

# A Review On Iot Based Smart Security System Using Raspberry Pi

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## ABSTRACT

Communication primarily is that the transfer of no matter factor or exchanging of knowledge, so the Iot is naught however the transferring or exchanging of something is many alternative things. the communication primarily transferring of useable knowledge and Iot the communication of something with the other factor, here is AN example a camera in a very area to observe the motion.

This is for security notification system mistreatment Iot if there square measure one thing or somebody within the camera field, so it helps to observe and that send notification to your good phone mistreatment camera module and raspberry pi. The notification comes with or within the kind of video, text and still image which will be read in ios or humanoid. once the motion detects then it sends videos and photos to a cloud server, the raspberry pi is use once the cloud isn't offered and also the knowledge is keep regionally on that and sent once the association resumes. These form of benefits create this application ideal

for watching homes in absence. This pretty application is therefore easy, it utilizes free services and software package like pushbullet, ffmpeg, and picamera.

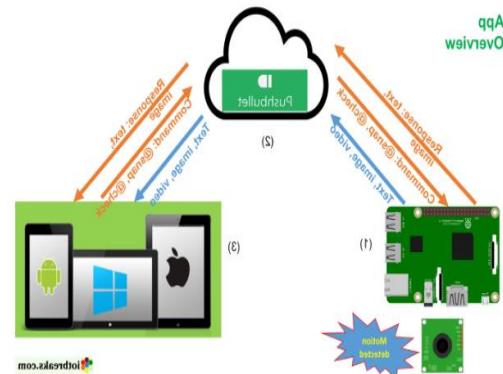
Keyword: Camera module and raspberry pi, pushbullet, Mobile/Web.

## 1.INTRODUCTION

Now a Days watching facilities square measure necessary and helpful for our way of life, as a result of it's important for USA to have faith in our security. This developed system, that is organized with extremely secure cameras and integrated net server, Wi-Fi devices that square measure connected to web. within the world of Iot, after we square measure with the technologies to revolutionize our way of life, therefore it's an excellent plan to develop and style a system which will be controlled and monitored from anyplace. There square measure several alternative costly cameras and system for security however here we tend to square measure with the concept to create a coffee price easy Raspberry pi primarily based unwelcome person Alert System by causing notifications within the kind of still pictures, text and videos. In this project , we'll build a wise Security System mistreatment Picamera. this

technique are in a position observe the presence of unwelcome person then quickly send the image or notification to alert the user. The notification include photos of the unwelcome person, captured by pi camera. Here the raspberry pi is employed for dominant the protection system.

**2.WORKING**



**APPLICATION STRUCTURE**

There square measure three actors play along to create up the appliance. Raspberry pi & camera module because the knowledge supply that ceaselessly scan for motion and recording video at identical time, Pushbullet because the message-broker to send messages (videos, text, still image) back and forth between mobile/web and raspberry pi . mobile/web acts as “notifeye” WHO receives the still image and video of motion. The communication is 2 ways that tho'. It implies that the command is send from mobile or net to raspberry pi for explicit action like “@snap” (for instantly take or capture a photo) or “@check” (to get current system info of pi).

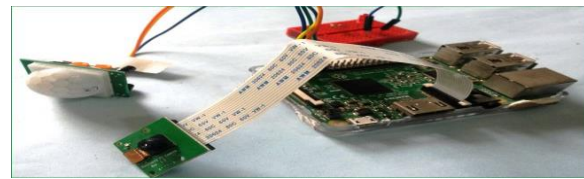
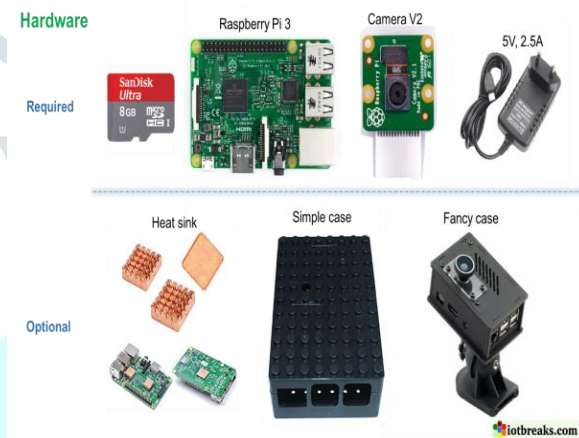


Figure. Camera Module

**3.HARDWARE SPECIFICATION**

- 1.Raspberry Pi
- 2.Camera Module
- 3.V2Sandisk small SD card
- 4.8GBPower provide 5V, 5.2.5AOptional: Heat sinks
- 6.Optional: Simple case or Fancy Case



**4. TECHNICAL SPECIFICATION PROCESSOR**

Broadcam BCM2387 chipset  
 1.2GHZ quad core arm cortex-a53(64 bit)  
 802.11 b/g/n wireless computer network and bluetooth four.1(bluetooth classic and le)  
 IEEE802.11 b/g/n wireless local area network protocol: net, wpa, wpa2, algorithms CCMP (maximum key length of 256 bits), the most vary of one hundred meters.  
 IEEE 802.15  
 Bluetooth, isobilateral cryptography formula Advanced cryptography Standard(AES)  
 With 128 bit key, the most key vary of fifty meters.  
 GPU  
 Dual core video core iv  
 @ transmission co- processor. give open gles two.0, hardware accelerated open vg,

and 1080p30 h.264 status decipher.,  
Capable of one.5GTEXEL/s or  
24GFLOPS with texture filtering and dms  
infrastructure.

#### MEMORY

1GB LPDDR2

#### OPERATING SYSTEM

Boot from microsd card , running a  
version of the UNIX operating  
system package or window 10IOT

#### DIMENSION

85\*56\*17mm

#### POWER

micro USB socket 5v1,2.5a

#### CONNECTORS

#### ETHERNET

10/100 baset local area network socket

#### VIDEO OUTPUT

HDMI (rev one.3 & 1.4)

#### AUDIO OUTPUT

Audio output three.5 mm jack

#### HDMI

USB 4\*USB two.0 connective

#### CAMERA connective

15 pin mini camera serial interface(CSI2)

#### DISPLAY connective

Display serial

interface fifteen manner flat flex  
cable connective with 2 knowledge lanes  
and a clock lane .

#### MEMORY CARD SLOT

Push/pull small SDIO

### 5.CONCLUSION

The good security system is aimed to  
style in such the simplest way that  
it will meet the requirements of the user  
for police investigation space. it's such a  
lot of numberless applications and  
it is utilized in totally different  
environments. It is employed  
by anyone operating in workplace to awa  
ke to the activity being happened at their  
own operating places, in their absence,  
and conjointly it is used for  
spy functions at bank lockers,

storage homes. Another application is to  
produce info to the  
user concerning what's happening  
in police investigation space by  
notification.

Here, any intrusion is detected.

This info is used for maintenance of the  
devices and conjointly for providing the  
registered user with  
any info concerning the intrusion.

### 6.FUTURE SCOPE

The additional extension of this project  
paper is to produce real time police  
investigation, To record direct videos and  
send to the nearest police stations  
and conjointly send alert voice messages  
to approved persons.

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