

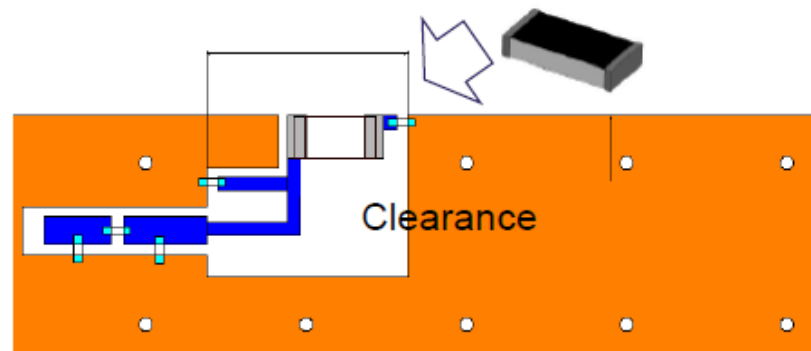
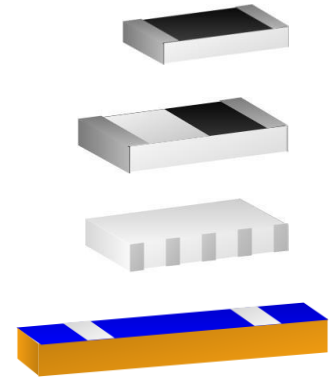
# Chip Antennas

- Application

- WLAN/BT/Zigbee (2.4GHz)
- WLAN Dualband (2.4/5GHz)
- GPS/Glonass

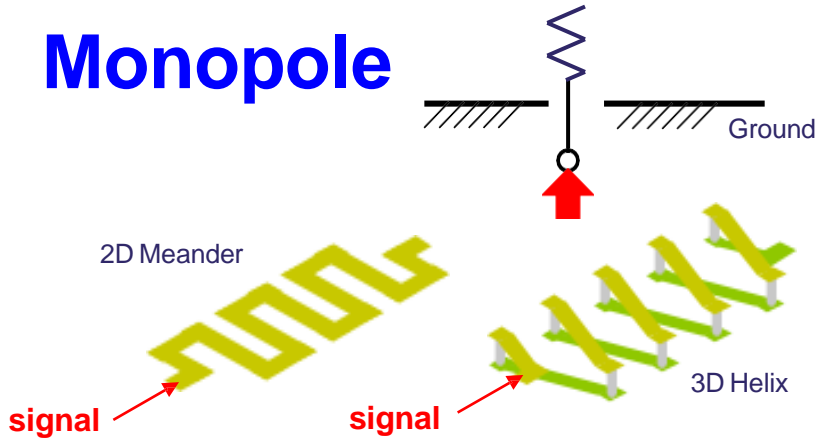
- Feature

- SMD – low process cost, instead of manual cost and mistake.
- Low Cost – without customized expense.
- High Reliability – embedded metallic radiation body, not expose in air.
- High Performance – combine the system ground plane.
- Ultra Impact – high K material and 3D structure.
- Standard – instead of one type for one project, easy for stock control.
- Omni-directional
- Clearance needed

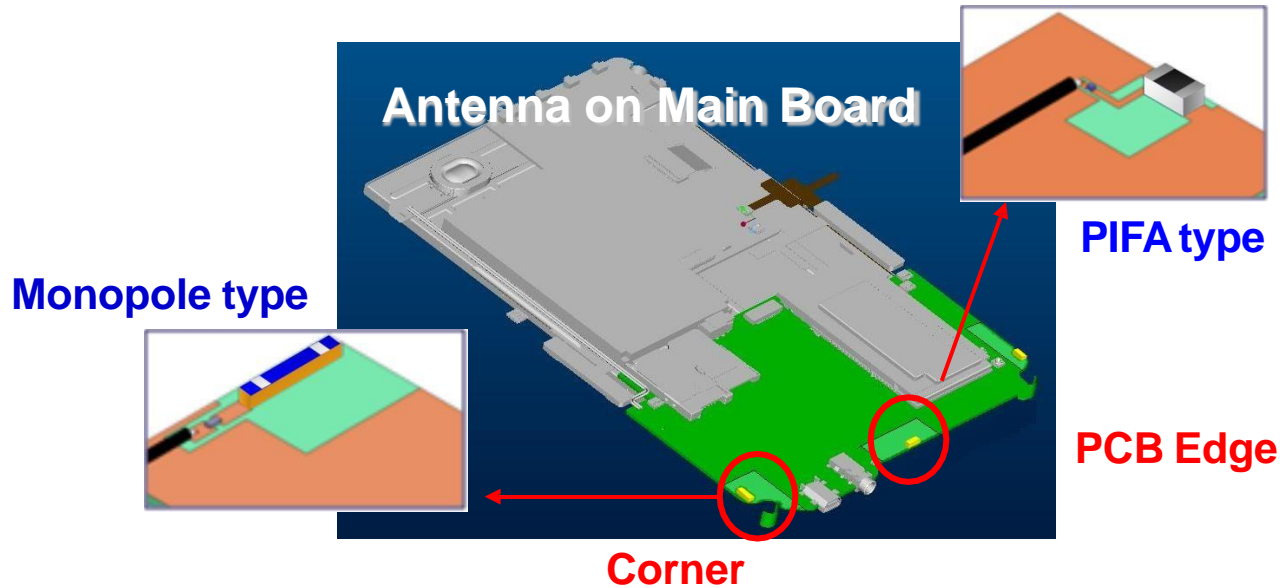
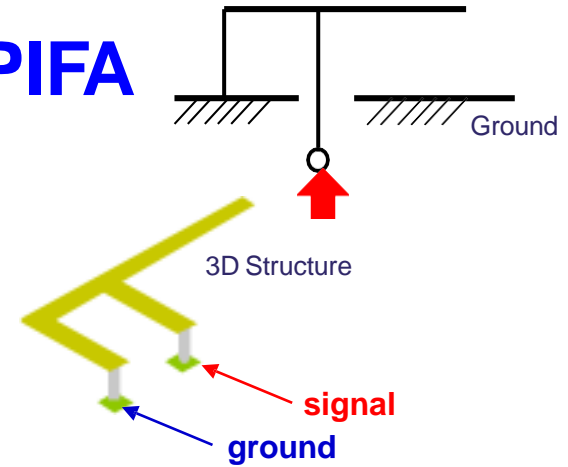


# Monopole vs. PIFA

## Monopole



## PIFA



# Smart Home (IOT)



Motion Detector



Lighting



Smoke Detector



Surveillance



Door/Window  
Lock/Security



Thermostat



Power Plug



**2.4GHz WLAN and Bluetooth**



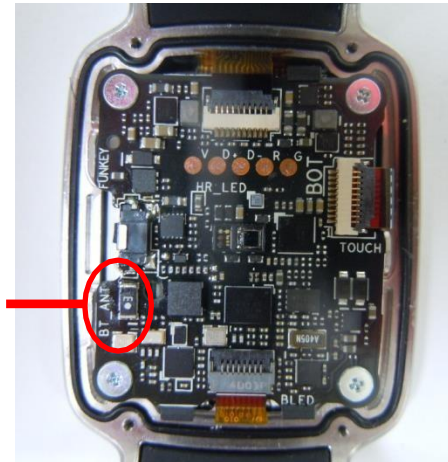
Home Appliance

# Wearable Devices

Smart Watch

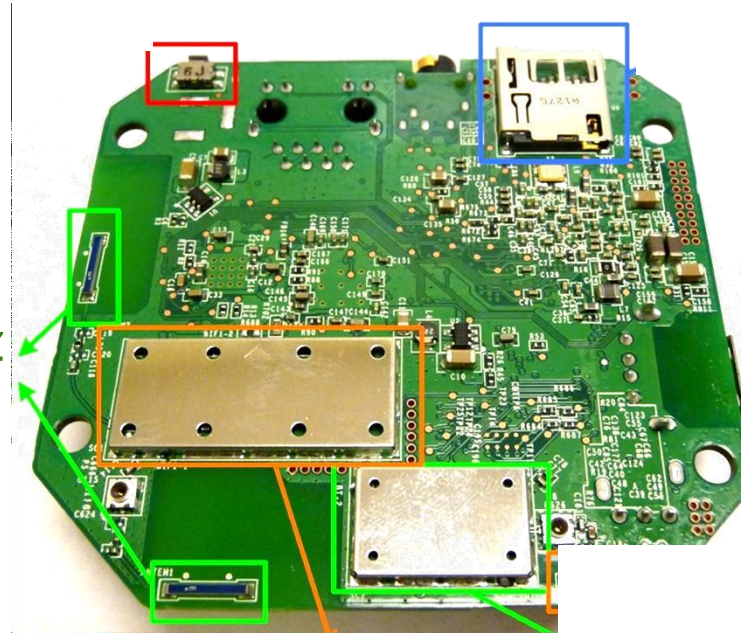


Bluetooth  
Chip Antenna  
2.0x1.2mm



# Wireless Set-Top-Box & AP (Networking)

8010 2.4 GHz  
chip antenna



# Antenna Tuning Service Procedure

## 1. Customer : To provide PCB or mockup

Layout and size of the PCB and the mockup will strongly affect the radiation performance of the antenna.

## 2. Technical Service : To evaluate performance

Yageo would suggest a matching circuit and antenna position to make the antenna has the best radiation performance.

If the antenna performance was limited by the layout, Yageo would provide an improvement suggestion for customers' reference.

Clearance / PCB size / Position / Orientation / Environment

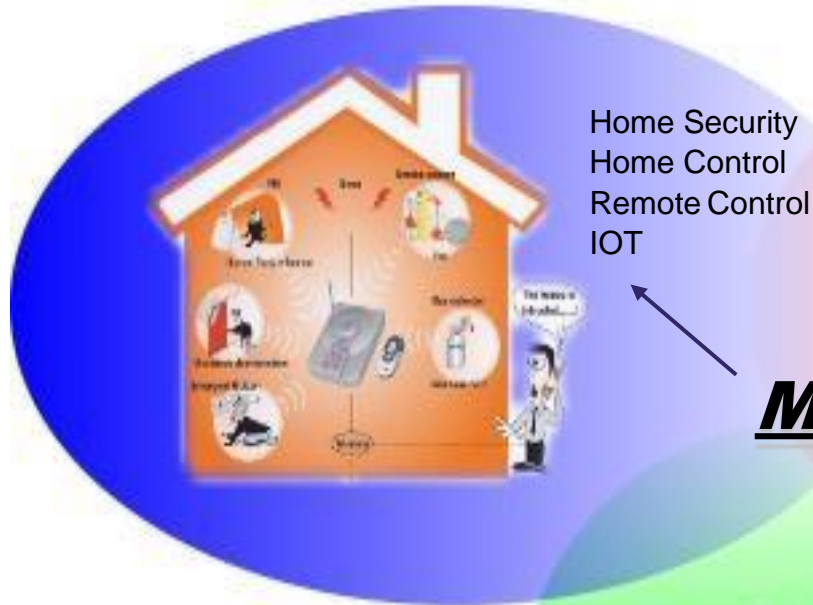
Performance report (radiation pattern / S11 or VSWR)

## 3. Customer : To confirm the performance

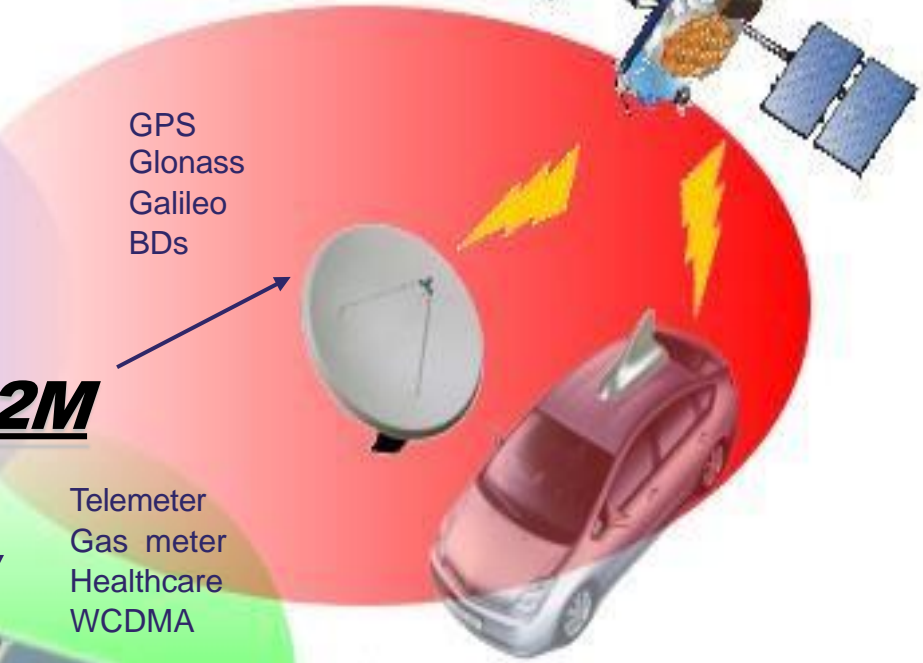
Customers have to confirm the real performance in field test because there will be another effect after power-on the device.



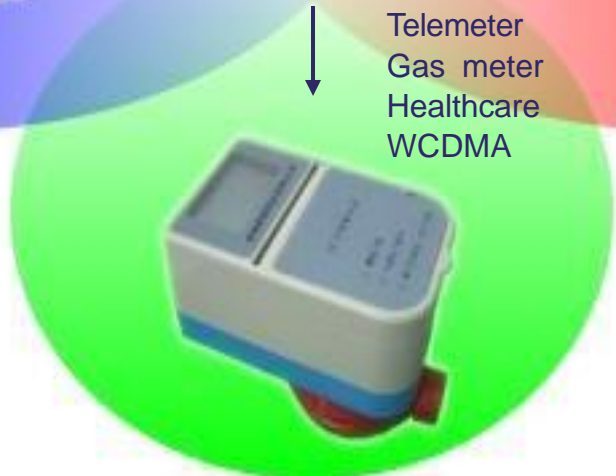
## Networking Smart Home



## Telematics Automotive



**M2M**



## Telemetry Smart meter

# Application Segment

## Wireless Module



- WWAN
- Bluetooth
- Zigbee

## Telematics/ Automotive



- Navigation
- Vehicle Tracking

## Telemetry/ Smart Meter



- e-meter
- Surveillance

## Industrial/ Medical/POS



- POS terminal
- Automation

## Networking/ Smart Home



- Set-top-box
- Wireless router



# Antenna Communication

