

ACTIVE RFID

READER Psion End-Cap RX2100



The RX2100 Psion End-Cap Reader is the only Active RFID expansion module for the Psion Teklogix® WORKABOUT PRO™ 2nd Generation Handheld Computer available today. The Psion End-Cap Reader detects and decodes RFID (radio frequency identification) signals from the Wavetrend® Activ and ActivDuo ranges of active RFID tags. It can operate in rugged conditions at both 'short' ranges or at ultra long ranges, subject to the appropriate version being fitted to the WORKABOUT PRO. The End-Cap reader provides unrivalled mobility solutions for customers seeking to identify, locate or audit tagged assets outside of areas monitored by fixed RFID reader networks.

Typical Applications

Whether it is being used as a standalone mobile reader or as part of an enterprise asset management system that also employs a network of Wavetrend® fixed readers, the RX2100 Psion End-Cap Reader allows the user to quickly and easily search for and locate tagged assets using the WORKABOUT PRO.

Tagged asset information is displayed by a suitable application installed on the WORKABOUT PRO enabling complete management of all tagged assets by mobile users, even if they are out of range of a fixed reader network. This data enables the automation of business decisions about all tagged assets, based on accurate and near real-time knowledge of their location and condition.

With mobility in mind, the design of the RX2100 End-Cap Reader allows multiple

other expansion modules to be installed and used on the WORKABOUT PRO hand-held computer simultaneous with the active RFID reader module.

Users can combine their choice of barcode scanners, imagers, wireless LAN & WAN adaptors, GPS positioning and GSM/GPRS/EDGE communication modules together with the active RFID reader. This allows users to deploy powerful mobile RFID solutions across a wide array of asset management, location and tracking activities to suit their specific needs, with information passing between the mobile reader and back end asset management system in real-time, as required. Barcode data can now be easily associated with the active RFID tag identity number, ideal for supply chain management systems.

- **Powerful, robust and low cost mobility tool for active RFID asset management solutions**
- **Standard Range and Long Range models available**
- **Quickly and easily installed**
- **Allows for simultaneous use of other WORKABOUT PRO expansion modules.**
- **User's choice of out-the-box or customised applications to process detected tag data**

KEY FEATURES	BUSINESS BENEFITS
Available in both Standard Range and Long Range versions.	The standard range reader can be used for close proximity asset identification and quick location in environments such as indoor storage facilities or warehouses. The long range reader allows for ultra-long range asset identification and audits in outdoor storage facilities or yards.
Connects to the WA Pro through the Psion G2 internal USB port	'Plug and Play' ease of physical installation, the other expansion ports remain available to use.
Reader is housed in a standard, approved Psion Teklogix end-cap.	Allows for quick and easy attachment to any appropriate Psion Teklogix WORKABOUT PRO G2 handheld computer.
Allows combination with GPRS, GSM, Wi-Fi and Barcode expansion modules on a single WA PRO unit.	Provides real-time data connectivity to enterprise systems, accurate reader location (and by extension tag location) to GPS coordinates and barcode / RFID tag associations.
Signal Strength information is reported with every tag.	Allows for limitation of read range directly on the reader through signal strength filtering and can give an idea of the tag's proximity to the reader.

Typical free-air read ranges for the RX2100 models and versions*

L-RX2100	up to 15m
L-RX2100-LR	up to 70m
W-RX2100	up to 12m
W-RX2100-LR	up to 55m



RX2100 End-Cap Standard Range Version with Internal Antenna



RX2100-LR End-Cap Long Range Version with External Antenna (supplied)

ACTIVE RFID

Operating Applications

Both Wavetrend and select Wavetrend Accredited Solution Partners offer users a choice of either out-the-box mobile reader solutions that will operate on the WORKABOUT PRO with the RX2100; or customised mobile applications created to suit specialist or specific user requirements.

The RX2100 can be supplied with the Wavetrend TagHound demonstration software (sold separately). TagHound allows the user to simply scan an area for tags, displaying the number of tags found and the detected tag ID numbers. The user can then select to find the location of an individual tag by following the 'tagometer'™ bar, which changes colour from red to green as the operator gets closer to the target tag.

For more information on the range of applications available from Wavetrend and our partners, please contact Wavetrend.

Connections

Connection to the WORKABOUT PRO is via its internal USB socket leaving the Psion 100 pin connector and other expansion slots free for use with other devices. The RX2100 Psion End-Cap Reader allows for the attachment of the Psion GPRS/GSM internal antenna within the RX2100.

Model Range

The reader is available in two models, each model offered as either a short range or long range version. Each model operates with a different air interface protocol. The readers can be ordered using the part numbers listed below:

L-Series	
L-RX2100	: Short Range End-Cap
L-RX2100-LR	: Long Range End-Cap
W-Series	
W-RX2100	: Short Range End-Cap
W-RX2100-LR	: Long Range End-Cap

Air Interface Protocols

'L-Series' and 'W-Series' refer to 2 different proprietary communication protocols used between Wavetrend tags and readers. The L-Series reader must be used with Wavetrend L-Series tags. The W-Series reader must be used with Wavetrend W-Series tags. Both types of reader can operate on the same reader network infrastructure.

Specifications

Environmental <ul style="list-style-type: none"> Operating temperature Storage temperature Humidity 	<ul style="list-style-type: none"> : -40°C to +75°C : -40°C to +85°C : 5% to 90% (non condensing)
Physical <ul style="list-style-type: none"> Size (excl. ext. antenna) Weight (unit) Colour Material Connections 	<ul style="list-style-type: none"> : 100mm x 60mm x 30mm (approx) : 65 grams : Black : ABS : Molex Psion USB : SMC connector (RX2100-LR only)
Radio Frequency* <ul style="list-style-type: none"> Receive Frequency Modulation Stability Sensitivity RF Input (RX2100-LR only) 	<ul style="list-style-type: none"> : 433.92 MHz : ASK : 20ppm over -10°C to +60°C : -70 dBm (preliminary) : 50 Ohm SMC (female)
Electrical <ul style="list-style-type: none"> Supply Voltage Max. current consumption ESD protection 	<ul style="list-style-type: none"> : ± 5Vdc : <15mA : 2kV Human Body Model
Supplied Accessories <ul style="list-style-type: none"> External Antenna (RX2100-LR only) 	<ul style="list-style-type: none"> : 433 Mhz ¼ Wave Whip

Please Note:

Use of any other external antenna on the RX2100-LR that is not expressly approved by Wavetrend may invalidate the certified approvals of the product and void the user's authority to operate the product.

Read Range

The read range of the RX2100 is achieved through use of an internal antenna while the ultra-long read range of the RX2100-LR is achieved through use of the external antenna supplied with the reader.

*Read ranges are affected by environmental conditions and site configurations and may not match those stated in this sheet. Read ranges will generally be greater outdoors than indoors.

It is strongly recommended that the services of a properly trained engineer from a Wavetrend Accredited Partner or Wavetrend Professional Services are employed to determine if the RX2100 will provide a suitable level of performance and to select the correct version for the intended application.



Ordering & Further Information

For more information on the RX2100 Psion End-Cap Reader or for purchase information please email Wavetrend's Sales team:

sales@wavetrend.net

For more information on Wavetrend®, please visit our website.

IP Information

Wavetrend and the Wavetrend logo are either registered trademarks or trademarks of Wavetrend Technologies Limited in the United States and/or other countries. All other trademarks are the property of their respective owners.

The product(s) described in this document are protected by various patents held by Wavetrend. Refer to the URL www.wavetrend.net/IPR for information on all patents and trademarks held, and for Wavetrend's Policy on Intellectual Property Rights.