

**DATALOGIC**

## **DLR-PR001-XX Family**

RFID Portal Reader 4 Antennas EU/US

**BSR** IDWARE

**BSR idware GmbH**  
Jakob-Haringer-Str.3  
A-5020 Salzburg  
Web: [www.bsr.at](http://www.bsr.at)



**Quick Reference Guide**

## **Datalogic S.r.l.**

Via San Vitalino 13  
40012 Calderara di Reno (BO)  
Italy  
Tel. +39 051 3147011  
Fax +39 051 3147205

### **2017 Datalogic S.p.A. and/or its affiliates**

♦ All rights reserved. ♦ Without limiting the rights under copyright, no part of this documentation may be reproduced, stored in or introduced into a retrieval system, or transmitted in any form or by any means, or for any purpose, without the express written permission of Datalogic S.p.A. and/or its affiliates. Owners of Datalogic products are hereby granted a non-exclusive, revocable license to reproduce and transmit this documentation for the purchaser's own internal business purposes. Purchaser shall not remove or alter any proprietary notices, including copyright notices, contained in this documentation and shall ensure that all notices appear on any reproductions of the documentation. Should future revisions of this manual be published, you can acquire printed versions by contacting your Datalogic representative. Electronic versions may either be downloadable from the Datalogic website ([www.datalogic.com](http://www.datalogic.com)) or provided on appropriate media. If you visit our website and would like to make comments or suggestions about this or other Datalogic publications, please let us know via the "Contact Datalogic" page.

### **Disclaimer**

Datalogic has taken reasonable measures to provide information in this manual that is complete and accurate, however, Datalogic reserves the right to change any specification at any time without prior notice.

Datalogic and the Datalogic logo are registered trademarks of Datalogic S.p.A. in many countries, including the U.S.A. and the E.U.

DLR-PR001 and the D RFID Logo are trademarks of Datalogic S.p.A. and/or its affiliates.

All other trademarks and brands are property of their respective owners.

**See the Regulatory Addendum included with your product for additional regulatory, safety and legal information.**



# Table of Contents

END USER LICENSE AGREEMENT .....	iii
Software Product Policy .....	vi
Product Description .....	1
General Features .....	2
Getting Started .....	2
Connecting to the Reader Using the Serial Port .....	3
Connecting to the Reader via Ethernet .....	3
Mechanical Dimensions and Installation Notice .....	4
Kit and Accessories .....	5
External Interfaces Description .....	6
Connectors .....	6
Power Supply Connector .....	6
RS232 Port .....	7
Ethernet Port .....	8
USB Host Ports .....	9
GPIO Port .....	10
RFID Antenna Ports .....	11
LEDs .....	11
DLR-PR001-XX Configuration .....	12
Restore Factory Default Settings .....	12
Technical Specifications .....	13
Datalogic Limited Factory Warranty .....	15
Support Through the Website .....	18

---

# NOTES

## END USER LICENSE AGREEMENT

**NOTICE TO END USER: BY DOWNLOADING OR INSTALLING THE SOFTWARE, OR BY USING THE DATALOGIC PRODUCT THAT INCLUDES THIS SOFTWARE, THE END USER CONSENTS TO BE BOUND BY THIS AGREEMENT. IF THE END USER DOES NOT AGREE WITH ALL OF THE TERMS OF THIS AGREEMENT, THEN DATALOGIC IS NOT WILLING TO LICENSE THE SOFTWARE AND THE END USER IS NOT ALLOWED TO DOWNLOAD, INSTALL OR USE THE SOFTWARE OR THE DATALOGIC PRODUCT.**

This End User License Agreement ("EULA") is between Datalogic IP Tech S.r.l. having its registered office at Via San Vitalino 13, 40012 Calderara di Reno (Bologna), Italy ("Datalogic"), and you, either an individual or a single entity, ("End User or 'You'") who has purchased one or more DLPR001-XX ("Datalogic Product") subject to the terms and conditions provided in any relevant purchase or sale contract. This EULA applies to the software contained in the Datalogic Product ("Embedded Software") and to any other software, to the extent applicable, offered as optional application software ("Application Software" that together with "Embedded Software" is herein referred to as "Software"). Any Open Source used in a conjunction with the Software is subject to the Open Source licenses available at the following website: <http://www.datalogic.com/oss>.

### 1. Grant of License

- 1.1 Datalogic grants to End User, a personal, non-exclusive, non-transferable, non-sublicensable, revocable, limited license to use the Software, solely on the Datalogic Product in which it is embedded or for which it is intended for use, in machine-readable form only, solely for End User's internal business purposes.
- 1.2 End Users shall not distribute, sublicense, rent, loan, lease, assign, export, re-export, resell, ship or divert or cause to be exported, re-exported, resold, shipped or diverted, directly or indirectly, the Software under this Agreement. End User shall not, and shall not permit others to: (i) modify, translate, decompile, reverse engineer, disassemble, or extract the inner workings of the Software, (ii) copy the functionality of the Datalogic Products; (iii) remove any proprietary notices, marks, labels, or logos from the Datalogic Products; (iv) rent or transfer all or some of the Software to any other party without Datalogic's prior written consent.
- 1.3 Title to the licensed Software shall be and remain with Datalogic or the third party from whom Datalogic has obtained a license right. This Agreement does not grant to End User any intellectual property rights. As used in this Agreement the term "purchase" or its equivalent when applied to the Software shall mean "acquire under license". End User is not entitled to receipt or use of the source code of any licensed Software.
- 1.4 Portions of the Datalogic Product are protected by the relevant and applicable patent and copyright laws, international treaty provisions, and other applicable laws. Therefore, End User must treat the Datalogic Product like any other copyrighted material (e.g., a book or musical recording) except that End User may make one copy of the Software solely for back-up purposes. Unauthorized duplication of the Software constitutes copyright infringement.
- 1.5 Any use of the Software outside of the conditions set forth herein is strictly prohibited and will be deemed a breach of this Agreement resulting in immediate termination of this Agreement. In the event of a breach of this Agreement, Datalogic will be entitled to all available remedies at law or in equity (including but not limiting to immediate termination of the license without notice, immediate injunctive relief and repossession of all Datalogic Products).
- 1.6 Without prejudice of the foregoing, End User grants to Datalogic and its independent accountants or consultants the right to examine End User's books, records and accounts during End User's normal business hours to verify compliance with this Agreement. In the event such audit discloses non-compliance with this Agreement, Datalogic shall be entitled to immediately terminate the Agreement, request End User to promptly pay all (additional) license fees due and any further damages, if any.

### 2. License Fee

License fees shall be due by End User to Datalogic according to the terms provided for in the relevant contract for the purchase of the Datalogic Product.

### 3. Termination

Without prejudice to any other rights or remedies Datalogic may have, Datalogic may terminate this Agreement if End User fails to comply with the terms and conditions of this Agreement. Datalogic may terminate this Agreement by offering you a superseding Agreement for the Software or any replacement or modified version of or upgrade to the Software and conditioning your continued use of the Software or such replacement, modified or upgraded version on your acceptance of such superseding Agreement. In addition, either party may terminate this Agreement at

---

any time. Subject to the foregoing, termination shall be effective upon notice to the other party. In the event that this Agreement terminates for any reason, End User's license to use the Software will immediately terminate, and End User must immediately stop using the Software, destroy all copies of the Software and all of its component parts, and, upon request, provide an affidavit certifying your compliance with the foregoing. The provisions of Sub-sections 1.2, 1.3, 1.4, 1.5, 4, 5, 6, 8, and 12 shall survive termination of this Agreement.

#### **4. Limited Warranty**

Datalogic warrants that, under normal use and operation, the Software will conform substantially to the applicable Datalogic Product documentation for the period specified in the same, provided that the Software is used with the Datalogic Product. Datalogic's entire liability and End User's sole and exclusive remedy for any breach of the foregoing limited warranty will be, at Datalogic's option, the provision of a downloadable patch or replacement software.

Datalogic does not warrant (i) that Software will meet End User's requirements; (ii) that Software will be uninterrupted or defect error free; (iii) any non conformity derived from unauthorized use, and/or improper installation or repair not in compliance with Datalogic Product documentation. End User agrees that the existence of such non conformities or errors and Datalogic's inability to remedy such errors shall not constitute a breach of this Agreement.

EXCEPT AS PROVIDED IN THIS AGREEMENT, THE DATALOGIC PRODUCT IS PROVIDED "AS IS" AND DATALOGIC MAKES NO WARRANTIES OF ANY KIND, EXPRESS OR IMPLIED, WRITTEN OR ORAL, WITH RESPECT TO THE DATALOGIC PRODUCT OR SOFTWARE, AND SPECIFICALLY DISCLAIMS THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

#### **5. Limitation Of Liability**

EXCEPT AS PROVIDED IN THIS AGREEMENT, NEITHER DATALOGIC NOR ITS LICENSORS SHALL BE LIABLE FOR ANY CLAIMS AGAINST END USER BY ANY OTHER PARTY. IN NO EVENT SHALL DATALOGIC'S LIABILITY FOR DAMAGES, IF ANY, WHETHER BASED UPON CONTRACT, TORT (INCLUDING NEGLIGENCE), PRODUCT LIABILITY, STRICT LIABILITY, WARRANTY, OR ANY OTHER BASIS, EXCEED THE PRICE OR FEE PAID BY END USER FOR THE DATALOGIC PRODUCT. UNDER NO CIRCUMSTANCES SHALL DATALOGIC OR ITS LICENSORS BE LIABLE TO END USER OR ANY THIRD PARTY FOR LOST PROFITS, LOST DATA, INTERRUPTION OF BUSINESS OR SERVICE, OR FOR ANY OTHER SPECIAL, CONSEQUENTIAL, CONTINGENT, INDIRECT, INCIDENTAL, PUNITIVE, EXEMPLARY, OR OTHER SIMILAR DAMAGES, EVEN IF DATALOGIC OR ITS LICENSORS HAVE BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES. END USER MUST BRING ANY ACTION UNDER THIS AGREEMENT WITHIN 12 (TWELVE) MONTHS AFTER THE CAUSE OF ACTION ARISES.

#### **6. Infringement**

To the maximum extent permitted by law, End User agrees to defend, indemnify and hold harmless Datalogic, its affiliates and their respective directors, officers, employees and agents from and against any and all claims, actions, suits or proceedings, as well as any and all losses, liabilities, damages, costs and expenses (including reasonable attorney's fees) arising out of or accruing from or related to licensee's failure to comply with the terms of this Agreement, including but not limited to (1) non compliance with any applicable laws or regulations with Datalogic product documentation, (2) unauthorized use or disclosure of Software, and (3) use of Software in combination with software, hardware, systems, or other items not provided by Datalogic.

#### **7. Support**

End User may request support for Software from Datalogic at Datalogic's standard support fees and under Datalogic's standard support terms and conditions in effect at the time the support is requested.

#### **8. Government Restricted Rights; International Use**

- 8.1 Use, duplication, or disclosure of the Software by the U.S. Government is subject to the restrictions for computer software developed at private expense as set forth in the U.S. Federal Acquisition Regulations at FAR 52.227-14(g), or 52.227-19 or in the Rights in Technical Data and Computer Software clause at DFARS 252.227-7013(c)(1)(ii), whichever is applicable.
- 8.2 If End User is using the Datalogic Product outside of the United States, End User must comply with the applicable local laws of the country in which the Datalogic Product is used and with U.S. export control laws. Without prejudice of the foregoing, the End User agrees to not export or re-export the Software, any part thereof, or any process or service that is the direct product of the Software to any country, person or entity subject to U.S. export restrictions. End User specifically agrees not to export or re-export any of the Software: (i)

---

to any country to which the U.S. has embargoed or restricted the export of goods or services or to any national of any such country, wherever located, who intends to transmit or transport the Software back to such country; (ii) to any person or entity who you know or have reason to know will utilize the Software in the design, development or production of nuclear, chemical or biological weapons; or (iii) to any person or entity who has been prohibited from participating in U.S. export transactions by any federal agency of the U.S. government. End User warrants and represents that neither the U.S. Commerce Department, Bureau of Export Administration nor any other U.S. federal agency has suspended, revoked or denied its export privileges.

## 9. Third Party Software

The Datalogic Product may contain one or more items of third party software which use is governed by separate third party license, unless otherwise stated.

## 10. Open Source Software

Portions of the Software include or operate with Open Source software ("Open Source Software").

Open Source Software is software covered by a publicly available license governed solely under Copyright law, whereas the complete terms and obligations of such license attach to a licensee solely through the act of copying, using and/or distributing the licensed software, such obligations often include one or more of attribution obligations, distribution obligations, copyleft obligations, and intellectual property encumbrances. The use of any Open Source Software is subject to the terms and conditions of this Agreement as well as the terms and conditions of the corresponding license of each Open Source Software package. If there is a conflict between the terms and conditions of this Agreement and the terms and conditions of the Open Source Software license, the applicable Open Source Software license will take precedence. Datalogic is required to reproduce the software licenses, acknowledgments and copyright notices as provided by the authors and owners, thus, all such information is provided in its native language form, without modification or translation. Please reference and review the above mentioned information to identify which Open Source Software packages have source code provided or available.

## 11. Notices

All notices required or authorized under this Agreement shall be given in writing, and shall be effective when received, with evidence of receipt. Notices to Datalogic shall be sent to the attention of Datalogic IP Tech S.r.l., Legal & IP Department, Via San Vitalino 13, 40012 Calderara di Reno (Bologna), Italy, or such other address as may be specified by Datalogic in writing.

## 12. General Provisions

- 12.1. Entire Agreement; Amendment. This document contains the entire agreement between the parties relating to use of the Datalogic Products and the licensing of the Software and supersedes all prior or contemporaneous agreements, written or oral, between the parties concerning the use of the Datalogic Products and licensing of the Software. This Agreement may not be changed, amended, or modified except by written document signed by Datalogic.
- 12.2. Waiver. A party's failure to enforce any of the terms and conditions of this Agreement shall not prevent the party's later enforcement of such terms and conditions.
- 12.3. Governing Law; Venue. End User agrees to the application of the laws of the country in which End User obtained the license to govern, interpret, and enforce all of End User's and Datalogic's respective rights, duties, and obligations arising from, or relating in any manner to, the subject matter of this Agreement, without regard to conflict of law principles. The United Nations Convention on Contracts for the International Sale of Goods does not apply.

All rights, duties, and obligations are subject to the courts of the country in which End User obtained the license. For licenses granted by Licensee who operates in the countries specified below, the following terms applies.

For Americas:

This Agreement is governed by the laws of the State of Oregon. This Agreement and the rights of the parties hereunder shall be governed by and construed in accordance with the laws of the State of Oregon U.S.A, without regard to the rules governing conflicts of law. The state or federal courts of the State of Oregon located in either Multnomah or Lane counties shall have exclusive jurisdiction over all matters regarding this Agreement, except that Datalogic shall have the right, at its absolute discretion, to initiate proceedings in the courts of any other state, country, or territory in which End User resides,

or in which any of End User's assets are located. In the event an action is brought to enforce the terms and conditions of this Agreement, the prevailing party shall be entitled to reasonable attorneys' fees, both at trial and on appeal.

For Europe, Middle East and Africa:

This Agreement is governed by the laws of Italy. This Agreement and the rights of the parties hereunder shall be governed by and construed in accordance with the laws of Italy, without regard to the rules governing conflicts of law. Italian Court of Bologna shall have exclusive jurisdiction over all matters regarding this Agreement, except that Datalogic shall have the right, at its absolute discretion, to initiate proceedings in the courts of any other state, country, or territory in which End User resides, or in which any of End User's assets are located. In the event an action is brought to enforce the terms and conditions of this Agreement, the prevailing party shall be entitled to reasonable attorneys' fees, both at trial and on appeal.

For Asia- Pacific Countries:

The validity, interpretation and construction of the Agreement shall be governed by and construed in accordance with Laws of the Republic of Singapore. Parties expressly disclaim the application of the United Nations Convention for International Sale of Goods.

Any dispute arising out of or in connection with this contract, including any question regarding its existence, validity or termination, shall be referred to and finally resolved by arbitration administered by the Singapore International Arbitration Centre ("SIAC") in accordance with the Arbitration Rules of the Singapore International Arbitration Centre ("SIAC Rules") for the time being in force, which rules are deemed to be incorporated by reference in this clause. The seat of the arbitration shall be Singapore.

The number of arbitrators will be three, with each side to the dispute being entitled to appoint one arbitrator. The two arbitrators appointed by the parties will appoint a third arbitrator who will act as chairman of the proceedings. Vacancies in the post of chairman will be filled by the president of the SIAC. Other vacancies will be filled by the respective nominating party. Proceedings will continue from the stage they were at when the vacancy occurred. If one of the parties refuses or otherwise fails to appoint an arbitrator within 30 days of the date the other party appoints its, the first appointed arbitrator will be the sole arbitrator, provided that the arbitrator was validly and properly appointed. All proceedings will be conducted, including all documents presented in such proceedings, in the English language. The English language version of these terms and conditions prevails over any other language version.

**- END -**

## Software Product Policy

Datalogic reserves the right to ship its products with the latest version of software/firmware available. This provides our customers with the very latest in Datalogic software technology.

The only exception to this policy is when the buyer has a signed contract with Datalogic that clearly defines the terms and conditions for making software/firmware changes in products shipped to the buyer.

To arrange for a Software Maintenance and Support Agreement please contact your Datalogic sales person.





# RFID Portal Reader 4 Antennas

## Product Description

The DLR-PR001-XX is an RFID reader optimized for portal installations, featuring full power to up 4 antennas\*, GEN2 Dense Reader Mode management and high speed read rates. Based on an embedded HW architecture (x86) and standard operating system (Linux), it eases the development of custom software and solutions. The on-board computing power and connectivity remove the need for an external PC and related cabling. This results in deployment and operations cost savings, thus reducing the total cost of ownership of installed devices. It is best suited for complex AutoID scenarios, where the information can be collected and fed directly to the reader from multiple sources such as Smart Card readers, Barcode readers and other in-field sensors. All data can be handled locally through data buffering, filtering and aggregation, in order to directly provide decision making data to higher level Business Intelligence processes. The same data can also trigger local actuators and screen displays for in-field real-time processes in a standalone mode. As a result of all the above, the DLR-PR001-XX allows solution providers to customize the reader to each application, thus creating their own specialized devices accordingly. It is offered in two different models to fit the different frequency standards in the EU and US regions.

Table 1 - Models P/N

Model P/N	RF carrier frequency
DLR-PR001-EU	865.6 - 867.6 MHz
DLR-PR001-US	902.0 - 928.0 MHz

\* You can add more antennas with the "4 antenna multiplexer" accessory (see Accessories list and Product Reference Guide for more details).

## General Features

The DLR-PR001-XX is an RFID UHF Portal reader and can be used with dedicated antennas (up to 4 antennas), refer to the [Products list and accessories on page 5](#) for part numbers.

You can connect to the DLR-PR001-XX using the serial port or the Ethernet port (see [External Interfaces Description on page 6](#) for more details).

Two USB ports are presents, they can be used to connect external devices like Wi-Fi or Bluetooth adapters, flash pens and others devices.

Lastly, the DLR-PR001-XX has a bidirectional port with 13 GPIOs (General Purpose Input/Output lines) to be used to control external devices or to send trigger signals to the reader (see "GPIO port" in "External Interfaces description" paragraph for more details).

## Getting Started

The DLR-PR001-XX reader can be used with an Ethernet cable or with the standard serial port.

To begin, you need first to download and install the .NET framework 2.0 (only if .NET is not already installed on your PC). Follow the steps below to familiarize yourself with the product.

1. Download the latest version of the Demo software or a similar application from the Datalogic website and install it on your PC.
2. Connect the antenna to conn. #1 through an appropriate antenna cable.
3. Connect the power supply.
4. Connect the reader directly to your PC using the serial port or via Ethernet (see dedicated paragraphs).
5. Launch the Demo Software and connect to the interface (TCP/IP or COM port).
6. Place a tag under the antenna field, click on "start inventory" and see the tag information on the main window of application.

## Connecting to the Reader Using the Serial Port

You can connect to the DLR-PR001-XX using the RS232 serial port through a standard DB9 serial cable.

By default, the serial port of the reader is configured as a configuration console; you have first to configure your preferred serial terminal monitor (Hyperterminal, Tera Term, Putty, etc.).

(For more details about reader connection using the serial port, please see the Product Reference Guide).

## Connecting to the Reader via Ethernet

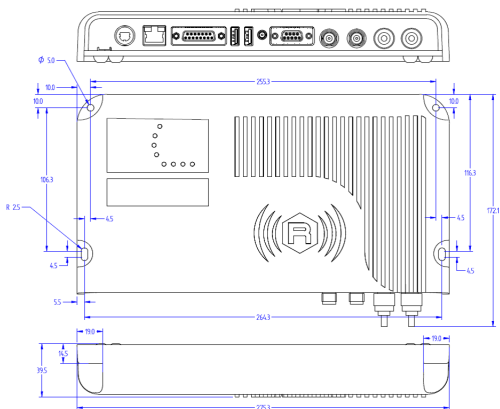
You can connect to the DLR-PR001-XX via Ethernet through an Ethernet crossover cable. By default, the reader is configured with the static IP address 192.168.0.1. If your private network matches the default network configuration of the reader, you can connect to it. Otherwise, you can change the network configuration of the reader by connecting to it with a serial communication program (see the Product Reference Guide for more details). Remember to select the TCP/IP connection option and insert the IP address in the Datalogic demo tool, or eventually in your application.

## Mechanical Dimensions and Installation Notice

The DLR-PR001-XX could be mounted either horizontally or vertically. Locate the four mounting slots on the reader, as illustrated below.

All measurements are in millimeters.

**Figure 1. DLR-PR001-XX Technical drawing**



## Kit and Accessories

Figure 2. shows the DLR-PR001-XX kit for a complete RFID set-up:

**Figure 2. DLR-PR001 kit**



- RFID Portal Reader 4 Antenna
- Datalogic Power Supply
- RFID Antenna
- Connection cable (antenna cable)

**Table 2 - Products list and accessories**

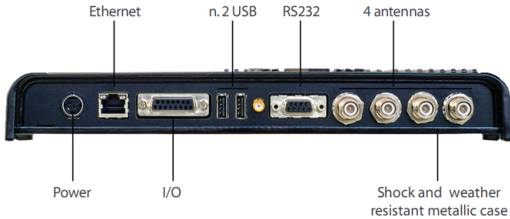
<b>Models Description</b>	<b>Part Number</b>
RFID PORTAL READER 4 ANTENNA EU	DLR-PR001-EU
RFID PORTAL READER 4 ANTENNA US	DLR-PR001-US
RFID PORTAL READER KIT EU	DLR-PR001-K1-EU
RFID PORTAL READER KIT US	DLR-PR001-K1-US
INTERFACE BOARD FOR I/O	IF-DLR-PR002
RFID ANTENNA FOR DLR-PR001 EU	AN-DLR-PR002-EU
RFID ANTENNA FOR DLR-PR001 US	AN-DLR-PR002-US
CONNECTION CABLE 5 MT. FOR DLR-PR002	CAB-002
CONNECTION CABLE 15 MT. FOR DLR-PR002	CAB-003
POWER SUPPLY FOR DLR-PR001 EU/US	PS-DLR-PR001
4 ANTENNA MULTIPLEXER	MP-DLR-PR002

# External Interfaces Description

## Connectors

The DLR-PR001-XX reader is equipped with the followings ports:

**Figure 3. DLR-PR001-XX Connectors View**



## Power Supply Connector

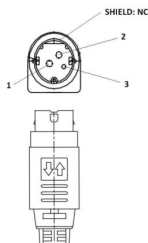
The power supply connector shall be used to provide the reader with the DC supply voltage in the range 9V to 36V.

The part number of the connector is KPJX-3S-S by Kycon, the pinout of the connector is shown in the following table:

Pin #	Signal	Description
1	GND	Ground
2	V+	DC input Voltage
3	GND	Ground

The external shield can be connected to Ground.

**Figure 4. Power supply connector**





It is strongly recommended to use only the Datalogic power supply AC/DC adapter 24Vdc output voltage.

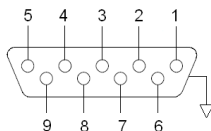
#### NOTE

## RS232 Port

The DLR-PR001-XX RS232 port is available on a DB9 connector, the pinout is the following:

Pin #	Signal	Description
1	-	Not connected
2	TX	TX output
3	RX	RX input
4	-	Not connected
5	GND	Ground
6	-	Not connected
7	CTS	Clear to Send
8	RTS	Req. to send
9	-	Not connected
	Shell	Ext. shell conn. To GND

Figure 5. RS232 port DB9 socket connector pinout



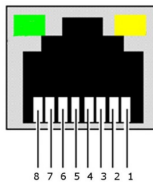
## Ethernet Port

The Ethernet port can be used to connect the reader to a 10/100/1000 Base-T network using a RJ45 cable.

The Ethernet connector pinout is the following:

Pin #	Signal	Description
1	DA+	Bidirectional pair A+
2	DA-	Bidirectional pair A-
3	DB+	Bidirectional pair B+
4	DC+	Bidirectional pair C+
5	DC-	Bidirectional pair C-
6	DB-	Bidirectional pair B-
7	DD+	Bidirectional pair D+
8	DD-	Bidirectional pair D-

Figure 6. Ethernet connector



### NOTE

The DLR-PR001 does not support Power Over Ethernet (POE).



## USB Host Ports

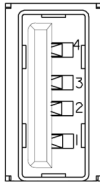
The DLR-PR001 reader has 2 USB 2.0 high speed ports that can be used to connect external devices like Wi-Fi or Bluetooth adapters, GPS receivers or flash pen drives.

Each port is able to provide up to 500mA supply current at 5VDC voltage.

The connector is a 4 pins Type A receptacle:

Pin #	Signal	Description
1	Vbus	+5V DC USB bus
2	D-	D- signal
3	D+	D+ signal
4	GND	Ground
	Shell	External shell

Figure 7. USB connector type A

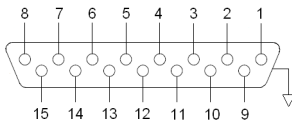


## GPIO Port

The reader has 13 GPIO bidirectional pins to be used to control external devices or to send trigger signals to the reader. All GPIOs are TTL Levels. (See the Product Reference Guide for more details and instructions on how to use them). A DB15 external connector is available:

Pin #	Signal	Description
1	GPIO0	General Purpose I/O 0
2	GPIO2	General Purpose I/O 2
3	GPIO4	General Purpose I/O 4
4	GPIO6	General Purpose I/O 6
5	GPIO8	General Purpose I/O 8
6	GPIO10	General Purpose I/O 10
7	GPIO12	General Purpose I/O 12
8	GND	Ground
9	GPIO1	General Purpose I/O 1
10	GPIO3	General Purpose I/O 3
11	GPIO5	General Purpose I/O 5
12	GPIO7	General Purpose I/O 7
13	GPIO9	General Purpose I/O 9
14	GPIO11	General Purpose I/O 11
15	DC_BYPASS	Input supply voltage bypass (500mA max)
	Shell	External shell

Figure 8. DB15 Socket Connector



## RFID Antenna Ports

The reader has 4 antenna ports available on 50 Ohm RP-TNC jack connectors.



RF output (32dBm peak max.)

In order to achieve the best reading performance, the VSWR of the antenna shall be lower than 1.5 : 1.

## LEDs

The DLR-PR001-XX top cover panel houses the following LEDs:

LED	Function	Type
POWER	Power ON	Green LED
RF ACTIVE	RFID Transmitting activity	Blink Yellow LED
GSM/GPRS	Not Present	No LED
FAULT	Boot phase	Red LED
	Ready to work	OFF
ANTENNA*	Selected TX Antenna	Yellow LED

\* The LED indicates the antenna configured via software to transmit. By default the selected antenna is Ant1. Please note that the LED does not indicate if an antenna is physically attached to the reader or not.



### NOTE

**Fault LED is on only during boot phase.**



## DLR-PR001-XX Configuration

The reader can be configured using a standard Linux bash shell available via serial port.

### Reader Configuration Using the Serial Port

By default, a standard bash shell is available via serial port; to access the reader using this method, you have first to configure your preferred serial terminal monitor (Hyperterminal, Tera Term, Putty, etc...) with the following settings:

Baud rate: 115200 b/s

Data bit: 8

Stop bit: 1

Parity: none

Flow control: none

To login, type "root" in the Username text box and "rooroot" as Password.

(For more details and complete procedure for reader configuration using the serial port, please see the Products Reference Guide).

### Restore Factory Default Settings

Restoring factory default settings of DLR-PR001-XX is possible only using the serial port and a USB pen drive. For complete detailed procedure, see the Products Reference Guide.

# Technical Specifications

Item	Description
<b>Physical Characteristics</b>	
Reader Dimension	(W-L-H) 27.5 x 15.5 x 3.9 cm <sup>3</sup> / 10.8 x 6.1 x 1.5 in <sup>3</sup>
Weight	1300 g / 45.86 oz
<b>Electrical Characteristics</b>	
Electrical Power	9÷36 VDC - 60W
<b>RF Characteristics</b>	
Type	UHF - RFID
Standard Compliance	EPC C1 G2/ISO 18000-6C
Frequency Bands	865.60 ÷ 867.60 MHz European standard (ETSI EN 302 208) 902.00 ÷ 928.00 MHz US standard (FCC part 15)
RF Output Power	Up to 32 dBm (1.6W) conducted (ETSI) Up to 30 dBm (1W) conducted (FCC)
Antenna	Up to 4 external antennas (RP-TNC connectors)
Receiving Capability	Gen 2 Dense Reader Mode Management Data rate up to 400 Kb/s
<b>Technical Characteristics</b>	
CPU	Intel Atom Z510 CPU @ 1.1 Ghz
Memory	2 Gbytes RAM 8 Gbytes MicroSD
Operating System	Linux (Debian)
Connectivity	RS232 serial com (DB9) 2 X USB 2.0 ports (conn. type A) Ethernet 10/100/1000 Base-T (RJ45)
Digital I/O	13 GPIO pins, TTL level
<b>User Environment</b>	
Partic. & Water Sealing	IP42

---

<b>Item</b>	<b>Description</b>
<b>Operat. Temperature</b>	-10°C to 50°C / 14°F to 122°F
<b>Storage Temperature</b>	-20°C to 60°C / -4°F to 140°F
<b>ESD Level</b>	16kV

# Datalogic Limited Factory Warranty

## Warranty Coverage

Datalogic warrants to Customer that Datalogic's products will be free from defects in materials and workmanship for a period of one year from product shipment. Datalogic ("Datalogic") hardware products are warranted against defects in material and workmanship under normal and proper use. The liability of Datalogic under this warranty is limited to furnishing the labor and parts necessary to remedy any defect covered by this warranty and restore the product to its normal operating condition. Repair or replacement of product during the warranty does not extend the original warranty term. Products are sold on the basis of specifications applicable at the time of manufacture and Datalogic has no obligation to modify or update products once sold.

If Datalogic determines that a product has defects in its material or workmanship, Datalogic shall, at its sole option repair or replace the product without additional charge for parts and labor, or credit or refund the defective products duly returned to Datalogic. To perform repairs, Datalogic may use new or reconditioned parts, components, subassemblies or products that have been tested as meeting applicable specifications for equivalent new material and products. Customer will allow Datalogic to scrap all parts removed from the repaired product. The warranty period shall extend from the date of shipment from Datalogic for the duration published by Datalogic for the product at the time of purchase (Warranty period). Datalogic warrants repaired hardware devices against defects in workmanship and materials on the repaired assembly for a 90 day period starting from the date of shipment of the repaired product from Datalogic or until the expiration of the original warranty period, whichever is longer. Datalogic does not guarantee, and it is not responsible for, the maintenance of, damage to, or loss of configurations, data, and applications on the repaired units and at its sole discretion can return the units in the "factory default" configuration or with any software or firmware update available at the time of the repair (other than the firmware or software installed during the manufacture of the product). Customer accepts responsibility to maintain a backup copy of its software and data.

## Warranty Claims Process

In order to obtain service under the Factory Warranty, Customer must notify Datalogic of the claimed defect before the expiration of the applicable Warranty period and obtain from Datalogic a return authorization number (RMA) for return of the product to a designated Datalogic service center. If Datalogic determines Customer's claim is valid, Datalogic will repair or replace product without additional charge for parts and labor. Customer shall be responsible for packaging and shipping the product to the designated Datalogic service center, with shipping charges prepaid. Datalogic shall pay for the return of the product to Customer if the shipment is to a location within the country in

which the Datalogic service center is located. Customer shall be responsible for paying all shipping charges, duties, taxes, and any other charges for products returned to any other locations. Failure to follow the applicable RMA policy, may result in a processing fee. Customer shall be responsible for return shipment expenses for products which Datalogic, at its sole discretion, determines are not defective or eligible for warranty repair.

## Warranty Exclusions

The Datalogic Factory Warranty shall not apply to:

- (i) any product which has been damaged, modified, altered, repaired or upgraded by other than Datalogic service personnel or its authorized representatives;
- (ii) any claimed defect, failure or damage which Datalogic determines was caused by faulty operations, improper use, abuse, misuse, wear and tear, negligence, improper storage or use of parts or accessories not approved or supplied by Datalogic;
- (iii) any claimed defect or damage caused by the use of product with any other instrument, equipment or apparatus;
- (iv) any claimed defect or damage caused by the failure to provide proper maintenance, including but not limited to cleaning the upper window in accordance with product manual;
- (v) any defect or damage caused by natural or man-made disaster such as but not limited to fire, water damage, floods, other natural disasters, vandalism or abusive events that would cause internal and external component damage or destruction of the whole unit, consumable items;
- (vi) any damage or malfunctioning caused by non-restoring action as for example firmware or software upgrades, software or hardware reconfigurations etc.;
- (vii) the replacement of upper window/cartridge due to scratching, stains or other degradation and/or
- (viii) any consumable or equivalent (e.g., cables, power supply, batteries, keypads, touch screen, triggers etc.).

## No Assignment

Customer may not assign or otherwise transfer its rights or obligations under this warranty except to a purchaser or transferee of product. No attempted assignment or transfer in violation of this provision shall be valid or binding upon Datalogic.

DATALOGIC'S LIMITED WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, ORAL OR WRITTEN, STATUTORY OR OTHERWISE, INCLUDING, WITHOUT LIMITATION, ANY IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, OR NON-INFRINGEMENT. DATALOGIC SHALL NOT BE LIABLE FOR ANY DAMAGES SUSTAINED BY CUSTOMER ARISING FROM DELAYS IN THE REPLACEMENT OR REPAIR OF PRODUCTS UNDER THE ABOVE.

THE REMEDY SET FORTH IN THIS WARRANTY STATEMENT IS THE CUSTOMER'S SOLE AND EXCLUSIVE REMEDY FOR WARRANTY CLAIMS. UNDER NO CIRCUMSTANCES WILL DATALOGIC BE



LIABLE TO CUSTOMER OR ANY THIRD PARTY FOR ANY LOST PROFITS, OR ANY INCIDENTAL, CONSEQUENTIAL INDIRECT, SPECIAL OR CONTINGENT DAMAGES REGARDLESS OF WHETHER DATALOGIC HAD ADVANCE NOTICE OF THE POSSIBILITY OF SUCH DAMAGES.

### **Risk of Loss**

Customer shall bear risk of loss or damage for product in transit to Datalogic. Datalogic shall assume risk of loss or damage for product in Datalogic's possession. In the absence of specific written instructions for the return of product to Customer, Datalogic will select the carrier, but Datalogic shall not thereby assume any liability in connection with the return shipment.

## Support Through the Website

Datalogic provides several services as well as technical support through its website.

Log on to [www.datalogic.com](http://www.datalogic.com) and click on the **SUPPORT > RFID** category link. From this page you can select your product model from the dropdown list which gives you access to:

**Downloads** including Data Sheets, Manuals, Software & Utilities, and Drawings;

**Repair Program** for On-Line Return Material Authorizations (RMAs) plus Repair Center contact information;

**Service Program** containing details about Maintenance Agreements;

**Technical Support** through email or phone.

# NOTES



[www.datalogic.com](http://www.datalogic.com)

©2017 Datalogic S.p.A. and/or its affiliates. All rights reserved. Datalogic and the Datalogic logo are registered trademarks of Datalogic S.p.A. in many countries, including the U.S. and the E.U.

**Datalogic S.r.l.**

Via San Vitalino 13 | Calderara di Reno (BO) | 40012 | Italy  
Telephone: +39 051 3147011 | Fax: +39 051 3147205



820098414

(Rev A)

September 2017