

POWERSCAN™ PM9501-AR



TECHNOLOGY DRIVEN

The PowerScan™ PM9000 series includes different models able to satisfy all customers' needs; the PM9501-AR is the 1D/2D Auto Range model with extra-long range capabilities. The PM9501-DAR is the intermediate model and includes a display and 4-key keypad. The ultimate PM9501-DKAR model features a display with a full 16-key keyboard. The PM9501-DKAR model significantly increases the sophistication of interaction with the host system and opens up new potential uses of the scanner, making it suitable for applications that would normally require a more expensive portable data terminal. The BC9180 base includes one model with two different Ethernet connections: Standard Ethernet and Industrial Ethernet protocols such as Ethernet IP and Modbus.

DATALOGIC'S STAR CORDLESS SYSTEM™

Narrow band radio communications with Datalogic's STAR Cordless System™ 2.0 provides the key to increased productivity and flexibility in the workplace. It offers scalable solutions from simple point-to-point applications to networking capabilities combined with seamless roaming for complex installations.

GOOD-READ FEEDBACK AND SUPERIOR READING PERFORMANCE

The PM9501-AR readers feature Datalogic's exclusive 3 Green Lights (3GL™) for superior good-read feedback. The patented 'Green Spot' directly on the code and dual Good Read LEDs on the top and back of the cap add increased visibility at any angle.

The PowerScan PM9501 Auto Range can read 1D/2D barcodes with an extended reading range. Its powerful autofocus system allows the scanner to read from a short distance of 15 cm / 6 in to a distance of more than 20 m / 65 ft because of a fast focus adjustment, allowing the operator to easily read a close up barcode and then focus at the top of a warehouse rack.

FEATURES

- Optics: Auto Range: > 20 m / 65 ft
- Fast Autofocus system, reads up to 3 mils
- Available in 3 models:
 - Basic
 - With Display and 4-Key Keypad
 - With Display and Full Alphanumeric Keypad
- Radio frequencies available in 433 or 910 MHz
- Point-to-point and multi-point transmission
- Seamless roaming
- Ethernet Connectivity (Standard and Industrial)
- Datalogic 3GL™ and loud beeper for good-read feedback
- User replaceable Lithium-Ion battery
- Operates over a wide range of temperatures
- Water and Particulate Sealing Rating: IP65
- Drop resistance to 2.0 m / 6.5 ft
- EASEOFCARE Service Plans offer a wide range of service options to protect your investment, ensuring maximum productivity and ROI

INDUSTRY - APPLICATION

- **Factory Automation:**
 - Material Picking
 - Shipping / Receiving
 - Order Processing
- **Manufacturing Shop Floor:**
 - Work-in-Progress
 - Component Tracking
- **Warehouse / Logistic Centers:**
 - Forklift Picking Applications
 - Shipping / Receiving
 - Parcel Preparation



TECHNICAL SPECIFICATIONS

WIRELESS COMMUNICATIONS	
Datalogic STAR Cordless System	Point-to-Point Configuration Multi-Point Configuration: Max. Readers per Radio receiver: 16
Radio Frequency	433 MHz; 910 MHz
Radio Range (Open Air)	433 MHz: 50 m / 164 ft at 500 KB/s; 120 m / 394 ft at 19.2 KB/s 910 MHz: 140 m / 459 ft at 500 KB/s; 240 m / 787 ft at 36.8 KB/s, frequency hopping 50 m / 164 ft at 36.8 KB/s, fixed channel; Seamless Roaming; Two Way Communications

DECODING CAPABILITY	
1D / Linear codes	Auto discriminates all standard 1D codes including GS1 DataBar™ linear codes.
2D Codes	Aztec Code; China Han Xin Code; Data Matrix; MaxiCode; Micro QR Code; QR Code
Postal Codes	Australian Post; China Post; IMB; Japanese Post; KIX Post; Planet Code; Portuguese Post; Postnet; Royal Mail Code (RM4SCC); Swedish Post
Stacked Codes	EAN/JAN Composites; GS1 DataBar Composites; GS1 DataBar Expanded Stacked; GS1 DataBar Stacked; GS1 DataBar Stacked Omnidirectional; MacroPDF; MicroPDF417; PDF417; UPC A/E Composites

ELECTRICAL	
Battery	Li-Ion 3350 mAh; Charge Time: External Power: 4.5 Hours; Host Power: 10 Hours
Reads Per Charge	40,000+ (continuous reading)
Cradle Indicator LEDs	Battery Charging (Red); Charge Completed (Green); Power/Data (Yellow)
Cradle Consumption	External Power < 8W; POT: Max 500 mA when in host/bus powered mode.
Input Voltage	External: 10 - 30 VDC; POT: 5 VDC +/- 10%

ENVIRONMENTAL	
Ambient Light	Immune to light exposure in offices/facilities and direct exposure to sunlight.
Drop Resistance	Withstands 50 drops from 2.0 m / 6.5 ft to concrete
ESD Protection (Air Discharge)	20 kV
Humidity (Non-Condensing)	0 - 95%
Particulate and Water Sealing	IP65
Temperature	Operating: -20 to 50 °C / -4 to 122 °F Storage/Transport: -40 to 70 °C / -40 to 158 °F

INTERFACES	
Interfaces	Keyboard Wedge; RS-232; RS-485; USB: OEM USB; USB COM; USB HID Keyboard; Optional Ethernet (Standard, Industrial)

PHYSICAL CHARACTERISTICS	
Colors Available	Yellow/Black
Dimensions	Cradle: 24.0 x 10.8 x 9.5 cm / 9.4 x 4.3 x 3.8 in PM9501-AR: 21.2 x 11.0 x 7.4 cm / 8.3 x 4.3 x 2.9 in
Display	PM9501-DAR, PM9501-DKAR: Display Type: Graphic with White Backlight; Font Dimensions: User selectable (6 lines x 21 columns default); Screen Dimensions: 48 x 132 pixels
Keypad	PM9501-D: 4 Configurable Keys PM9501-DK: 16 Configurable Keys
Weight	PM9501-AR: 460.0 g / 16.2 oz PM9501-DAR: 485 g / 17.1 oz PM9501-DKAR: 485 g / 17.1 oz

READING PERFORMANCE	
Light Source	LED
Print Contrast Ratio (Minimum)	15%
Reading Angle	Pitch: +/- 80°; Roll (Tilt): +/- 180°; Skew (Yaw): +/- 60°
Field of View	Near Field: 14°(H) x 10.5°(V); Over 3 m / 10 ft: 14.4°(H) x 10.8°(V)
Reading Indicators	Beeper; Datalogic Three Green Lights (3GL™) Good Read Feedback; Datalogic 'Green Spot' on the Code, Dual Good Read LEDs; Good Transmission
Resolution (Maximum)	1D Codes: 3 mils; 2D Codes: 4 mils

READING RANGES	
Typical Depth of Field	Minimum distance determined by symbol length and scan angle. Printing resolution, contrast, and ambient light dependent.
	EAN 13: 20 to 290 cm / 7.8 to 114.1 in Code 39: 10 mils: 15 to 160 cm / 5.9 to 63.0 in 40 mils: 50 to 1,100 cm / 20.0 to 433.0 in 100 mils: up to 2,300 cm / 75.0 ft Code 128: 15 mils: 30 to 330 cm / 11.8 to 129.9 in 40 mils: 60 to 850 cm / 23.6 to 335.0 in 100 mils: up to 20 m / 65.0 ft DataMatrix: 10 mils: 20 to 85 cm / 7.8 to 33.5 in 55 mils: 30 to 550 cm / 11.8 to 216.5 in 100 mils: 30 to 880 cm / 11.8 to 349.5 in 200 mils: up to 20 m / 65 ft

Note: Reading performances may change with different symbologies; Reading performances @ 300 lux of ambient light.

SAFETY & REGULATORY	
Agency Approvals	The product meets necessary safety and regulatory approvals for its intended use.
Environmental Compliance	Complies to EU RoHS; Complies to China RoHS
Laser Classification	Caution Laser Radiation - Do not stare into beam CDRH Class II; IEC 60825-1 Class 2
LED Classification	IEC 62471 Exempt Risk Group

UTILITIES	
Datalogic Aladdin™	Datalogic Aladdin configuration program is available for download at no charge.
OPOS / JavaPOS	JavaPOS and OPOS Utilities are available for download at no charge.
Remote Host Download	Available on request

WARRANTY	
Warranty	3-Year Factory Warranty

ACCESSORIES

Base Stations/Chargers



BC9030-433 / BC9030-910 Base/Charger, Multi-Interface

BC9130-433 / BC9130-910 Base/Dual Charger, Multi-Interface
BC9160-433 / BC9160-910 Base/Dual Charger, Multi-Interface/RS-485
BC9180-433 / BC9180-910 Base/Dual Charger/Ethernet (Standard, Industrial)

Batteries/Battery Chargers



RBP-PM91-BK Removable Battery Pack
FBP-PM91 Fixed Battery Pack
MC-P090 Multiple Battery Charger, 4-Slots

Cases/Holsters



HLS-P080 Universal Holster (HLS-8000)
PC-P090 Protective Case/ Belt Holster (PC-9000)

Mounts/Stands



7-0404 Industrial Take-Up Reel
HLD-P080 Desk/Wall Holder (HLD-8000)
STD-P090 Hands Free Stand (STD-9000)
VMK-P090 Vehicle Mount Kit

Miscellaneous



SD9030 STAR System USB Industrial Dongle (433 or 910 MHz available)

POWERSCAN™ PM9501



AIM, TRIGGER, DECODE: IT'S THAT SIMPLE!

An intuitive and effortless scanning experience is the target of the PowerScan™ 9501 series. They combine omnidirectional reading capabilities with outstanding optical characteristics. The result is a scanner that is able to read any kind of bar code, regardless of the orientation, from contact to over 1.0 m / 3.3 ft, depending on the bar code resolution. In addition, Datalogic's latest decoding software guarantees snappy reading in any type of environment.

MOBILITY ENHANCES PRODUCTIVITY

The Datalogic STAR Cordless System™ for narrow-band radio communications was developed specifically to maximize efficiency and reliability for handheld scanner data collection applications. The PowerScan PM9501 models are equipped with a new generation of the STAR-System that further improves the already outstanding features of versatility, ease of use and radio range.

The PM9501 series offers two display options: 4 configurable keys and a full 16-key keyboard. This increases interaction between the host and the user allowing a two-way exchange of information for more reliable and effective communications.

The BC9180 base/charger also includes in one model two different Ethernet connections: Standard Ethernet and Industrial Ethernet protocols such as Ethernet IP and Modbus.

DEVELOPED WITH THE USER IN MIND

Handle shape, well-balanced weight and an intuitive aiming system allows high first-pass reading rates while reducing unnatural wrist movements for improved ergonomics and user comfort.

The PowerScan 9501 area imagers use a soft-pulsed white illumination light that is very gentle on the eyes and less troublesome to the operator during scan-intensive applications.

FEATURES

- High-performance Liquid Lens allows one model to read standard, wide and high density codes
- Snappy omnidirectional reading
- Intuitive aiming system
- Soft white light illumination
- Available with optional display and 4 or 16-key keyboards
- High speed 433 MHz and 910 MHz radio communications
- Point-to-point and multi-point transmission
- Networking and seamless roaming
- Multiple interfaces available
- Ethernet Connectivity (Standard and Industrial)
- Lithium-Ion battery replaces in 3 seconds!
- Datalogic's Motionix™ motion-sensing technology
- Ergonomic shape
- Datalogic's 3GL™ (3 Green Lights) technology and loud beeper for good-read feedback
- Water and Particulate Sealing Rating: IP65
- In-field replaceable window and cradle contacts
- EASEOFCARE Service Plans offer a wide range of service options to protect your investment, ensuring maximum productivity and ROI

INDUSTRY - APPLICATION

- Entertainment:
 - Access Control
 - Mobile Coupons
 - Ticket Validation
 - Security / Age Verification
 - Lottery
- Manufacturing Shop Floor:
 - Work-in-Progress
 - Sub-Assembly
 - Component Tracking
 - Quality Control
 - Time and Cost Analysis
 - Machine Replenishment /Configuration
 - Line Inventory Control
- Warehouse and Logistic Centers:
 - Shipping / Receiving
 - Parcel Preparation
 - Picking / Put Away
 - Automatic Sorting Back-Up
 - End of Line Sorting



POWERSCAN™ PM9501

TECHNICAL SPECIFICATIONS

CORDLESS COMMUNICATIONS

Datalogic STAR Cordless System™	Effective Radiated Power: 433 MHz: <10 mW; 910 MHz: <50 mW Point-to-Point Configuration Multi-Point Configuration: Max. Readers per Radio Receiver: 16
Radio Frequency	433 MHz; 910 MHz
Radio Range (Open Air)	433 MHz: 120 m / 393 ft low speed; 50 m / 164 ft high speed 910 MHz: 220 m / 721 ft low speed; Frequency hopping 170 m / 558 ft high speed Seamless Roaming; Two Way Communications

DECODING CAPABILITY

1D / Linear Codes	Autodiscriminates all standard 1D codes including GS1 DataBar™ linear codes.
2D Codes	Aztec Code; China Han Xin Code; Data Matrix; MaxiCode; Micro QR Code; QR Code;
Postal Codes	Australian Post; China Post; IMB; Japanese Post; KIX Post; Planet Code; Portuguese Post; Postnet; Royal Mail Code (RM4SCC); Swedish Post;
Stacked Codes	EAN/JAN Composites; GS1 DataBar Composites; GS1 DataBar Expanded Stacked; GS1 DataBar Stacked; GS1 DataBar Stacked Omnidirectional; MacroPDF; MicroPDF417; PDF417; UPC A/E Composites

ELECTRICAL

Battery	Lithium-Ion 3350 mAh Charge Time: External Power: 4.5 Hours; Host Power: 10 Hours
Reads Per Charge	Continuous Reading: 60,000+ (typical @ 25 °C)
Cradle Indicator LEDs	Battery Charging (Red); Charge Completed (Green); Power/Data (Yellow)
Cradle Consumption and DC Input Supply Range	Volt 10-30 VDC; Power <8W*; Max 500mA when in host/bus powered mode* *Typical input current measured under factory default configuration.
Operating (Typical)	150 mA @ 10 VDC
Input Voltage	External Power: 10-30 VDC; POT: 5 VDC +/- 10%

ENVIRONMENTAL

Ambient Light	0 - 100,000 lux
Drop Resistance	Cradle: Withstands 50 drops from 1.2 m / 3.9 ft onto a concrete surface PM9501: Withstands 50 drops from 2.0 m / 6.6 ft onto a concrete surface
ESD Protection (Air Discharge)	20 kV
Humidity (Non-Condensing)	95%
Particulate and Water Sealing	IP65
Temperature	Operating: -20 to 50 °C / -4 to 122 °F Battery Charging: 0 to 45 °C / 32 to 113 °F Storage/Transport: -40 to 70 °C / -40 to 158 °F

INTERFACES

Interfaces	Keyboard Wedge; RS-232; RS-485; USB: OEM USB; USB COM; USB HID Keyboard; Optional Ethernet (Standard, Industrial)
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PHYSICAL CHARACTERISTICS

Colors Available	Yellow/Black
Dimensions	Cradle: 24.0 x 10.8 x 9.5 cm / 9.4 x 4.3 x 3.8 in PM9501: 21.2 x 11.0 x 7.4 cm / 8.3 x 4.3 x 2.9 in
Display	PM9501-D, PM9501-DK: Display Type: Graphic with White Backlight; Font Dimensions: User selectable (6 lines x 21 columns default); Screen Dimensions: 48 x 132 pixels
Keypad	PM9501-D: 4 Configurable Keys PM9501-DK: 16 Configurable Keys
Weight	PM9501-XX, PM9501-HPXX, 400 g / 14.1 oz PM9501-DXX, PM9501-DHPXX: 440 g / 15.5 oz PM9501-DKXX, PM9501-DKHPXX: 445 g / 15.7 oz

READING PERFORMANCE

Imager Sensor	PM9501: 864 x 544; PM9501-HP: 1280 x 1024
Light Source	Aiming: 630 - 680 nm VLD; Illumination: White LEDs
Print Contrast Ratio (Minimum)	15%
Reading Angle	Pitch: +/- 40°; Roll (Tilt): 360°; Skew (Yaw): +/- 40°
Reading Indicators	Beeper (Adjustable Tone and Volume); Datalogic's 3GL™ (Three Green Lights) technology and loud beeper for good-read feedback; Datalogic 'Green Spot' on the Code, Dual Good Read LEDs
Resolution (Maximum)	PM9501: 1D Codes: 4 mil; 2D Codes: 7.5 mil PM9501-HP: 1D Codes: 2.5 mil; 2D Codes: 4 mil

READING RANGES

Typical Depth of Field	Minimum distance determined by symbol length and scan angle; Printing resolution, contrast, and ambient light dependent.		
PM9501		PM9501-HP	
4 mils	6.0 to 17.0 cm / 2.3 to 6.7 in	2.5 mils	2.0 to 6.0 cm / 0.8 to 2.3 in
7.5 mils Data Matrix	9.0 to 12.0 cm / 3.5 to 4.7 in	4 mils Data Matrix	2.0 to 6.0 cm / 0.8 to 2.3 in
10 mils Data Matrix	4.0 to 18.0 cm / 1.5 to 7.0 in	10 mils Data Matrix	2.0 to 20.0 cm / 0.8 to 7.8 in
10 mils PDF417	2.0 to 25.0 cm / 0.8 to 9.8 in	10 mils PDF417	2.0 to 30.0 cm / 0.8 to 11.8 in
13 mils	4.0 to 45.0 cm / 1.5 to 17.7 in	13 mils	3.0 to 60.0 cm / 1.1 to 23.6 in
20 mils	4.0 to 55.0 cm / 1.5 to 21.6 in	20 mils	3.0 to 70.0 cm / 1.1 to 27.5 in
40 mils	4.0 to 85.0 cm / 1.5 to 33.4 in	40 mils	3.0 to 110.0 cm / 1.1 to 43.3 in

SAFETY & REGULATORY

Agency Approvals	The product meets necessary safety and regulatory approvals for its intended use. The Quick Reference Guide for this product can be referred to for a complete list of certifications.
Environmental Compliance	Complies to China RoHS; Complies to EU RoHS; Complies to R.E.A.C.H.
Laser Classification	Caution Laser Radiation - Do not stare into beam CDRH Class II: IEC 60825 Class 2
LED Classification	IEC 62471 Class 1 LED

UTILITIES

Datalogic Aladdin™	Datalogic Aladdin configuration program is available for download at no charge.
OPOS / JavaPOS	OPOS and JavaPOS Utilities are available for download at no charge
Remote Host Download	Available on request

WARRANTY

Warranty	3-Year Factory Warranty
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ACCESSORIES

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BC9030-433 / BC9030-910 Base/Charger, Multi-Interface



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Cases/Holsters



HLS-P080 Universal Holster (HLS-8000)

Mounts/Stands



HLD-P080 Desk/Wall Holder (HLD-8000)
7-0404 Industrial Take-Up Reel



Miscellaneous



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