

## **The simple principle of Sense-1820 Scanner**

Being set by the MCU, PLL send out a single carrier wave between 902~928MHz. The single carrier wave is transmitted by LNA and is amplified by PA. Then it passes by a circulator (1->2). At last, it is sending out by an antenna (ANT).

The single carrier wave that was sent out are received by a ending receiver, The ending receiver modulate the single carrier wave using ASK(Amplitude shifted keying) and send it back to ANT through the original transmitting path.

The echo signal received from ANT is transmit into circulator (2->3), come into Zero-IF mixer. Then the echo signal is demodulated into baseband signal. The baseband signal is a ending receiver's data which frequency is not great than 1 MHz. After that, the baseband signal is amplified to enough level. Then it passes by a compare circuit, generating a TTL level signal. The TTL level signal is processed by MCU systems.

The MCU systems get the tag's data from demodulation circuit and do some processes or operations, communicating with PC by RS-232 or RS-485 interface.