

System Description

1. System Module Block Diagram

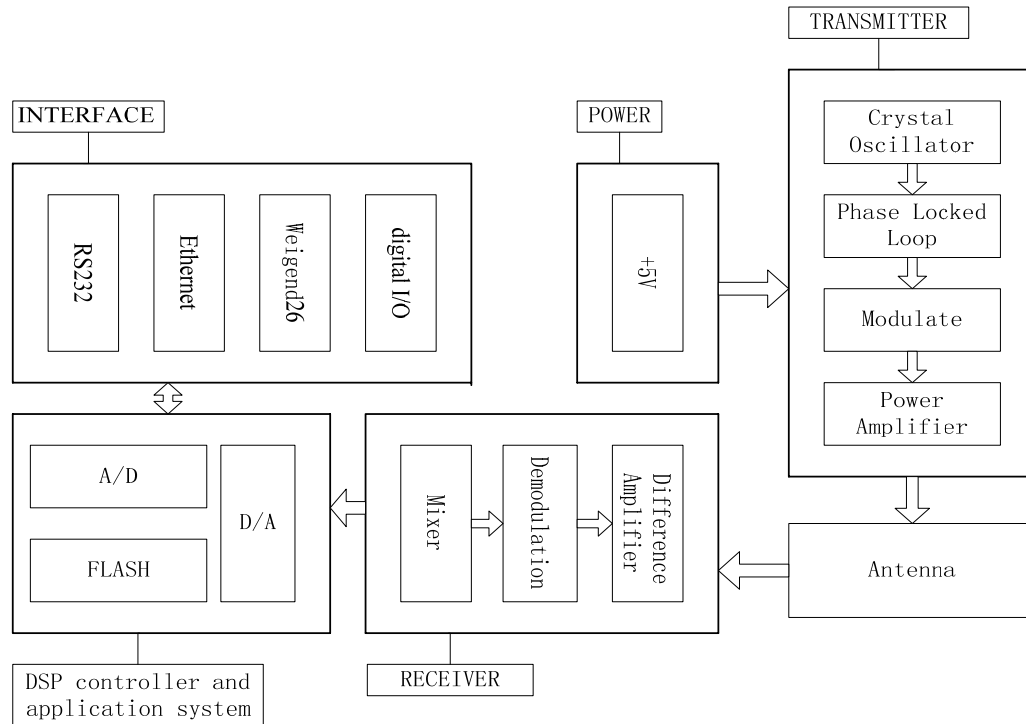


Diagram1 System Module Block Diagram

XCRF-502E Reader, together with the antennas, tags and a PC (personal computer), forms a complete application environment for the Reader, in which under the control of the PC, the baseband unit sends instructions to the RF unit, by which relevant instructions will be send according to the types of the tags. After receiving the instructions, the tags will feedback relevant information; after being amplified and shaped by the receiving circuit, the information will be sent to the baseband unit for decoding; and the decoded data will be sent to the PC via the communication port of the baseband unit.

The transmission part of the RF unit is in charge of generating, modulating, amplifying and transmitting carrier waves. Its receiving part is in charge of demodulation, amplification and comparison.

The baseband unit is in charge of coding and decoding the data of the tags and communication with the PC.

2. Reader Baseband Module Block Diagram

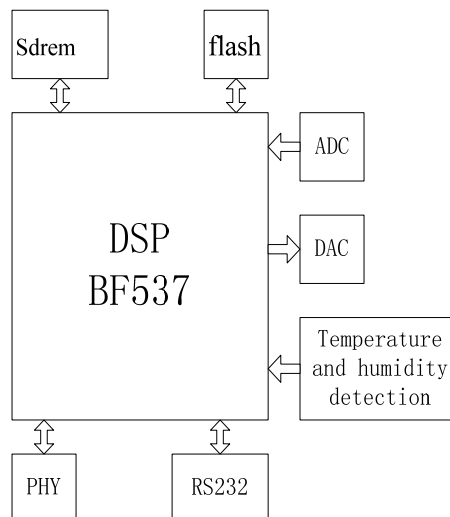


Diagram2 Reader Baseband Module Block Diagram

- ✧ Receive the control instructions and data sent by the PC via the RS-232 or network port, or send data and implementation results to the PC;
- ✧ Send tag control signals to the RF unit;
- ✧ Receive the tag data signals that the RF unit feedbacks for decoding and check;
- ✧ Modify and query the configuration information of the

Reader by the instructions from the PC.

3. Reader RF Module Block Diagram

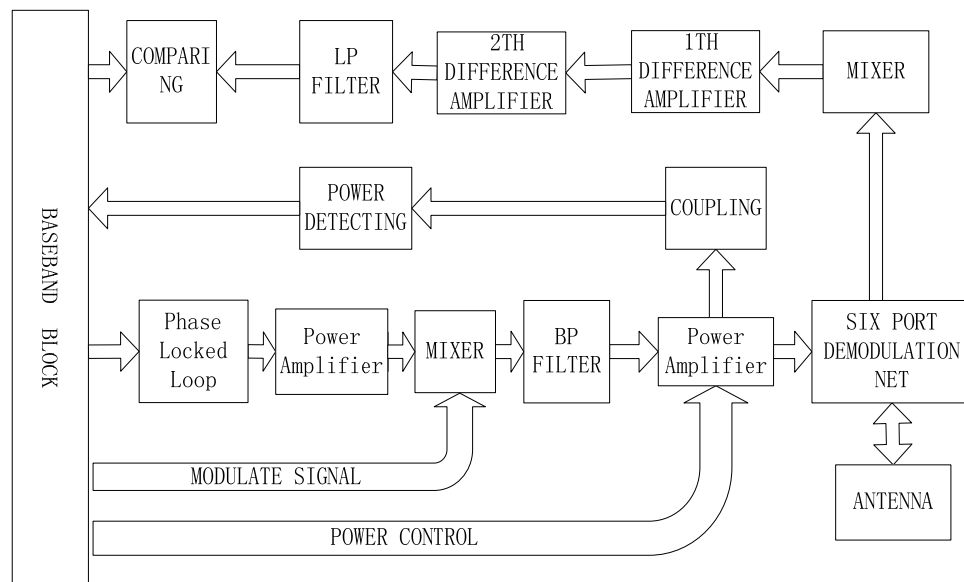


Diagram3 Core board Module block diagram

- ✧ Receive the tag signals from the baseband unit and modulate microwaves, amplify the modulated microwaves and transmit them through a specified antenna with an electronic switch;
- ✧ Receive the signals feedback by the tags for compared output after modulation and amplification;
- ✧ Adjust the output powers and frequencies of the antenna ports according to the instructions from the baseband unit.

4. Power Module Block Diagram

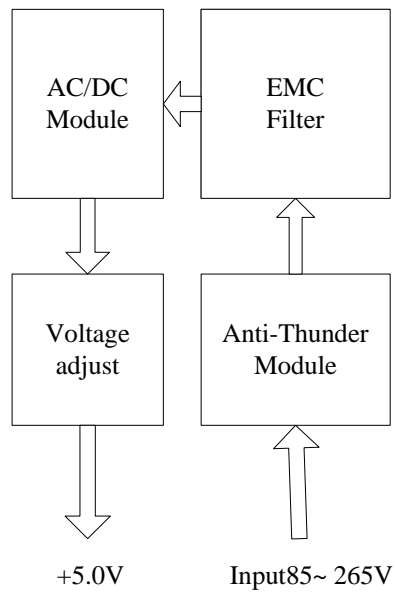


Diagram4 Power Module Block Diagram

- ✧ Transform AC input voltage into DC output voltage, to provide DC power to the Reader.