IRIS USB Radio modem

- **Bi-directional radio data-communication module**
  High range, with small amount of data!
- **High level of security**
  Coding with acknowledgement!
- **Intelligent radio modem**
  You can activate predefined events and activities via the configuration software
- **High range**
  Up to 1500 meters, depending on the topographical situation!
- **Programmable parameters**
  With the software delivered, the different parameters can be modified at any time without problems!
- **Many fields of application**
  M2M, ZFA, telecontrol systems, remote monitoring systems etc.!
- **Low-cost alternative to cable**
  Communication cables are expensive; laying them involves extensive outlay and disturbs on-going operation!
- **Mobile network**
  Determined through the IRIS protocol and the Rooting function!

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TRL
Funksysteme GmbH

Details

The simplest application is the transparent radio modem. The IRIS unit receives the data from an external source and sends it to another IRIS unit that's relays it to another external system. None of the IRIS unit tries to interpret the data. This is useful for replacing serial cables and for sending data over long distances, more than 1000 meters with free line of sight.

For more advanced use there are a number of possibilities. The IRIS unit can compare text received via both the radio and the serial interface with predefined strings. Wildcards can be used to replace characters in the text string. This makes the interpretation of the received text more flexible. After the interpretation the unit can take actions. There are a variety of actions. The IRIS unit has internal functions such as timers, counters, logical flags and various parameters. This makes it possible to program the units to do much more than just relaying the data.

The unit can create and send both fixed text string and strings with parameters. The parameters can for example contain the unit's id or alias, the received text, status of logical flags, RSSI and values of timers and counters. The created text messages can be sent as commands to other units or as information to the user. There is a special command that changes the values of the logical flags and outputs on other units.

To enhance the quality of the radio communication IRIS acknowledges every data package sent. If the transmitting unit doesn't get a receipt that the package was received correctly it tries again for a predefined number of times.

IRIS Starter-Kit

The IRIS Starter-Kit makes a rapid and especially simple entry into the world of radio modules possible, which can also be simultaneously used as an evaluation board. Among other things, range tests can be carried out with this or data records sent between different units. The complete package consists of two kits, two IRIS radio modules, two serial data cables, two main cables, as well as an extensive documentation and software on CD-ROM.

You can find further details about IRIS on **www.irissystem.de**

The IRIS products are developed for monitoring and controlling other systems. IRIS units usually work in networks communicating with each other via radio. An IRIS network can consist of units of different types and usually there is at least one unit with an interface that enables it to communicate with the end-user. It could be for example a serial port, a GSM/GPRS module or an internet connection and a database.

Basic technical data:

Transmission speed	4.800 bps (in the air)
Range in air	Up to 1500 meters
Sensitivity	-112 dBm (@ 50 Ohm)
Programmable serial interface parameters	Baudrate, number of bits, parity and stop bits, predefined text strings and many more
Channel pattern	25 kHz
Voltage	12 – 24 VDC (2.1mm DC socket)
Current consumption	80 mA
Current cunsumption in RX/TX	90 – 100 mA
Size (without antenna)	70 x 95 x 30mm
Modulation type	FSK
Temperature range	-10°C bis +55°C

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