Utilising proprietary LPRS easyRadio technology operating in the 433MHz or 868MHz (UK & Europe) & 915MHz (US) Industrial Scientific & Medical (ISM) bands the eRA USB 'dongle' provides a simple 'wireless bridge' between any host devices that support USB serial communications such as a PC or Raspberry Pi or Beaglebone Black.

These devices provide considerably greater range and less power consumption than similar WiFi or Bluetooth dongles operating in the overcrowded 2.4GHz bands.

Frequency, bandwidth, power output and data rate can (optionally) be configured to allow multiple devices to communicate free from interference from each other and any other RF devices.

Features	Benefits
LPRS easyRadio RF Transceiver technology	Bi-directional link, no RF protocol software required
USB Connection	'Plug & Play' operation, appears as a 'Com' port
Low current consumption	Can be powered directly from Raspberry Pi
Integral SMA Antenna connector	Allows use of extension for optimal antenna position
FTDI FT232 USB IC	Linux & Windows drivers available (see below)
Transmit & Receive LEDs	Diagnostics
Configurable RF parameters (optional)	Fine tune for optimum performance
Up to 180 Bytes per packet	Ideal for 'Sense & Control' applications
Built-in Temperature Sensor	Usable by host program

Host devices can send and receive (half duplex) up to 180 Bytes of data per packet that will be seamlessly delivered and presented to other hosts within range. There is no need for any complicated 'bit balancing' or elaborate coding schemes.

Easy: Data In and Data Out !

Specifications

Supply: +5V ± 5%, Temperature 20°C

Parameter	Min	Typical /Default	Max	Units	Notes
Supply Voltage		5V		Volts	Powered by USB connection
Supply Current		25		mA	Receive (Idle state)
		35		mA	Transmit
USB Host Data Rate	2.4	19.2	115.2	Kbps	Configurable - See Note 1 below
Packet Size	1		180	Bytes	Auto detect end of packet
Frequency (Default)		434		MHz	Europe - Configurable
		868		MHz	Europe - Configurable
		915		MHz	USA - Configurable
Receive Sensitivity		-107	-117	dBm	Configurable
RF Output Power	-1	+5	+7	dBm	Configurable
Antenna		50		Ω	Via SMA Connector
Range		200		m	Dependant on conditions/terrain
Operating Temperature	-40	20	85	°C	
Mechanical					
Size		80 x 22 x 10		mm	Including connectors, excluding antenna
Weight		11		g	Without antenna
USB Connector		USB Type A Plug			Cable not supplied

Specifications are subject to change without notification

Notes

1) Parameters can be configured using 'easyRadio Companion' software available from: www.lprs.co.uk
2) Please read this datasheet in conjunction with the easyRadio Advanced datasheet available from www.lprs.co.uk
3) The device is supplied with either a matching 434MHz or a 868/915 MHz antenna

FTDI offers royalty-free virtual com port drivers for the following operating systems:

    Windows 98, 98SE, ME, 2000, Server 2003, XP and Server 2008
    Windows 7 32,64-bit
    Windows XP and XP 64-bit
    Windows Vista and Vista 64-bit
    Windows XP Embedded Windows CE 4.2, 5.0 and 6.0
    Mac OS 8/9, OS-X
    Linux 2.4 and greater

Product Order Codes

Name	Description	Frequency	Order Code
eRA400 USB Dongle	UK/European Version	433MHz	eRA-400USB-EK
eRA900 USB Dongle	Europe/US Version	868/915MHz	eRA-900USB-EK
Antenna	UK & Europe	433MHz	ANTSR433
Antenna	Europe & USA	868/915MHz	ANTST900

Acknowledgements

Raspberry Pi is a trademark of the Raspberry Pi Foundation.

Terms and Conditions of Use

Low Power Radio Solutions Ltd has an on-going policy to improve the performance and reliability of their products; we therefore reserve the right to make changes without notice. The information contained in this data sheet is believed to be accurate however we do not assume any responsibility for errors or any liability arising from the application or use of any product or circuit described herein. This data sheet neither states nor implies warranty of any kind, including fitness for any particular application.

easyRadio modules are a component part of an end system product and should be treated as such. Testing to fitness is the sole responsibility of the manufacturer of the device into which easyRadio products are fitted, and is expected BEFORE deployment into the field.

Any liability from defect or malfunction is limited to the replacement of product ONLY, and does not include labour or other incurred corrective expenses.

Using or continuing to use these devices hereby binds the user to these terms.