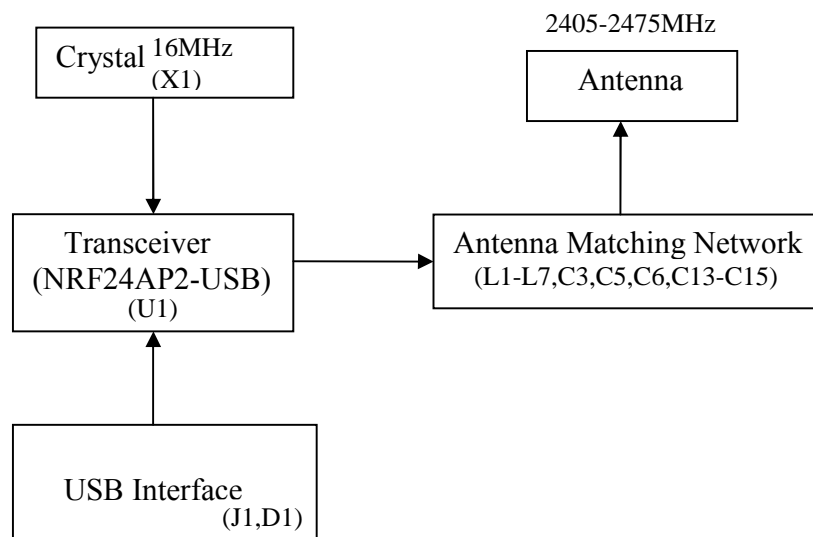


AD182 Block



2.2 Block diagram

nRF24AP2 is composed of five main blocks as shown in [Figure 2](#). The blocks indicate the interface, power management, the ANT protocol engine, on-chip oscillators and the RF transceiver.

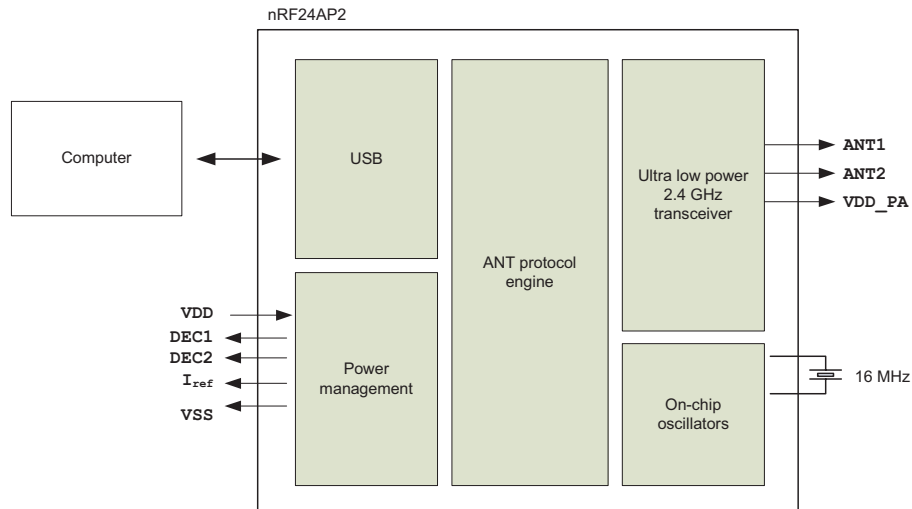


Figure 2. Block diagram of nRF24AP2 solution

To find more information about each block in the diagram, see [Table 1](#).

Name	Reference
RF transceiver	Chapter 3 on page 12
ANT protocol engine	Chapter 4 on page 13
USB interfaces	Chapter 5 on page 21
On-chip oscillators	Chapter 6 on page 30
Power management	Chapter 8 on page 33

Table 1. Block diagram cross references

3 RF transceiver

All transceiver operations are controlled solely by the ANT protocol stack. Configuration of the ANT protocol stack occurs through a serial interface by issuing ANT commands to nRF24AP2-USB.

3.1 Features

Features of the RF transceiver include:

- General
 - Worldwide 2.4 GHz ISM band operation
 - Common antenna interface in transmit and receive
 - GFSK modulation
 - 1 Mbps on air data rate
- Transmitter
 - Programmable output power: 0, -6, -12 or -18 dBm
- Receiver
 - Integrated channel filters
 - -85 dBm sensitivity
- RF Synthesizer
 - Fully integrated synthesizer
 - 1 MHz frequency programming resolution
 - 78 RF channels in the 2.4 GHz ISM band
 - Accepts low cost ± 50 ppm 16 MHz crystal
 - 1 MHz non-overlapping channel spacing

3.2 Block diagram

[Figure 4. on page 12](#) shows a block diagram of the RF transceiver in nRF24AP2-USB.

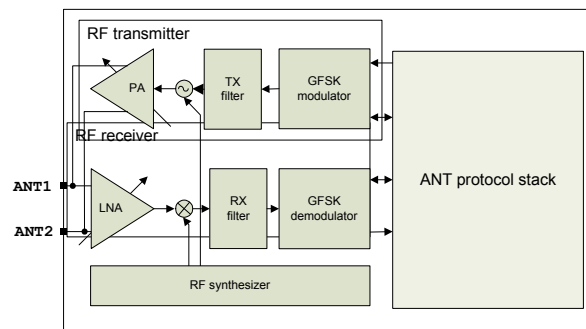


Figure 4. Internal circuitry of RF transceiver relative to ANT