

# IRIS Starter kit



## IRIS System

An IRIS system consists of a group of IRIS units arranged in a tree structure connected to each other by radio.

The top unit is the concentrator in the system and the connection to end-user via, for example, a serial interface, a web-module or a GSM-module. The other units in the system are connected to various electronic equipments or acts as repeaters to enable communication over longer distances.

There are different types of IRIS-units with different functions. Digital and analogue inputs, digital outputs, serial interface, timers and counters are examples of some of the functions available.

It is possible to configure the IRIS-units either before setting up the system on location or after using the radio link or the serial interface.



## IRIS Starter kit

The IRIS Starter kit is developed to be an introduction to IRIS-systems and a quick problem solver for smaller projects.

There are two IRIS Starter kit units in each kit. A Starter kit unit is an IRIS Evaluation board with an IRIS Base. The IRIS Evaluation board gives the user access to IRIS Base functions such as digital and analogue inputs, digital outputs and serial communication, both RS-232 and RS-485.

The Starter kit units are easy to configure by using the configuration software, available on IRIS homepage and on the CD that is included in the Starter kit.



## Technical data:

### Radio:

|                 |  |
|-----------------|--|
| Frequency       | 433.050 – 434.775 MHz; 439.700 – 439.975 MHz |
| Power           | 10 mW  |
| Sensitivity     | -112dBm                                      |
| Modulation type | FSK  |
| Bit rate        | 4800 Bits/s                                  |
| Range           | > 1 km (in line of sight)                    |

### Serial communication:

|          |  |
|----------|--|
| Protocol | RS-232, RS-485 (Jumpers on the evaluation board) |
| Speed    | 300-115200 Baud                                  |
| Databits | 7, 8   |
| Stopbits | 1, 2   |
| Parity   | None, even or odd                                |

### I/O:

|                           |                            |
|---------------------------|----------------------------|
| Digital / analogue inputs | 6                          |
| - Resolution              | 10 bits                    |
| - Range                   | 0 - 30 VDC                 |
| - Input leakage           | max 5 $\mu$ A              |
| Digital outputs           | 4<br>( $V_{max} = 30$ VDC) |
| Max output current        | 100 mA (resistive)         |

### Power supply:

|  |                               |
|--|-------------------------------|
| Voltage  | 12 - 24 VDC                   |
| Power consumption (no active input or output pins) | 60 mA @ 12 VDC (transmitting) |
| Maximal power consumption                          | 150 mA @ 12 VDC               |

### Miscellaneous:

|      |            |
|------|------------|
| Size | 100x150 mm |
|------|------------|

**For more information:** [www.irisnetwork.se](http://www.irisnetwork.se), [info@irisnetwork.se](mailto:info@irisnetwork.se)