

# POWERSCAN™ PBT9501



## 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, typical in all area imaging scanners, 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 m / 3.3 ft, depending on the bar code resolution.

## MOBILITY ENHANCES PRODUCTIVITY

The PowerScan PBT9501 further enhances operator efficiency and safety with Bluetooth® wireless technology; no matter if you need 1 or 100 meters of freedom: you never need to worry about getting tangled up in the cable. Accurate power management allows long lasting battery life to always guarantee more than one shift of intensive scanning. Should you need to operate for 24 hours, a quick 3-second battery replacement combined with a single or multi-slot battery charger allows for continuous operation without interruption.

The BC9180-BT 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.

## BUILT TO LAST

The rugged mechanics of the PowerScan brand guarantees reliable, long term operation. Repeated shocks and indoor / outdoor usage in the toughest environmental conditions do not impact its performance or reliability.

## FEATURES

- High-performance Liquid Lens allows one model to read standard, wide and high density codes
- Piconet with up to 7 scanners connected to the same base station
- Snappy omnidirectional reading
- Intuitive aiming system
- Soft white light illumination
- Bluetooth® 3.0 Compliant: Class 1
- Multiple interfaces available
- Ethernet Connectivity (Standard and Industrial)
- Lithium-Ion battery replaces in 3 seconds!
- 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
- 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™ PBT9501

## TECHNICAL SPECIFICATIONS

### CORDLESS COMMUNICATIONS

<b>Bluetooth® Wireless Technology</b>	Piconet: Max. 7 readers per radio receiver (cradle and commercial dongle)
<b>Profiles</b>	HID (Human Interface Device); SPP (Serial Port Profile)
<b>Protocol</b>	Bluetooth® 3.0 Certified Class 1
<b>Radio Frequency</b>	2.40 to 2.48 GHz
<b>Radio Range (Open Air)</b>	Class 1: Exceeds 100 m / 328 ft Range distances are measured using the base station. Range with connection to other Bluetooth® peripherals may show different results.
<b>Security</b>	Data Encryption; Scanner Authentication

### DECODING CAPABILITY

<b>1D / Linear Codes</b>	Autodiscriminates all standard 1D codes including GS1 DataBar™ linear codes.
<b>2D Codes</b>	Aztec Code; China Han Xin Code; Data Matrix; MaxiCode; Micro QR Code; QR Code
<b>Postal Codes</b>	Australian Post; China Post; IMB; Japanese Post; KIX Post; Planet Code; Portuguese Post; Postnet; Royal Mail Code (RM4SCC); Swedish Post
<b>Stacked Codes</b>	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

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

### ENVIRONMENTAL

<b>Ambient Light</b>	0 - 100,000 lux
<b>Drop Resistance</b>	Cradle: Withstands 50 drops from 1.2 m / 3.9 ft onto a concrete surface PBT9501: Withstands 50 drops from 2 m / 6.6 ft onto a concrete surface
<b>ESD Protection (air discharge)</b>	20 kV
<b>Humidity (non-condensing)</b>	95%
<b>Particulate and Water Sealing</b>	IP65
<b>Temperature</b>	Operating: -20 to 50 °C / -4 to 122 °F Battery Charging: 0 to 40 °C / 32 to 104 °F Storage/Transport: -40 to 70 °C / -40 to 158 °F

### INTERFACES

<b>Interfaces</b>	Keyboard Wedge RS-232; USB: OEM USB; USB COM; USB HID Keyboard; Optional Ethernet (Standard, Industrial)
-------------------	--

### PHYSICAL CHARACTERISTICS

<b>Colors Available</b>	Yellow/Black
<b>Dimensions</b>	Cradle: 24 x 10.8 x 9.5 cm / 9.4 x 4.3 x 3.8 in PBT9501: 21.2 x 11 x 7.4 cm / 8.3 x 4.3 x 2.9 in
<b>Weight</b>	PBT9501-RB, PBT9501-HPRB, PBT9501-DPMRB: 400 g / 14.1 oz

### READING PERFORMANCE

<b>Image Capture</b>	Graphic Formats: BMP, JPEG, TIFF; Greyscale: 256, 16, 2
<b>Imager Sensor</b>	PBT9501: 864 x 544; PBT9501-HP: 1280 x 1024
<b>Light Source</b>	Aiming: 630 - 680 nm VLD Illumination: White LEDs
<b>Print Contrast Ratio (minimum)</b>	15%
<b>Reading Angle</b>	Pitch: +/- 40°; Roll (Tilt): 360°; Skew (Yaw): +/- 40°
<b>Reading Indicators</b>	Datalogic's 3GL (Three Green Lights) technology and loud beeper for good-read feedback; Datalogic 'Green Spot' on the Code, Dual Good Read LEDs
<b>Resolution (maximum)</b>	PBT9501: 1D Codes: 4 mil; 2D Codes: 7.5 mil PBT9501-HP: 1D Codes: 2.5 mil; 2D Codes: 4 mil

### READING RANGES

<b>Typical Depth of Field</b>	Minimum distance determined by symbol length and scan angle; Printing resolution, contrast, and ambient light dependent.
-------------------------------	--

PBT9501		PBT9501-HP	
4 mils	6 to 17 cm / 2.3 to 6.7 in	2.5 mils	2 to 6 cm / 0.8 to 2.3 in
7.5 mils Data Matrix	9 to 12 cm / 3.5 to 4.7 in	4 mils Data Matrix	2 to 6 cm / 0.8 to 2.3 in
10 mils Data Matrix	4 to 18 cm / 1.5 to 7 in	10 mils Data Matrix	2 to 20 cm / 0.8 to 7.8 in
10 mils PDF417	2 to 25 cm / 0.8 to 9.8 in	10 mils PDF417	2 to 30 cm / 0.8 to 11.8 in
13 mils	4 to 45 cm / 1.5 to 17.7 in	13 mils	3 to 60 cm / 1.1 to 23.6 in
20 mils	4 to 55 cm / 1.5 to 21.6 in	20 mils	3 to 70 cm / 1.1 to 27.5 in
40 mils	4 to 85 cm / 1.5 to 33.4 in	40 mils	3 to 110 cm / 1.1 to 43.3 in

### SAFETY & REGULATORY

<b>Agency Approvals</b>	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.
<b>Environmental Compliance</b>	Complies to China RoHS; Complies to EU RoHS; Complies to R.E.A.C.H
<b>Laser Classification</b>	Caution Laser Radiation - Do not stare into beam
<b>LED Classification</b>	IEC 62471 Class 1 LED

### UTILITIES

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

### WARRANTY

<b>Warranty</b>	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/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™ PBT9501-AR



## EXTENDED READING RANGE WITH A POWERFUL AUTOFOCUS SYSTEM

The PowerScan™ PBT9501 Auto Range (AR) is a hand held industrial scanner with area imaging technology that 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 with a fast focus adjustment, allowing the operator to easily read a close up barcode and then focus at the top of a warehouse rack.

## MOBILITY ENHANCES PRODUCTIVITY

The PowerScan PBT9501 AR reader can support multi-code features as well as pick mode where only the barcode pointed at by the aiming system is decoded. The quick 3-second battery replacement combined with a single or multi-slot battery charger allows for continuous operation without interruption. The BC9180-BT base/charger also includes in the same model two different Ethernet connections: Standard Ethernet and Industrial Ethernet protocols such as Ethernet IP and Modbus.

## BUILT TO LAST

The PowerScan PBT9501 AR reader has been tested to withstand extreme environmental conditions and is also suitable for the toughest industrial applications.

## FEATURES

- Extended reading range: decodes from 15 cm / 6 in up to more than 20 m / 65 ft with fast focus adjustment
- Omnidirectional reading of 1D/2D codes
- Reads up to 3 mil codes
- Bluetooth® 3.0 Compliant: Class 1
- Piconet with up to 7 scanners connected to the same base station
- 3-second battery replacement
- Operates over a wide range of temperatures
- Water and Particulate Sealing Rating: IP65
- Drop resistance to 2.0 m / 6.5 ft
- Datalogic's 3GL™ (3 Green Lights) technology and loud beeper for good-read feedback
- In-field replaceable window and cradle contact
- 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



## POWERSCAN PBT9501-AR

# TECHNICAL SPECIFICATIONS

### WIRELESS COMMUNICATIONS

<b>Bluetooth Wireless Technology</b>	Maximum number of devices per base station: 7
<b>Profiles</b>	HID (Human Interface Device) SPP (Serial Port Profile)
<b>Protocol</b>	Bluetooth 3.0 Certified Class 1
<b>Radio Frequency</b>	2.40 to 2.48 GHz
<b>Radio Range (Open Air)</b>	Class 1: up to 100 m / 328 ft Range distances are measured using the base station. Range with connection to other Bluetooth peripherals may show different results.
<b>Security</b>	Data Encryption; Scanner Authentication

### DECODING CAPABILITY

<b>1D / Linear Codes</b>	Auto discriminates all standard 1D codes including GS1 DataBar™ linear codes.
<b>2D Codes</b>	Aztec Code; China Han Xin Code; Data Matrix; MaxiCode; Micro QR Code; QR Code
<b>Postal Codes</b>	Australian Post; China Post; IMB; Japanese Post; KIX Post; Planet Code; Portuguese Post; Postnet; Royal Mail Code (RM4SCC); Swedish Post
<b>Stacked Codes</b>	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

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

### ENVIRONMENTAL

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

### INTERFACES

<b>Interfaces</b>	Keyboard Wedge; RS-232 USB: OEM USB; USB COM; USB HID Keyboard; Optional Ethernet (Standard, Industrial)
-------------------	--

### PHYSICAL CHARACTERISTICS

<b>Colors Available</b>	Yellow/Black
<b>Dimensions</b>	Cradle: 24.0 x 10.8 x 9.5 cm / 9.4 x 4.3 x 3.8 in PBT9501-AR: 21.2 x 11.0 x 7.4 cm / 8.3 x 4.3 x 2.9 in
<b>Weight</b>	460.0 g / 16.2 oz

### READING PERFORMANCE

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

### READING RANGES

<b>Typical Depth of Field</b>	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

<b>Agency Approvals</b>	The product meets necessary safety and regulatory approvals for its intended use. See the Regulatory Addendum for details.
<b>Environmental Compliance</b>	Complies to EU RoHS; Complies to China RoHS
<b>Laser Classification</b>	Caution Laser Radiation - Do not stare into beam CDRH Class II; IEC 60825-1 Class 2
<b>LED Classification</b>	IEC 62471 Exempt Risk Group

### UTILITIES

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

### WARRANTY

<b>Warranty</b>	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/ 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/Stand



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