

R-Idge

6LoWPAN USB Router



Datasheet
Revision 1.0

6LoWPAN USB router R-Ildge

DESCRIPTION

R-Ildge is a powerful 6LoWPAN USB router, easy to use and to configure.

Plug R-Ildge to your computer and you will enter into the world of the Wireless Sensor Network.

You can get a state-of-the-art Wireless Sensor Network solution by combining R-Ildge with the development board R-Mote Device. Together, they form an ultimate combination for a highly-capable network.

Thanks to an upgradable firmware, you have access to new features while keeping the same hardware.

FEATURES

SOFTWARE SPECIFICATION

Standards based

- ▶ **IEEE 802.15.4** Low Power Wireless Protocol
- ▶ **6LoWPAN** IPv6 Internet Protocol

Configuration required

- ▶ **Operating system** Linux 2.6 and above
- ▶ **USB** CDC-ACM, RNDIS

HARDWARE SPECIFICATION

General

- ▶ **Microcontroller** Texas Instruments CC2531
- ▶ **Frequency** 32 MHz
- ▶ **Flash** 128 K

Interfaces

- ▶ **USB** Plug A-type connector
- ▶ **Push Button** 2.5mm diameter
- ▶ **LED Indicators** 2 colors (green, red)

Antenna

- ▶ **Type** Meandered Inverted F
- ▶ **Indoor Range** 30m
- ▶ **Outdoor Range** 100m

Physical

- ▶ **Dimension** 57 x 16 x 4,5 mm
- ▶ **Weight** 20 g
- ▶ **Operating Conditions** -20°C to +60°C

6LoWPAN USB router R-IEdge

A simple USB Interface For a practical connection

R-IEdge is easy to use. Plug R-IEdge to your computer and it will be viewed by the Operating System as a network device. Like any standard network interface, R-IEdge is fully configurable.

Of small size but powerful, R-IEdge offers a seamless leading-edge 802.15.4 2.4 GHz connectivity. You will soon notice its efficiency and easy configurability.



Communicate with all 6LoWPAN sensors IPv6-friendly

The USB Router R-IEdge is entirely compatible with the IPv6 protocol. Based on 6LoWPAN and IEEE 802.15.4 standard, R-IEdge can interact with any 6LoWPAN sensors with ease.

Combine it with the development board R-Mote Device and you have the ultimate Wireless Sensor Network.

R-IEdge can work with various IPv6 routing protocols, such as RADV, AODV and RPL.

If you want to use the RPL protocol within your WSN, a Linux RPL Edge Router daemon is provided.

Furthermore, R-IEdge supports HTTP and CoAP at the application level.



Secured data traffic Network redundancy and Data privacy

Network redundancy and data privacy are important. Whether you plan to use ten or thousands sensors, R-IEdge allows you to build a secured scalable network. Share the traffic between two or as many R-IEdge as you need. Build redundancy and load balancing for your network.

R-IEdge can benefit the embedded AES "Advanced Encryption Standard" engine to support all security suites for 802.15.4.



Firmware Upgrade Get the latest releases

Technology innovation is evolving at a rapid pace. The USB router R-IEdge was designed to be upgradable.



6LoWPAN USB router **R-Idge**

REVISION HISTORY

Revision Number	Date	Description
1.0	15/04/2012	Initial Version