the belt holster. In addition, the scanner is also compatible with the Vehicle Mount KIT (VMK-8000).

## Easy to Configure and Always Up-to-date

The complete product set-up is easy and intuitive because of the Datalogic Aladdin configuration software. All the parameters can be modified and the configuration settings can be downloaded, saved, printed and sent via e-mail to remote customers. Because of its FLASH memory, the firmware of the PowerScan PM8500 readers can be easily updated in the field. The firmware can be downloaded via a Serial or USB interface maintaining an 'up-to-date' device.



To summarize, the Key Product Attributes include:

- 'Radio' compatibility with the existing PowerScan PM8300 scanner family
- 'Mechanical' compatibility with the existing PowerScan PM8300 scanners and accessories
- Unique and Patented Features: Green Spot and Dual Good read LEDs
- State-of-the-art robustness and durability: 2 m / 6.6 ft drop spec and IP65/IP64 protection
- Outstanding reading performance on 'real life' bar codes
- Configuration simplicity: Datalogic Aladdin configuration software
- Tool-free replaceable, long lasting Li-Ion battery: 3 seconds to replace, over 30,000 reads per charge
- Proven reliability and versatility of the Datalogic Star Cordless System™ Radio
- Display with backlight and 3-key keypad
- Batch Mode Capability: over 1 MB of memory available

## Features and Benefits Summary

Product Features	Customer Benefits
Graphic Display and Keypad with 3 Keys	<ul style="list-style-type: none"> <li>▪ Allows real interaction of the operator with the host, providing better feedback for the operator</li> </ul>
Green Spot / 'Dual LED Good Read Feedback' (both patented) and a very loud beeper	<ul style="list-style-type: none"> <li>▪ Improves user feedback, speeding up all operations</li> <li>▪ Unique and innovative features and are a great selling point for partners and resellers</li> </ul>
5 Dots aimer driven by the 'double click' trigger	<ul style="list-style-type: none"> <li>▪ Improves performance when reading bar code menus</li> <li>▪ Increases operator productivity by avoiding the delay caused by standard 'timeout based' aimers</li> </ul>
STAR Cordless System for Narrow Band Radio Communications: Available in 433 MHz or 910 MHz Radio Frequencies	<ul style="list-style-type: none"> <li>▪ Wide radio range for point-to-point and point to multi-point connectivity</li> <li>▪ Allows wide area coverage due to the networking capability</li> <li>▪ No interference with Wi-Fi infrastructure</li> </ul>
100% compatible with the PowerScan PM8300 reader Radio System	<ul style="list-style-type: none"> <li>▪ Available to mix 1D and 2D readers in the same environment with a smooth transition, lowering the TCO</li> <li>▪ It is possible to replace broken 1D scanners with the new 2D scanners without changing the cradle, which lowers the TCO</li> </ul>

100% compatible with the STAR-System™	<ul style="list-style-type: none"> <li>It provides the widest family of narrow band devices on the market, allowing the user the freedom to choose the best product for each application</li> </ul>
Sealed against dust and water with an IP65/IP64 rating	<ul style="list-style-type: none"> <li>Protect internal components</li> <li>Improves reliability and reduces the TCO</li> </ul>
Operates over a wide range of temperatures: (-10° to +50 °C / 14 to 122 °F)	<ul style="list-style-type: none"> <li>Ideal for severe outdoor usage as well as any indoor applications</li> </ul>
Co-moulded rubber with a robust plastic case produce a 2 m / 6.6 ft drop spec	<ul style="list-style-type: none"> <li>Protect the scanner against shocks and abuse</li> <li>Resistant to multiple drops, strong shocks, repetitive tumbles</li> <li>Prevents the scanner from slipping off the counter</li> <li>Improves reliability and reduces the TCO</li> </ul>
Recessed display and reading window	<ul style="list-style-type: none"> <li>Protected against drops and scratches; enhanced durability lowers the TCO</li> </ul>
Accessories: Single battery charger, Multiple battery charger (4 slots), 'click-on' battery	<ul style="list-style-type: none"> <li>Allows 24 hours of non-stop scanning</li> <li>Easy to exchange without the use of a screwdriver or additional tools</li> </ul>
Li-Ion 'tool free' removable battery pack 2,150 mA	<ul style="list-style-type: none"> <li>Operating autonomy exceed 30,000 cycles (reading and transmission), which guarantees more than one 8 hour shift per charge</li> </ul>
High Density and Wide Angle specialized optics	<ul style="list-style-type: none"> <li>Provides the customer with 2 options to best fit their scanning needs</li> </ul>
Datalogic Aladdin Configuration Software Program	<ul style="list-style-type: none"> <li>Easy to use and the software improves the reader's installation and maintenance</li> </ul>

## Target Markets and Applications

Data coming from various marketing research companies confirm that, even in the current economic situation, the market segments/applications that are showing some 'excitement' are those related to the introduction of the 2D bar codes and the need of mobility. The new PowerScan PM8500 reader is the answer to both market needs.

**Manufacturing / Work-In-Progress and Raw Material Warehouse / Stocking Warehouse:** Component Traceability, Quality Control, Time and Cost Analysis, Chain Inventory and Numeric Control Machines are all activities that have been consolidated in manufacturing plants where the upgrade to scanning has taken place.

Material Picking, Shipping/Receiving, Order Processing, Parcel Preparation, Pallet Tracking and Stocking are typical activities in any size warehouse.

The wide radio range without interference from other radio systems (Wi-Fi, etc.) makes the PowerScan PM8500 readers the optimal solution for the above mentioned activities. The model with the display and keypad provides additional benefits because of the expanded interaction between the operator and the host. Mobility is further enhanced by the batch mode capability when the scanner moves out of radio range. Robustness and reliability are a must in order to guarantee no down time and lower the total cost of ownership (TCO). Normally, the standard or high resolution models are recommended since small/high resolution bar codes are usually used.

### The main sub-segments are:

- Automotive (Cars, Motorcycles, Vans, Truck Manufacturers and related OEM suppliers)
- Food and Beverage

- Furniture
- Machinery, Equipment and Home Appliances
- Chemicals
- Electronics and Computers
- Fashion, Clothing and Accessories

**Winning Points:**

- Point-to-point and point-to-multipoint configuration for versatile installation
- Removable battery: no down time for battery charging
- Green Spot and 3GL (3 Green Lights) for noisy environments
- High resolution reading capability
- No interference with Wi-Fi

**Transportation and Logistics / Warehouse / Sorting:** Parcel Sorting, Conveyor End-of-line and Automatic Sorting Systems Backup are the typical activities in Logistic Centers.

The PowerScan PM8500 reader can be used as a backup for automatic sorting systems as well as the main sorting tool depending on the Logistic Center size and topology. High throughput, reliable and secure confirmation from the host and operator mobility are key factors for these applications. Again, robustness is not an option. It is normally considered as a mandatory pre-requisite. The wide angle model is normally preferred because of the label dimension.

**The main sub-segments are:**

- Freight Transport
- Parcel Couriers
- Air Transport
- Cargo Handling
- Postal Services

**Winning Points:**

- Wide Radio Range without interference from Wi-Fi
- Removable Battery: no down time for battery charging
- The Datalogic Green Spot and 3GL (3 green lights) for noisy environments
- Display and 3-key Keypad for reliable feedback
- Indoor and Outdoor Operable

**Healthcare:** Healthcare is moving rapidly to 2D codes in many sectors because of the higher level of security guaranteed by the use of codes like Data Matrix. In particular, it is very useful to have a large amount of information encoded in a single Data Matrix code allowing the ability to trace even a single dose medicine from the manufacturing plant to the patient. Distribution centers specializing in the pharmaceutical sector will be able to manage the 2D bar codes. In addition, most of the material used in surgery needs to be traced. Products used in that environment need to have high IP protection because they have to survive in a 'sterile' environment and are often cleaned, washed and sterilized. The Standard or High Resolution models are normally recommended for hospitals, the Wide Angle model is more suited for

distribution centers.

**The main sub-segments are:**

- Shipping/Receiving and parcel preparation in pharmaceutical distribution centers
- Surgery material management and tracking in hospitals

**Winning Points:**

- Wide radio range without interference with Wi-Fi
- The Datalogic Green Spot and 3GL (3 green lights) for noisy environments
- IP 65/64 protection

**Ordering Information**

The PowerScan PM8500 reader is available with the following options:

- 433 or 910 MHz radio
- With ‘Standard’, ‘High Density’ or ‘Wide Angle’ optics
- With or without Display and 3-key Keypad
- All models have the Removable Battery

Part Number	Description
PM8500-433RB	PowerScan PM8500 433 MHz Removable Battery (standard optic)
PM8500-HD433RB	PowerScan PM8500 HD 433 MHz Removable Battery (High Density optic)
PM8500-WA433RB	PowerScan PM8500 WA 433 MHz Removable Battery (Wide Angle optic)
PM8500-D433RB	PowerScan PM8500-D 433 MHz Removable Battery with Display (standard optic)
PM8500-DHD433RB	PowerScan PM8500-D HD 433 MHz Removable Battery with Display (High Density optic)
PM8500-DWA433RB	PowerScan PM8500-D WA 433 MHz Removable Battery with Display (Wide Angle optic)
PM8500-910RB	PowerScan PM8500 910 MHz Removable Battery (standard optic)
PM8500-HD910RB	PowerScan PM8500 HD 910 MHz Removable Battery (High Density optic)
PM8500-WA910RB	PowerScan PM8500 WA 910 MHz Removable Battery (Wide Angle optic)
PM8500-D910RB	PowerScan PM8500-D 910 MHz Removable Battery with Display (standard optic)
PM8500-DHD910RB	PowerScan PM8500-D HD 910 MHz Removable Battery with Display (High Density optic)
PM8500-DWA910RB	PowerScan PM8500-D WA 910 MHz Removable Battery with Display (Wide Angle optic)

**Note:**

The new PowerScan PM8500 is replacing the current Lynx™ BT432. Appropriate instructions on cross over and obsolescence date will be provided separately.

## Critical Dates

General Availability is currently planned for July 15, 2009 and the Public Announcement is scheduled for July 24, 2009. At the General Announcement date we will have limited stock for each model and our capacity may be limited based on demand ramp-up on the different models.

## Accessories and Cables

The new PowerScan PM8500 inherits all the accessories and cables from the existing PowerScan PM8300 family. For your benefit they are all listed in the following tables.

### Accessories:

Part Number	Description
BC8030-433	PM8300 BASE/CHARGER MULTI INTERFACE 433MHz
BC8060-433	PM8300 BASE/CHARGER MULTI/RS485 INTERFACE 433MHz
BC8030-910	PM8300 BASE/CHARGER MULTI INTERFACE 910MHz
BC8060-910	PM8300 BASE/CHARGER MULTI/RS485 INTERFACE 910MHz
CHR-PM80	PM8300,CHARGING ONLY BASE
MC-P080	PWRSCN 8000 4 SLOT BATT CHARGER
FBP-PM80	POWERSCAN 8000 FIXED BATT PACK
RBP-PM80	POWERSCAN 8000 REMOVABLE BATT PACK
HLD-P080	HLD-8000 DESK/WALL HOLDER POWERSCAN
HLS-P080	PWRSCN 8000 UNIVERSAL HOLSTER
PC-P080	PWRSCN 8000 CASE/BELT HOLSTER
PCD-P080	PWRSCN 8000 CASE/BELT HOLSTER D
RBP-PM80	PWRSCN 8000 REMOVABLE BATT PACK
STD-P080	PWRSCN 8000 HANDS-FREE STAND
90ACC1876	METAL PLATE FOR STD 10XX
11-0138	Accessory, Heated Holder, 36 Volts.
11-0139	Accessory, Heated Holder, 24 Volts.
11-0140	Accessory, Heated Holder, 48 Volts.
7-0404	Take Up Reel



## Cables:

Part Number	Description
CAB-433	CAB-433 RS 9D F PWR STR 6'
CAB-434	CAB-434 RS 9D F PWR COIL 8'
CAB-436	CAB-436 KBW PS/2 POT STR 6'
CAB-437	CAB-437 KBW PS/2 POT COIL,10'
CAB-438	CAB-438 USB TYPE A POT STR
CAB-439	CAB-439 USB TYPE A POT COIL
CAB-450	CAB-450 RS VRC 69XX POT STR 6'
CAB-451	CAB-451 RS VRC 79/89XX POT 6'
CAB-470	CAB-470 WE.9D M POT STR
CAB-471	CAB-471 RS 25D F DCE COIL10'
CAB-472	CAB-472 RS 25D M DTE COIL 10'
CAB-473	CAB-473 WE 9D M POT COIL
CAB-456	RS-232, SNI ,W/DTR, Black, 12'
CAB-459	RS-232, 9 Pin D, External Power, Coiled, 12'
CAB-462	KeyBoard Wedge, PS2, Power Off Terminal, External Power, 12'
CAB-463	KBW PS2 Power Off Terminal LAPTOP 12'
CAB-465	USB Type A, Power Off Terminal, LW 12'
CAB-467	USB Type A, Power Off Terminal, PC 12'
CAB-474	RS-232, 25-Pin D, DTE, Coiled 12'
CAB-477	RS-232, 25-Pin, DCE, Power off Terminal, Coiled 25'
CAB-479	RS-232, 9-Pin D, Power off Terminal, Coiled 25'
CAB-485	KBW 8RJ 3151,34XX Coiled
CAB-486	IBM-USB Power Off Terminal, Coiled 15'
CAB-487	Wand Emulation, 6 Pin RJ, Male, Coiled, 8'
CAB-488	Wand Emulation, 6 Pin RJ, DECATH, Coiled 20'
CAB-489	Wand Emulation, 7 Pin, LEMO LXE, Coiled, 8'
CAB-490	Wand Emulation, 9 Pin Female, Power Off Terminal, Coiled 15'
CAB-491	Wand Emulation, 10 Pin RJ, Power off Terminal, 8'
CAB-501	RS-232, 9 Pin D Female, Power off Terminal, Straight, 10.5'

## Marketing Communications Materials

The following Sales Tools are currently available for the PowerScan PM8500 imager:

- [PowerScan PM8500 Marketing Information Guide \(MIG\)](#)
- [PowerScan PM8500 Competitive Selling Guide](#)
- [PowerScan PM8500 PowerPoint Sales Presentation](#)
- [Email HTML Templates](#)
- [Web Banner Suite](#)
- Data Sheets
  - [English \(US LTR\)](#)
  - [English \(A4\)](#)
  - [Brazilian Portuguese](#)
  - [Chinese](#)
  - [French](#)
  - [German](#)
  - [Italian](#)
  - [Japanese](#)
  - [Russian](#)
  - [Spanish](#)
- Product Photography – Visit the Extranet for a complete library of photography available

## Service and Technical Support

All models of the PowerScan PM8500 come with a standard 3-year factory warranty. Service will be provided either by Datalogic Scanning or Datalogic Scanning Authorized Service Providers.

## Frequently Asked Questions (FAQ's)

### **Q: Does the PowerScan™ PM8500 Imager intend to replace any existing product?**

A: Yes. The Lynx™ BT432 reader will still be available until the end of 2009 when it will be obsoleted. A dedicated Sales and Product Bulletin will be sent to inform customers about the last order and shipping dates.

### **Q: Does the PowerScan PM8500 Imager require a dedicated Base Station?**

A: No. The PowerScan M8500 Imager is 100% mechanically and electrically compatible with any existing base station (BC8030 and BC8060) in the field. To be 100% compatible in terms of software, the base station needs to be updated with software release 3.00 or later. All 'new' manufactured cradles have the latest software release. A period of cross-over is anticipated due to the cradles currently present in stock (Datalogic and our partners) and based on the old 2.00 software. The CD ROM which is part of the PowerScan PM8500 imager package includes the new firmware version for the cradle update.

**Q: Are the Software Configuration Commands the same as the other industrial products?**

A: No. The PowerScan PM8500 Imager has a configuration of mixed commands from both the PD8500 and PM8300 readers, therefore the use of its dedicated PRG is strongly recommended.

**Q: Can the PowerScan PM8500 imager and the PM8300 work together in a 'mixed' installation environment (i.e. both connected to the same base station/receiver)?**

A: Yes. The PowerScan PM8500 and PM8300 readers are compatible in terms of communication protocol and they can operate in mixed installations. In cases of mixed installations, each group of devices needs to be configured individually since the set of commands is not the same. The 'copy configuration' from the PM8300 to the PM8500 and vice versa cannot be used.

**Q: Does the PowerScan M8500 imager have a dedicated set of accessories?**

A: No. All of the accessories available for the PM8300 models are shared with the PM8500 models.

**Q: Does the Base Station (BC8030 or BC8060) and the PowerScan PM8500 imager require a power supply?**

A: No. The BC8030/BC8060 cradles are able to communicate (via radio with the scanner and via cable with the host) with 'power off terminal' supplied via the USB or RS-232 (5 VDC) interfaces. With this system setting, it is also possible to charge the battery in 'slow mode' (i.e. the full battery charge will take about 10 hours). The use of the external power supply (10 – 30 VDC) allows the faster battery charging (a full charge in less than 4 hours).

**Q: Is there a configuration tool available for the PowerScan M8500 imager?**

A: Yes. The PowerScan PM8500 imager is supported by the Datalogic Aladdin configuration software.

**Q: Is the Datalogic Scanning 'good read' Green Spot available in the PowerScan M8500 imager?**

A: Yes. The PowerScan M8500 imager is equipped with the patented 'Green Spot' on the bar code.

**Q: Can customers order a custom configured model?**

A: Yes they can. They will need to submit an FSR for this request. The decision to release a special version will be made based on strategic importance and quantity commitment.

**Q: Can this product be made available with a custom logo/color?**

A: Yes. They will also need to submit an FSR for this request. The decision to release a special version will also be made based on strategic importance and quantity commitment.

**For More Information**

Please contact Stefano Vassura, Product Marketing Manager: [stefano.vassura@datalogic.com](mailto:stefano.vassura@datalogic.com).