

Experiment no :- 6

Aim :- Understanding and connectivity of Raspberry - Pi / Beagle board with a zigbee module. Write a network application for communication betⁿ two devices using zigbee.

Theory :-

ZigBee is a communication device used for data transfer betⁿ controllers, computers, systems really anything with a serial port. As it works with low power consumption, transmission distances is limited to 10-100 meters line-of-sight. zigbee devices can transmit data over long distances by passing data through a mesh network of intermediate devices to reach more distant ones.

Its main applications are in field of wireless sensor network based on industries as it requires short-range low-rate wireless data transfer.

Here we make of zigbee with Raspberry wireless communication got four usb ports so if zigbee dongle for this want to check betⁿ two ported use of an interface Pi2 for a proper Raspberry Pi2 has is better to use interface.



Python script to perform zigbee communication

```
import serial
```

```
# Enable USB communication
```

```
ser = serial.Serial('/dev/ttyUSB0', 9600, TIMEOUT = .5)
```

```
while True:
```

```
    ser.write("Hello user!\r\n") # write a data
```

```
    incoming = ser.readline().strip()
```

```
    print 'Received data: ' + incoming
```

Conclusion :-

Thus, we have done zigbee communication between two Raspberry Pi devices.