

trademark:amroad model:RF-221

Description of Operation

The RFID part is an ISO 14443A RFID reader/writer, It's operating in the 13.56MHz ISM (Industrial Scientific Medicine) band for ISO 14443A RFID system.

The circuit is comprised of a Micro Controller unit(MCU), 13.56MHz RF Transceiver circuit and a **LOOP Antenna**.

Micro Controller Unit(MCU)

The Control circuit controls all of RFID ASIC signals.

Control circuit outputs the command data which is needed to work the Transceiver circuit. When the response data from the RFID ASIC circuit, it will proceed recognition and other procedure.

RF Transceiver circuit (RFID ASIC).

The signal of 13.56MHz is supplied from crystal oscillator.

The Magnetic field signal is generated by the Transceiver circuit.

This ASK modulation signal is supplied through the Impedance transformer and the Antenna matching circuit to the external **LOOP Antenna**.

The feedback signal sent from the tag is received at the **LOOP Antenna** and is input to The H.P.F. The signal is demodulated by the RF ASIC .

LOOP Antenna

The external **LOOP Antenna** is formed with the coil, and supplies the electric power and the transmission signal to the tag by generating the flux of magnetic field

Antenna Specification

RFID		
RFID Antenna Specification		
Frequency Range	13.56 MHz	(Chinese/English)
Antenna Brand	SUNION	(Chinese/English)

name		
Antenna Model	ANT-AR-5040-85MM	(Chinese/English)
Name		
Antenna type	Loop Antenna	(Chinese/English)
Modification:	ASK (Transmitter) and FSK(Receiver)	(Chinese/English)
GAIN	0.5dBi	

Antenna	Mode	Frequency/Band	Tune-up tolerance (dBm)
			Max
RFID_Ant	RFID	13.56MHz	-29