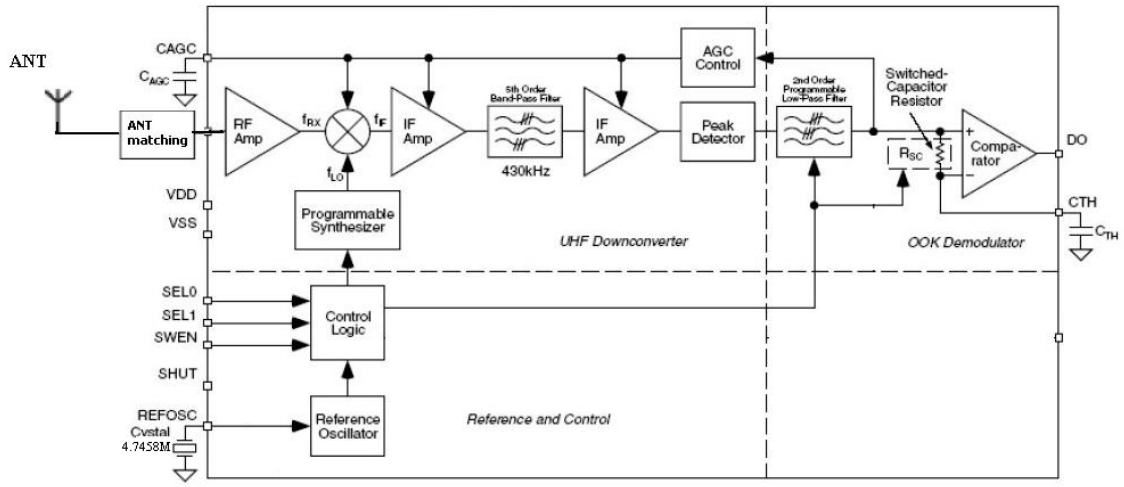
# Technical Description

| Description | Function | Component |
|---|---|---|
| 315 MHz Receive module | 1, 315MHz ASK RF receiver and demodulation.<br>2, RF Module with crystal 4.7458MHz.<br>3, Receive current 5.7mA & sensitivity -107dbm | 315 MHz RX_MOD |
| CPU | The function signal decodes | U2 |
| Fan Driver | The on/off function of fan controls | Q2 |
| 5V Regulator | Change the 12V dc power to 5V dc | U3 |
| Power Supply | AC-DC Switching power supply | Power supply |

Antenna Used: internal wire antenna




It is consisted with four sections: Ant matching net working, UHF downconverter, Resference and control, and OOK demodulator. Also shown in the figure are two capacitors (CTH, CAGC) and one timing component, usually a crystal. With the exception of a supply decoupling capacitor, and antenna impedance matching network, these are the only external components needed to assemble a complete UHF receiver.

For optimal performance is highly recommended that the MICRF002 is impedance matched to the antenna, the matching network will add an additional two or three components.

Four control inputs are shown in the block diagram: SEL0, SEL1, SWEN, and SHUT. Using these logic inputs, the user can control the operating mode and selectable features of the IC. These inputs are CMOS compatible, and are internally pulled-up. IF Band-pass Filter Roll-off response of the IF Filter is 5th order, while the demodulator data filter exhibits a 2nd order response. There needs a local frequency generator for any super-heterodyne receiver. In this circuit it is based on PLL type circuit inside and a crystal 4.7458 MHz(special for 315 MHz) outside.