

POWERSCAN™ 9501-DPM EVO



DPM TECHNOLOGY

Direct Part Marking (DPM) is a process that allows users to imprint a bar code directly on an item instead of printing the code on a paper label. Different technologies are available to directly mark objects: laser/chemical etching, dot peening and ink jet printing. Each of these methods have specific advantages and disadvantages in terms of durability, cost and ease of reading.

The PowerScan™ 9501-DPM Evo series of scanners are rugged handheld area imagers specifically addressed and capable of reading codes marked with DPM.

READING CAPABILITIES

The PowerScan DPM series include the latest optics and software from Datalogic to make the reading of codes with DPM easy and intuitive. The typical reading distance is from contact to 4-5 cm / 1.5 -1.9 in, depending on the DPM technology used, the code resolution, and the material and surface type. The scanner is also capable of reading standard bar codes on printed labels. High density optics allow the capture of very small, high-resolution codes in a range from near contact up to 15.0 cm / 5.9 in. The intuitive aiming system provides the highest first-pass reading rates. A soft pulsed white illumination light results in reduced flashes and is very gentle to the eyes.

FULL CONNECTIVITY

The PM9501 DPM Evo series offers the display option with 4 configurable keys. This increases interaction between the host and the user allowing a two-way exchange of information for more reliable and effective communications.

The BC9180 is provided with Standard Multi- Interface: USB-KBD, USB-COM, USB-OEM, RS-232 and Ethernet connectivity: Telnet, Web Server, Data Socket, Ethernet/IP.

MOTIONIX™ MOTION-SENSING TECHNOLOGY

Datalogic's Motionix™ motion-sensing technology detects the natural actions of the operator to automatically switch the scanner into the desired scanning mode.

FEATURES

- Enhanced Decoding software will support any kind of Direct Part Marking (DPM) technology
- Snappy omnidirectional reading
- Intuitive aiming system
- Soft white light illumination
- Available with optional display with 4-keys
- Datalogic's Motionix™ motion-sensing technology
- Ergonomic shape
- Image capture
- Datalogic's 3GL™ (3 Green Lights) technology and loud beeper for good-read feedback
- Water and Particulate Sealing Rating: IP65
- EASEOFCARE Service Plans offer a wide range of service options to protect your investment, ensuring maximum productivity and ROI
- **Cordless Products**
 - Bluetooth® 3.0 Compliant, Class 1
 - STAR Cordless System™ available in 433 MHz or 910 MHz
 - Ethernet Connectivity (Standard and Industrial)

INDUSTRY - APPLICATION

- Manufacturing Shop Floor:
 - Work-in-Progress
 - Sub-Assembly
 - Component Tracking
 - Quality Control
 - Time and Cost Analysis
 - Line Inventory Control



POWERSCAN™ PD9531-DPM EVO

TECHNICAL SPECIFICATIONS

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 | Postnet; Royal Mail Code (RM4SCC) |
| 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

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|----------------------|---|
| Current | Operating (Typical): 350 mA Standby/Idle (Typical): 120 mA |
| Input Voltage | 5 VDC +/- 10% |

ENVIRONMENT

| | |
|---------------------------------------|---|
| Ambient Light | 0 - 100,000 lux |
| Drop Resistance | Withstands 50 drops from 2.0 m / 6.6 ft onto a concrete surface |
| 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

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|-------------------|---|
| Interfaces | RS-232 / USB / Keyboard Wedge Multi-Interface |
|-------------------|---|

PHYSICAL CHARACTERISTICS

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|-------------------------|---|
| Colors Available | Yellow/Black; Other colors and custom logo options are available for minimum quantity purchase. |
| Dimensions | 21.2 x 11.0 x 7.4 cm / 8.3 x 4.3 x 2.9 in |
| Weight | 330.0 g / 11.6 oz |

READING PERFORMANCE

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|---|---|
| Direct Part Marking (DPM) Capability | Codes are readable when marked by laser or chemical etching or ink jet printed; Data Matrix codes are also readable when marked by dot peening |
| Imager Sensor | 864 x 544 |
| Light Source | Aiming: 630 - 680 nm VLD Illumination: White LED reading light |
| 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) | 1D Codes: 2.5 mil; 2D Codes: 4 mil |

READING RANGES

| | | |
|-------------------------------|---|--------------------------------|
| Typical Depth of Field | Depth of Field ranges on bar codes printed with DPM technology may vary depending on the printing technology, the code type and the resolution of the code. Other factors include the surface material the DPM technology is used on (metal, plastic, shiny or polished, opaque, etc.). The following specs represent standard bar codes that are traditionally printed black on white on paper labels. | |
| | 2 mils | 2.8 to 6.3 cm / 1.1 to 2.4 in |
| | 2.5 mils | 2.5 to 7.8 cm / 0.9 to 3.0 in |
| | 5 mils | 1.2 to 9.0 cm / 0.4 to 3.5 in |
| | 4 mils Data Matrix | 2.6 to 5.2 cm / 1.0 to 2.0 in |
| | 5 mils Data Matrix | 2.2 to 7.2 cm / 0.8 to 2.8 in |
| | 10 mils Data Matrix | 2.0 to 10.5 cm / 0.8 to 4.1 in |
| | 5 mils PDF | 1.2 to 9.0 cm / 0.4 to 3.5 in |
| | 10 mils PDF | 1.0 to 12.5 cm / 0.4 to 4.9 in |
| | 13 mils EAN-13 | 2.5 to 16.0 cm / 0.9 to 6.3 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

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|-----------------------------|---|
| 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

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|-----------------|-------------------------|
| Warranty | 3-Year Factory Warranty |
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ACCESSORIES

Cases/Holsters



HLS-P080 Universal Holster (HLS-8000)

Mounts/Stands



HLD-P080 Desk/Wall Holder (HLD-8000)



7-0404 Industrial Take-Up Reel

POWERSCAN™ PBT9501-DPM EVO

TECHNICAL SPECIFICATIONS

CORDLESS COMMUNICATIONS

| | |
|--------------------------------------|---|
| Bluetooth Wireless Technology | Piconet: Max. Readers per Radio Receiver Using Commercial Dongle: 7; Using Cradle: 4 |
| Profiles | HID (Human Interface Device) SPP (Serial Port Profile) |
| Protocol | Bluetooth® 3.0 Compliant, Class 1 |
| Radio Frequency | 2.40 to 2.48 GHz |
| Radio Range (Open Air) | Exceeds 100 m / 328 ft Range distances are measured using the base station. Range with connection to other Bluetooth peripherals may show different results. |
| Security | Data Encryption; Scanner Authentication |

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 | Postnet; Royal Mail Code (RM4SCC) |
| 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

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|---|--|
| Battery | Lithium-Ion 3350 mAh Charge Time: External Power: 4.5 Hours; Host Power: 10 Hours |
| Reads per Charge | Continuous Reading: 60,000+ |
| 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 PBT9501-DPM: Withstands 50 drops from 2.0 m / 6.6 ft onto a concrete surface |
| 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 Battery Charging: 0 to 45 °C / -32 to 113 °F Storage/Transport: -40 to 70 °C / -40 to 158 ° |

INTERFACES

| | |
|-------------------|--|
| Interfaces | RS-232 / USB / Keyboard Wedge Multi-Interface; 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 PBT9501-DPM: 21.2 x 11.0 x 7.4 cm / 8.3 x 4.3 x 2.9 in |
| Weight | PBT9501-DPM: 400 g / 14.1 oz |

READING PERFORMANCE

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|---|---|
| Direct Part Marking (DPM) Capability | Codes are readable when marked by laser or chemical etching or ink jet printed; Data Matrix codes are also readable when marked by dot peening |
| Image Capture | Graphic Formats: BMP, JPEG, TIFF; Greyscale: 256, 16, 2 |
| Imager Sensor | 864 x 544 |
| 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) | 1D Codes: 2.5 mil; 2D Codes: 4 mil |

READING RANGES

| | | | | | | | | | | | | | | | | | | | |
|-------------------------------|--|--------|-------------------------------|----------|-------------------------------|--------|-------------------------------|--------------------|-------------------------------|--------------------|-------------------------------|---------------------|--------------------------------|------------|-------------------------------|-------------|--------------------------------|----------------|--------------------------------|
| Typical Depth of Field | Depth of Field ranges on bar codes printed with DPM technology may vary depending on the printing technology, the code type and the resolution of the code. Other factors include the surface material the DPM technology is used on (metal, plastic, shiny or polished, opaque, etc.). The following specs represent standard bar codes that are traditionally printed black on white on paper labels. | | | | | | | | | | | | | | | | | | |
| | <table border="0"> <tr> <td>2 mils</td> <td>2.8 to 6.3 cm / 1.1 to 2.4 in</td> </tr> <tr> <td>2.5 mils</td> <td>2.5 to 7.8 cm / 0.9 to 3.0 in</td> </tr> <tr> <td>5 mils</td> <td>1.2 to 9.0 cm / 0.4 to 3.5 in</td> </tr> <tr> <td>4 mils Data Matrix</td> <td>2.6 to 5.2 cm / 1.0 to 2.0 in</td> </tr> <tr> <td>5 mils Data Matrix</td> <td>2.2 to 7.2 cm / 0.8 to 2.8 in</td> </tr> <tr> <td>10 mils Data Matrix</td> <td>2.0 to 10.5 cm / 0.8 to 4.1 in</td> </tr> <tr> <td>5 mils PDF</td> <td>1.2 to 9.0 cm / 0.4 to 3.5 in</td> </tr> <tr> <td>10 mils PDF</td> <td>1.0 to 12.5 cm / 0.4 to 4.9 in</td> </tr> <tr> <td>13 mils EAN-13</td> <td>2.5 to 16.0 cm / 0.9 to 6.3 in</td> </tr> </table> | 2 mils | 2.8 to 6.3 cm / 1.1 to 2.4 in | 2.5 mils | 2.5 to 7.8 cm / 0.9 to 3.0 in | 5 mils | 1.2 to 9.0 cm / 0.4 to 3.5 in | 4 mils Data Matrix | 2.6 to 5.2 cm / 1.0 to 2.0 in | 5 mils Data Matrix | 2.2 to 7.2 cm / 0.8 to 2.8 in | 10 mils Data Matrix | 2.0 to 10.5 cm / 0.8 to 4.1 in | 5 mils PDF | 1.2 to 9.0 cm / 0.4 to 3.5 in | 10 mils PDF | 1.0 to 12.5 cm / 0.4 to 4.9 in | 13 mils EAN-13 | 2.5 to 16.0 cm / 0.9 to 6.3 in |
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| 5 mils | 1.2 to 9.0 cm / 0.4 to 3.5 in | | | | | | | | | | | | | | | | | | |
| 4 mils Data Matrix | 2.6 to 5.2 cm / 1.0 to 2.0 in | | | | | | | | | | | | | | | | | | |
| 5 mils Data Matrix | 2.2 to 7.2 cm / 0.8 to 2.8 in | | | | | | | | | | | | | | | | | | |
| 10 mils Data Matrix | 2.0 to 10.5 cm / 0.8 to 4.1 in | | | | | | | | | | | | | | | | | | |
| 5 mils PDF | 1.2 to 9.0 cm / 0.4 to 3.5 in | | | | | | | | | | | | | | | | | | |
| 10 mils PDF | 1.0 to 12.5 cm / 0.4 to 4.9 in | | | | | | | | | | | | | | | | | | |
| 13 mils EAN-13 | 2.5 to 16.0 cm / 0.9 to 6.3 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 |
|-----------------|-------------------------|

ACCESSORIES

Base Stations/Chargers



BC9030-BT Base/Charger, Multi-Interface



BC9130-BT Base/Dual Charger, Multi-Interface
BC9180-BT Base/Dual Charger, Multi-Interface/Ethernet (Standard, Industrial)

Cases/Holsters



HLS-P080 Universal Holster (HLS-8000)

Mounts/Stand



HLD-P080 Desk/Wall Holder (HLD-8000)



7-0404 Industrial Take-Up Reel

POWERSCAN™ PM9501-DPM EVO

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: 200 m / 656 ft low speed; Frequency hopping 50 m / 164 ft high speed 910 MHz: 270 m / 886 ft low speed; 170 m / 558 ft high speed 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 | Postnet; Royal Mail Code (RM4SCC) |
| 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-DPM: 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 ° |

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 |
| Display | PM9501-DDPM: Display Type: Graphic with White Backlight; Font Dimensions: User selectable (6 lines x 21 columns default); Screen Dimensions: 48 x 132 pixels |
| Keypad | PM9501-DDPM: 4 configurable keys |
| Dimensions | Cradle: 24.0 x 10.8 x 9.5 cm / 9.4 x 4.3 x 3.8 in PM9501-DPM: 21.2 x 11.0 x 7.4 cm / 8.3 x 4.3 x 2.9 in |
| Weight | PM9501-DPMXX: 400.0 g / 14.1 oz PM9501-DDPMXX: 440 g / 15.5 oz |

READING PERFORMANCE

| | |
|---|---|
| Direct Part Marking (DPM) Capability | Codes are readable when marked by laser or chemical etching or ink jet printed; Data Matrix codes are also readable when marked by dot peening |
| Imager Sensor | 864 x 544 |
| 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) | 1D Codes: 4 mil; 2D Codes: 7.5 mil |

READING RANGES

| | | |
|-------------------------------|---|--------------------------------|
| | Depth of Field ranges on bar codes printed with DPM technology may vary depending on the printing technology, the code type and the resolution of the code. Other factors include the surface material the DPM technology is used on (metal, plastic, shiny or polished, opaque, etc.). The following specs represent standard bar codes that are traditionally printed black on white on paper labels. | |
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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 |
|-----------------|-------------------------|

ACCESSORIES

Base Stations/Chargers



Cases/Holsters



Mounts/Stands



Miscellaneous

