PURELINK
TECHNOLOGY

Wireless Visibility Receiver
PLK-VRF015-10

User Guide

Wi Fi   FC   ETSI   Industry Canada   Industrie Canada   Canada

Description

Purelink's PLK-VRF015-10 Wireless Visibility Receiver has a receptive field of over 40 000 m2 and delivers zone location for more than 10 000 personnel badges, asset tags and sensors per second. It provides reliable zone location for wide areas, yards, buildings and manufacturing plants. A PLK-VRF015-10 visibility receiver processes thousands of badge, tag and sensor communications per second on two independent antennas at 5.8 GHz. Each of these two antennas can be oriented in different directions to optimize the power level of received signals or to cover a wider area of the enterprise.

PLK-VRF015-10 supports two location modes in **Bluefairy**™ Computing Engine: visibility mode and checkpoint mode. When used in conjunction with Purelink's **nano**Edge™ Hardware-Level SDK, PLK-VRF015-10 provides low-level, raw data for integration into custom enterprise applications. The PLK-VRF015-10 is the only infrastructure equipment required to install in an enterprise in order to run location-aware people and asset tracking applications. Increasing coverage is as simple as adding more visibility or location receivers.

Purelink's PLK-VRF015-10 Wireless Visibility Receiver

Technical Specifications

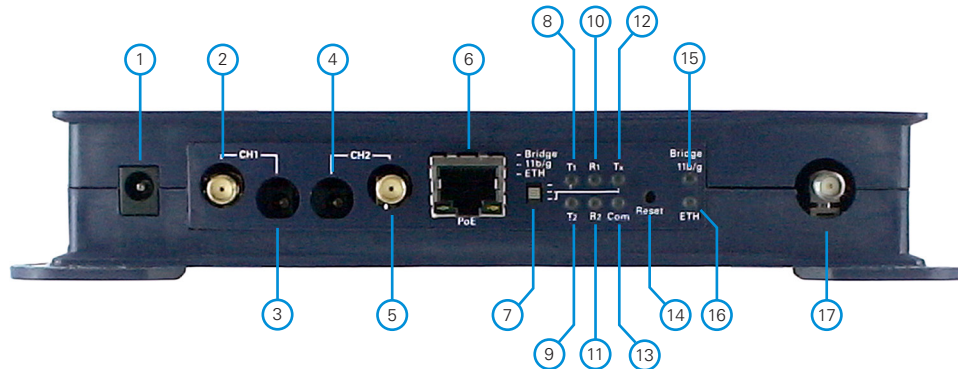|	
Operation Frequency	5.8 GHz, RFID communication ISM band, Airport and Healthcare environment compliant
Coverage Area	Outdoor: 40 000 m^2 (430 556 sq ft) Indoor: 6 400 m^2 (68 889 sq ft)
Configuration	Comes with 2 PLK-AN010 tracking antennas (5.8 GHz, 6dB gain, SMA connector)
Interface Type	Ethernet 10/100BASE-T RJ45 2.4 GHz WiFi 802.11b/g embedded wireless bridge (optional)
Physical Interface	Three-way switch (for selecting operating mode)
Location Mode	Visibility (zoning), checkpoint
Location Accuracy	Zoning
Processing Capacity	10 000 tags at 1 blink/second
Device Management	Mozilla Firefox 2.0 - 3.0, Microsoft Internet Explorer 6.0
Other Communication Interface Capabilities	All wireless transmission modules with an Ethernet interface: WiMAX, GPRS, EDGE
Security	WPA / WPA2 (with WiFi option)
Power Supply	5V DC Power Over Ethernet (optional)
Certification / Compliance	Industry Canada FCC ETSI
Environmental Specifications	Temperature: -20 °C to +60 °C (operation) -30 °C to +60 °C (storage)
Dimensions (L x W x H, mm)	206 x 159 x 36
Weight	Receiver with bridge and PoE: 400 g Antenna with mounting kit: 300 g
Package Content	1 x PLK-VRF015-10 Visibility Receiver 2 x PLK-AN010 Tracking Antennas 2 x PLK-MK010 Antenna Mounting Kit 1 x 220/110V AC - 5V DC power adapter 1 x Omnidirectional WiFi antenna (optional) 1 x Product Documentation
Warranty	1 year limited warranty

Receiver Connection Description

Figure 1: Receiver Connection Panel

1- Power connection
   The included power adapter must be connected to grounded mains.

2- Channel 1 antenna connection
   SMA connector. In Bluefairy Computing Engine, this channel is identified as *[serial number]*-1.

3- Channel 1 power connection

4- Channel 2 antenna connection
   SMA connector. In Bluefairy Computing Engine, this channel is identified as *[serial number]*-2.

5- Channel 2 power connection

6- Ethernet port

7- Network selection switch
   -In the **up** position, the Ethernet port is connected to the WiFi bridge. Use this position to configure the WiFi bridge
   -In the **middle** position, the Ethernet port is deactivated. The receiver uses the WiFi bridge to send data.
   -In the **down** position, the Ethernet port is connected to the receiver. Use this position to configure the receiver and to use the receiver in Ethernet mode.

8- Tag activity on channel 1

9- Tag activity on channel 2

10- Reference Tag activity on channel 1

11- Reference Tag activity on channel 2

12- Data transmission

13- Network connection
   This LED is on when the receiver is connected to the WiFi bridge or to an external device via the Ethernet port.

14- Reset button
   Hold the button down for 12 seconds to reset the receiver and the Wi-Fi bridge to their default settings. A shorter press will only restart the receiver.

15- Wi-Fi bridge wireless activity

16- Wi-Fi bridge Ethernet activity

17- Wi-Fi bridge antenna connection
   SMA connector.

Receiver Web Configuration

Figure 2: Receiver Web Interface Login Screen

To log onto a receiver, enter the IP address in Firefox 2.0 - 3.0 or Internet Explorer 6.0. The default IP address for all receivers is **192.168.1.101**. The login page will appear, as in Figure 2. The default password for receivers is **admin**. Once the password is entered, click on the login button. The receiver will load the configuration page, as in Figure 3.

The receiver configuration page shows the current network configuration for the receiver.

Name

The receiver's name, as displayed in the **Blue**fairy™ Computing Engine Receiver Diagnostic module. The default name is **Default Receiver**.

Firmware

The receiver's firmware version.

Configuration

The receiver's configuration.

Serial

The receiver's serial number.

Receiver Web Configuration *(Continued)*

Figure 3: Receiver Web Interface Configuration Screen

MAC

The receiver's MAC address.

Mode

The receiver's mode of operation.

Receiver IP

The receiver's IP address. The default is **192.168.1.101**.

Port

The receiver's receiving port number used to send commands to the receiver. The default is **4097**.

Gateway

The receiver's default gateway IP address. The default is **192.168.1.1**.

Netmask

The receiver's subnet mask. The default is **255.255.255.0**.

Receiver Web Configuration *(Continued)*

Target IP

The receiver's target IP address. This is the address to which the information is sent. This must be the address of the **Bluefairy**™ Computing Engine. The default is **192.168.1.50**.

Port

The target port to which the information is sent. The default is **6947**.

Target ID

The **Bluefairy**™ Computing Engine ID.

2nd Target

The IP address of a second target to which the information is sent. Enable this feature by checking the box.

New Password

To change the receiver password, type in the new password. This will be effective after the **Accept Changes** button is pressed.

Password

The password field is required to validate any changes made in the configuration page.

> ⚠ If you do not provide the password, all your changes will be lost.

Reconfigure Receiver From File

To reconfigure the receiver, click the **Browse** button and select the configuration file. Enter the password and click the **Reconfigure** button. The name of this configuration will appear in the configuration field the next time you log on to the receiver web page.

> ⚠ Resetting the receiver to its default settings will restore the default configuration.

Receiver Web Configuration *(Continued)*

Name	Default Receiver
Receiver IP Address	192.168.1.101
Receiver Port	4097
Default Gateway	192.168.1.1
Subnet Mask	255.255.255.0
Target IP	192.168.1.50
Target Port	6947
2nd Target	192.168.1.51 (disabled)
Password	admin

Table 1: Default Receiver Configuration Summary

Wi-Fi Bridge Web Configuration *(optional)*

The Wi-Fi bridge included with the receiver can be reached at **192.168.1.226**. To configure this device the network selection switch must be set to the *up* possition.

IP Address	192.168.1.226
Login	admin
Password	admin

Table 2: Default Wi-Fi Bridge Configuration Summary

Power-over-Ethernet *(optional)*

The power-over-ethernet option works in both modes:
  -Power over data pair
  -Power over spare pair
PoE works regardless of the position of the network selection switch.

WARRANTY

1 OTHER WARRANTY RIGHTS AND NATIONAL LAW

1.1 This warranty does not exclude or limit the buyer's statutory rights provided by national law, in particular, any such rights against the seller that arise from a legally effective purchase contract.

1.2 The warranty regulations mentioned herein are applicable unless they constitute an infringement of national warranty law.

2 WARRANTY

2.1 PURELINK (PURELINK TECHNOLOGY INCORPORATED) warrants the mechanical and electronic components of this product to be free of defects in material and workmanship for a period of one (1) year from the original date of purchase, in accordance with the warranty regulations described below. If the product shows any defects within the specified warranty period that are not excluded from this warranty as described under paragraphe 5, PURELINK shall, at its discretion, either replace or repair the product using suitable new or reconditioned parts. In the case that other parts are used which constitute and improvement, PURELINK may, at its discretion, charge the customer for the additional cost of these parts.

2.2 If the warranty claim proves to be justified, the product will be returned to the user freight prepaid.

2.3 Warranty claims other than those indicated above are expressly excluded.

3 RETURN AUTHORIZATION NUMBER

3.1 To obtain warranty service, the buyer (or his authorized dealer) must call PURELINK during normal business hours BEFORE returning the product. All inquiries must be accompanied by a description of the problem. PURELINK will then issue a return authorization number.

3.2 Subsequently, the product must be returned in its original shipping carton, together with the return authorization number to the address indicated by PURELINK.

3.3 Shipments without freight prepaid will no be accepted.

4 WARRANTY REGULATIONS

4.1 Warranty services will be furnished only if the product is accompanied by a copy of the original retail dealer's invoice. Any product deemed eligible for repair or replacement under the terms of this warranty will be repaired or replaced.

4.2 If the product needs to be modified or adapted in order to comply with applicable technical or safety standards on a national or local level, in any country which is not the country for which the product was originally developed and manufactured, this modification/adaptation shall not be considered a defect in materials or workmanship. The warranty does not cover any such modification/adaptation, irrespective of whether it was carried out properly or not. Under the terms of this warranty, PURELINK shall not be held responsible for any cost resulting from such a modification/adaptation.

4.3 Free inspections and maintenance/repair work are expressly excluded from this warranty, in particular, if caused by improper handling of the product by the user. This also applies to defects caused by normal wear and tear, in particular, of switches, connectors, illuminants and similar parts.

4.4 Damages/defects caused by the following conditions are not covered by this warranty:

- improper handling, neglect or failure to operate the unit in compliance with the instructions given in PURELINK user manuals.
- connection or operation of the unit in any way that does not comply with the technical or safety regulations applicable in the country where the product is used.
- damages/defects caused by force majeure or any other condition that is beyond the control of PURELINK.

4.5 Any repair or opening of the unit carried out by unauthorized personnel (user included) will void the warranty.

4.6 If an inspection of the product by PURELINK shows that the defect in question is not covered by the warranty, the inspection costs are payable by the customer.

4.7 Products which do not meet the terms of this warranty will be repaired exclusively at the buyer's expense. PURELINK will inform the buyer of any such circumstance. If the buyer fails to submit a written repair order within 6 weeks after notification, PURELINK will return the unit C.O.D. with a separate invoice for freight and packing. Such costs will also be invoiced separately when the buyer has sent in a written repair order.

5 WARRANTY TRANSFERABILITY

This warranty is extended exclusively to the original buyer (customer of retail dealer) and is not transferable to anyone who may subsequently purchase this product. No other person (retail dealer, etc.) shall be entitled to give any warranty promise on behalf of PURELINK.

6 CLAIM FOR DAMAGES

Failure of PURELINK to provide proper warranty service shall not entitle the buyer to claim (consequential) damages. In no event shall the liability of PURELINK exceed the invoiced value of the product.

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