

The whole device is operated by the single pushbutton.

First press of the button initiates operation of the device (accompanied with visual and sound indications).

Each subsequent press activates reading sequence pattern, as described below:

RFID module (13.56MHz) is activated first for 200ms only.

If within this time tag is present near the antenna, the system returns to standby mode, otherwise barcode scanner is being activated for a maximum of 4 second.

At the expiration of 4.5 seconds from the button activation, reading sequence is terminated and system revert to standby mode.

In case, the button is pressed continuously for more than 6 seconds the system shut off itself (accompanied with sound confirmation).

The electronic circuit shares the ground system among the modules integrated into the system.

RFID antenna however is isolated via balun transformer located right before the antenna output terminal on the RFID module.

Antenna itself consist of 2 loops made on 1.6mm FR4 with 1oz copper clad. Antenna dimension: 45x25mm.

Additionally, matching circuit (PI network configuration) is present on the board to allow matching the antenna to desired frequency of operation.