

## *Operational / Product Description / Technical Description*

### **RAD24**

#### **Overview**

The RAD24 module (28 X 16mm) is a general purpose radio transceiver with a serial USART interface. The module is intended to be coupled with a microcontroller. The module is available with an on-board chip antenna and external antennas.

The communication protocol has been designed for flexibility and has communication models for Request/Response and broadcast scenarios as well as built-in support for sleep/wake, binding, identification and diagnostics.

#### **Radio**

The Radio operates in the 2.4GHz band and utilises direct sequence spread spectrum. The modulation format is Offset Quadrature Phase Shift Keying (O-QPSK) with half-sine chip shaping. This is equivalent to MSK (Minimum Shift Keying) modulation.

16 channels operate over the 2.400 to 2.485 band.

Output power is 0db.

The module uses the Chipcon CC2430 radio transceiver chip and so leverages the 802.15.4 compliance of this chip but uses a non 802.15.4 compliant sync word and MAC Protocol Data Unit (MPDU) structure.

#### **Power Supply**

Designed to operate over 2.1 to 3.6 volts dc allowing for battery operation.