Elpas
Active RFID/RTLS Solutions

RF BUS Reader

Description

The Elpas RF BUS Reader is a supervised; 433MHz fixed indoor receiving device. The reader is designed to detect, and relay real-time 'Location' and 'State' data from Elpas Active RFID Asset, Personnel or Infant Protection Tags to host applications.

The RF BUS Reader can be easily integrated anywhere onto wired or wireless Ethernet/Wi-Fi networks (using an Elpas RF IP Reader as a RS-485 BUS Master) to enable indoor facility-wide area monitoring and tracking of assets or personnel in real-time.

Architecturally attractive, the RF BUS Reader is easily surface mounted onto solid ceilings, flush mounted into dropped (false) ceilings or hung on solid and hollow walls.

The reader supports large tag populations at read-distances up to 20m/65ft (360° coverage area) in open office environments and is remotely configurable for customized applications. On-board I/O ports enable the monitoring of one general purpose analogue input and control of two open-collector digital switched outputs.

The Elpas RF BUS Reader also supports XML messaging technology (via the Elpas RF IP Reader) for integration with external systems plus data transmission with up to 15 Elpas RS-485 BUS devices.

Elpas RF BUS Reader - Ceiling Mount

Elpas RF BUS Reader – Wall Mount

Product Features

Attractive, cost effective design

Real-time tag monitoring and tracking

Read range up to 20m/65ft radius (360° coverage)

Wired/Wireless Ethernet/Wi-Fi compatibility

Handles large tag populations

Fully supervised, including tamper protection

Remote Ethernet configuration & supervision

Low power consumption

Onboard I/O ports, RS-485 connectivity

XML messaging technology (via Elpas RF IP Reader)

CE, FCC, IC & ISO 9001 certified

Applications and Uses

Patient identification

Assisted living facilities

Infant protection

Nurse/Patient call

Wandering patient supervision

Entrance- and exit- based alarming

Hands-free access control

Asset management & loss prevention

Personnel and visitor safety

Visonic Technologies
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Elpas RF BUS Reader – Confidential Technical and Product Specifications

Operational Specifications	
Operating Frequency	432.92 MHz (868 MHz upon special request)
RS-485 BUS	230Kbit/sec
Read Range (Note 1)	Installation grid: 20M/65Ft radius
RF Sensitivity	-102dbm
Tag Density	Up to 125 tag messages/second
Message Lenght	4–31 byte message (encapsulated for messages > 4 bytes)
Buzzer Indicator	**Power-Up:** User configurable; **Device malfunction:** Beeps continuously
Green LED Indicator	Lights continuously when powered
Red LED Indicator	**Corrupted Firmware**: Lights continuously **Unregistered in Eiris:** Toggles on/off every second **Tag Detection**: Flashes once per message
Tamper Switch	Generates service message
Encoding	Factory-programmed ID
Input/Output	**Input:** 1 dry analogue contact **Output:** 2 open collector digital outputs (up to 100 mA)
Power Requirements	16–28 VDC, 80 mA at 24 VDC=2W

General Specifications	
Construction	White polycarbonate plastic
Dimensions (H x W x D)	**Ceiling:** 17 x 4 cm (6.6 x 1.6 inches) **Wall:** 10.5 x 16.0 x 3.5 cm (4.0 x 6.0 x 0.5 inches)
Weight	**Ceiling:** 200 grams / 7.0 ounces **Wall:** 180 grams / 6.3 ounces
Tamper Protection	Open 'State' spring-loaded switch button
Device Interfaces	**RF Antenna:** Female RP SMA connector **Bus Data & Power - over single cable:** Female RJ-11 plug or Four–position removable terminal block **Analogue Input:** Two–position fixed terminal block; **Digital Outputs:** Three–position fixed terminal block
Operating Environment	**Temp:** -10°C to 70°C (14°F to 159°F) **Humidity:** 20% to 80% non-condensing
Storage Temperature	-40° to 70°C (-40°to 159°F)
Configuration & Supervision	EIRIS 4.6.3 (or higher) software
Compliance Standards	**FCC:** FCC PART 15, Sub-part B, Class B **CE:** EN60950-1, CAN/CSA-CEI/ICE CISPR 22 **IC:** ICES-003
Warranty	1-year limited warranty

*Note 1: Read distances may be affected by environmental conditions and site characteristics.   All specifications are subject to change without notice.

The following Elpas Tags are not compatible with the Elpas RF BUS Reader:

433MHz Alert Tag **(5-ALB00001, 5-PLB00001)**   Alert Tag (IR) – with Pull **(5-PWB00001)**   433MHz Wrist Tag **(PWB00901, 5-PWB00901-1, 5-PWB00901-4)**
433MHz Pediatric Tag **(5-BTB00433-1, 5-BTB00433-2, 5-BTB00433-3, 5-BTB00433-8)**

Ordering Information

Part Number	Description
5-RFB00433-1	RF Reader, BUS, 433MHz, Ceiling
5-RFB00433-5	RF Reader, BUS, 433MHz, Wall

Compatible Accessories

Part Number	Description
5-IOX00001	End-of-Line Terminator for Elpas & AXS Inputs (5 units)
5-JBA00485	RS-485 Junction Box, 4 RJ11 Ports
5-ERS02721	Network Drop Cable, 2.5Meters / 8.0 Feet
5-ERS02721-1	Network Drop Cable, 5.0 Meters / 16.0 Feet
5-500100	Power-Over-Ethernet Splitter, 24Vdc/0.5A
5-ERS02601	P60 Power Supply, 24Vdc/2.5A
5-RDT09100	Mounting Bracket (5 units)
5-RDT09113	Reader Surface-Mount Plastic Ring (5 units)

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About Visonic Technologies

Visonic Technologies (VT) is a global leader in Active RFID/RTLS safety & security solutions for the healthcare industry. VT delivers out-of-the-box and custom-tailored risk mitigation tools that enhance patient and personnel safety; reduces asset shrinkage and labor costs; lessens negligence litigation and facilitates industry guideline compliance.

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