

4. Specification

4.1 CPU

Type	uPD789860 (8bit) Manufacturer: NEC Corporation
ROM	4K bytes
RAM	128 bytes
EEPROM	16 bytes
Clock frequency	5MHz
Clock frequency generation	Ceramic resonator
Package	20pin SOP

4.2 RF block

Carrier frequency	315.1MHz
Frequency generation	Crystal resonator
Modulation	FSK
Bit transmission rate	1000bps or 2000bps
Bandwidth	120KHz
RF output power (field strength)	10.8uW (6000 μ V/m) at3m max

4.3 Others

Dimension	55.7mm \times 33.8mm \times 11.8mm
Weight	18.0g
Battery	Lithium cell (CR2032) Manufacturer: Maxell or Panasonic
Operation Voltage	DC 3V, 220mAh
Operation temperature	-20 ~ +60

5. Features

5.1 Transmission frame

The transmission begins immediately in case of LOCK or UNLOCK button is pressed.

The transmission frame consists of the synchronous frame and the data frame. The synchronous frame has 81 synchronous codes that it will be used for the receiver to wake up. The data frame consists of 28-bit length identification code, 16-bit security code and function code. 1600 million different identification codes are available. The security code is always changed in case of any of the buttons is pressed. The transmission time is typically 370 milliseconds.

5.2 Battery saving

To prevent the battery exhaustion, the microcomputer of the transmitter is usually inactive. When the button will be pressed, the microcomputer wakes up immediately and judges which button is pressing. Then the microcomputer constructs the transmission frame and radiates it from the antenna. After transmitting, the microcomputer switches stand-by mode by itself.