

## **Touch screen based remote controlled Robot with wireless Video camera**

The main aim of this project is to build a RF controlled wireless robot with video coverage. The robot is controlled by using touch screen. The device makes use of another wireless transmitter to transmit the audio and video data. This wireless transmitter is termed as AV transmitter. At receiver end, these real time images can be seen on TV. It is a very low cost surveillance system used to monitor sensitive areas.

The objectives of the device are achieved by employing two microcontroller-based motherboards. One of the controller-based motherboard is interfaced with the output modules available in the project. The input module is formed by the touch screen and is interfaced to the other micro controller board. The communication between the two boards is done using the RF transmitter and receiver based wireless transmission. This system also checks or light intensity and Switches ON high power LED if the light intensity is not enough for video coverage.

The motion of the robot and ON/OFF status of the camera can be automatically controlled by the user with the help of touch screen. The microcontroller board present at the robot receives the input from the transmitter via receiver and performs the necessary actions. To control the direction of the robot the controller makes use of two DC motors interfaced to it.

### **The objectives of the project include:**

1. Real time monitoring.
2. Forms the surveillance system for combing areas.
3. Low power consumption.
4. ROBOT controlling with the help of touch screen.

**The project focuses on the following advancements:**

1. RF based communication.
2. Interfacing between motors and controllers.
3. Characteristics of AV transmitter.
4. Interfacing between touch screen and controller.
5. Audio and video transmission mechanisms.
6. Embedded C programming.
7. PCB designing.

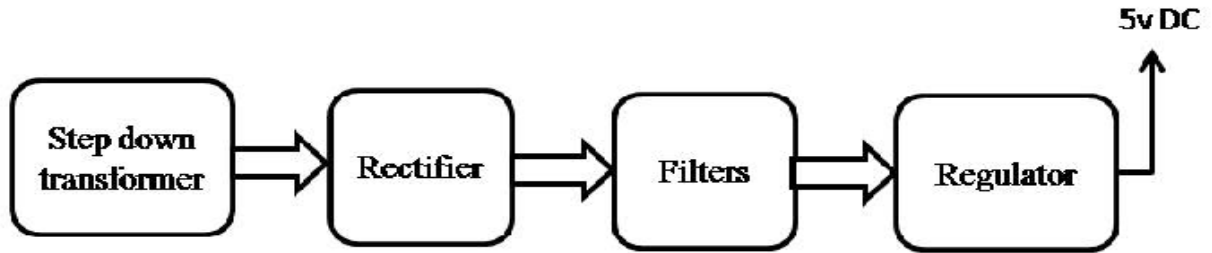
**The major building blocks of this project are:**

1. Regulated Power Supply.
2. RF transmitter and RF receiver.
3. Touch screen.
4. LDR.
5. AV transmitter and AV receiver.
6. High power LED with driver.
7. Two Micro Controllers boards.
8. DC Motors with driver.
9. Crystal oscillator.
10. AV Camera.
11. LED Indicators.

**Software's used:**

1. PIC-C compiler for Embedded C programming.
2. PIC kit 2 programmer for dumping code into Micro controller.
3. Express SCH for Circuit design.
4. Proteus for hardware simulation.

**Regulated Power Supply:**

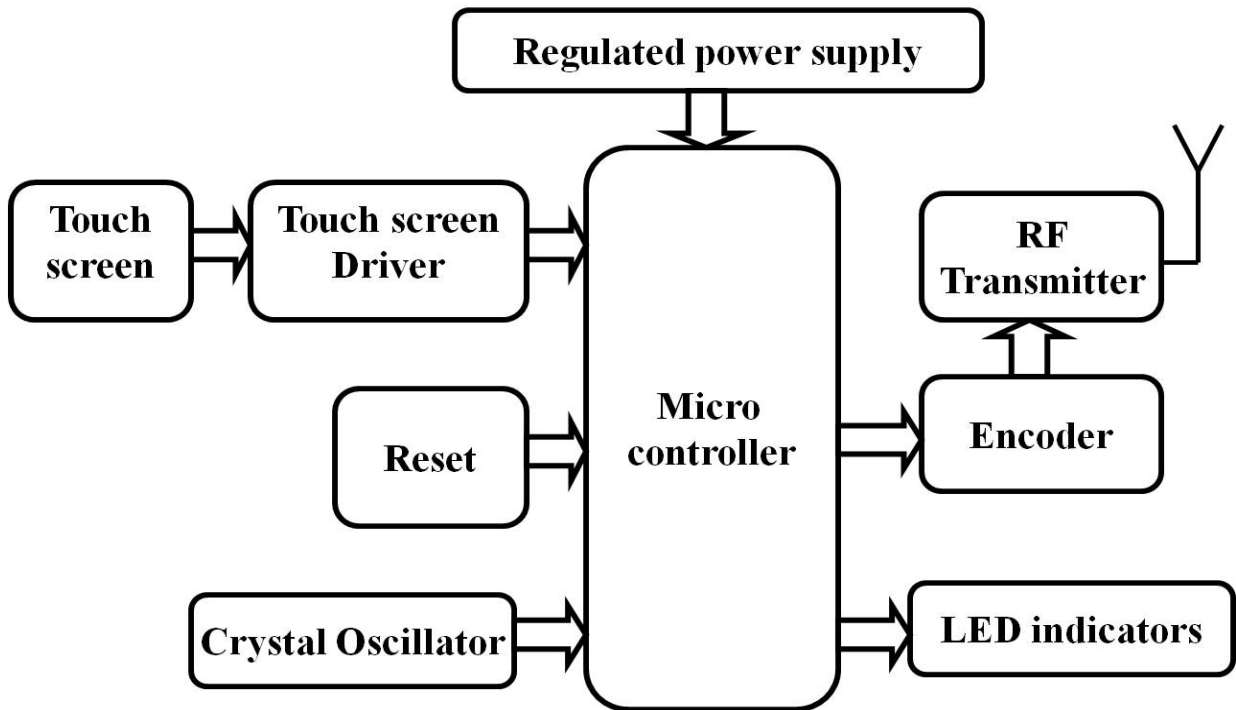


**Block diagram:**



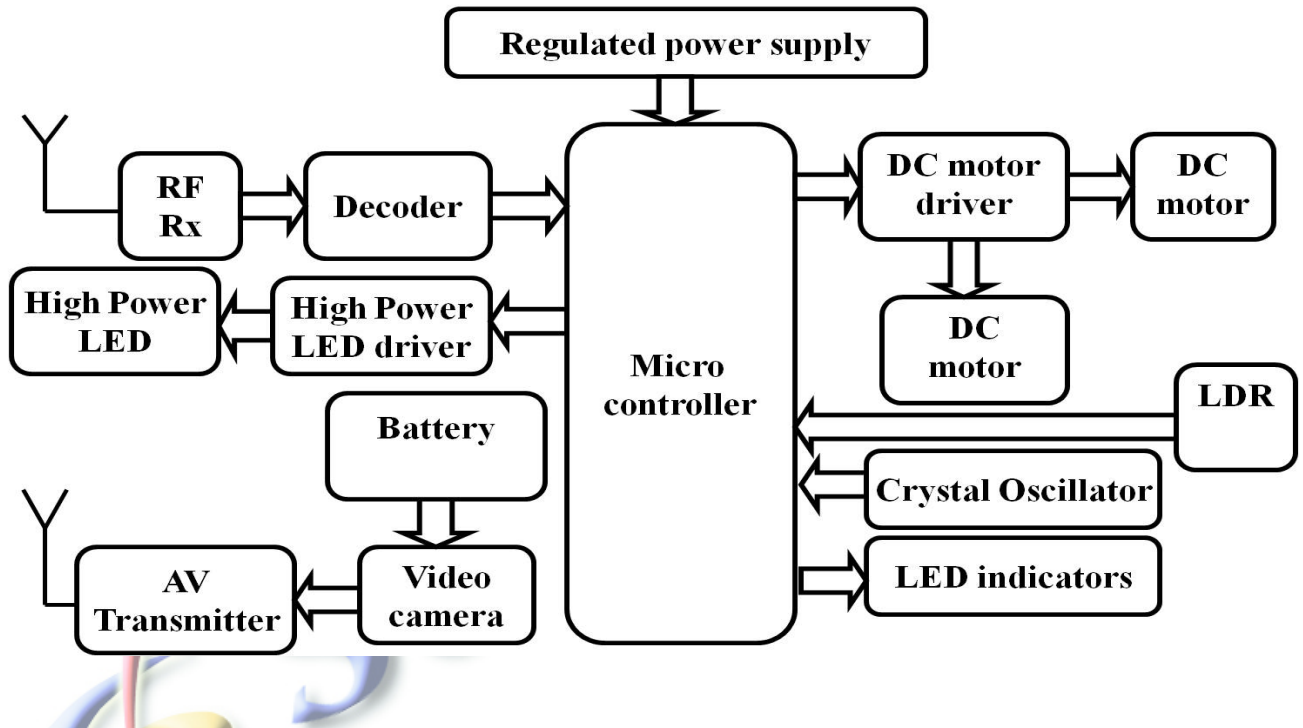
# Touch screen based remote controlled Robot with wireless video camera

## 1. Transmitter



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### 2. Receiver



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### 3. At TV

