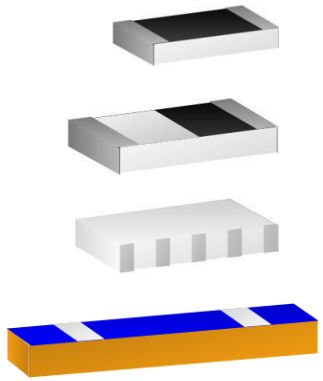
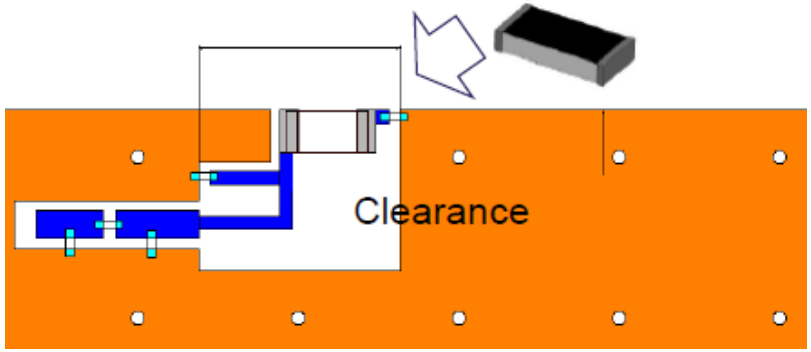
Chip Antennas

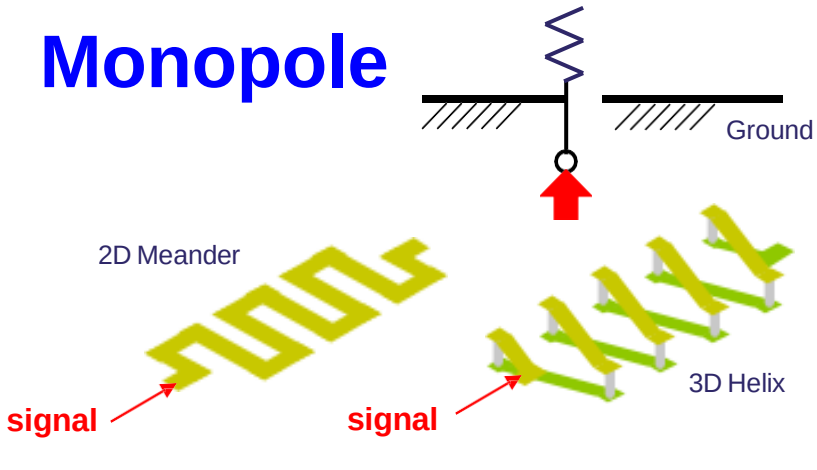
- Application
  - WLAN/BT/Zigbee (2.4GHz)
  - WLAN Dualband (2.4/5GHz)
  - GPS/Glonass

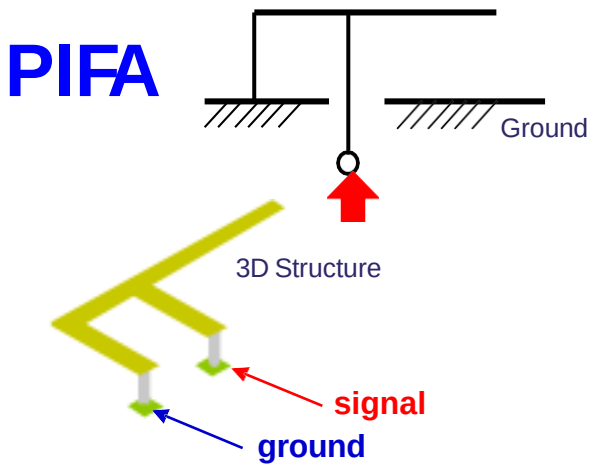


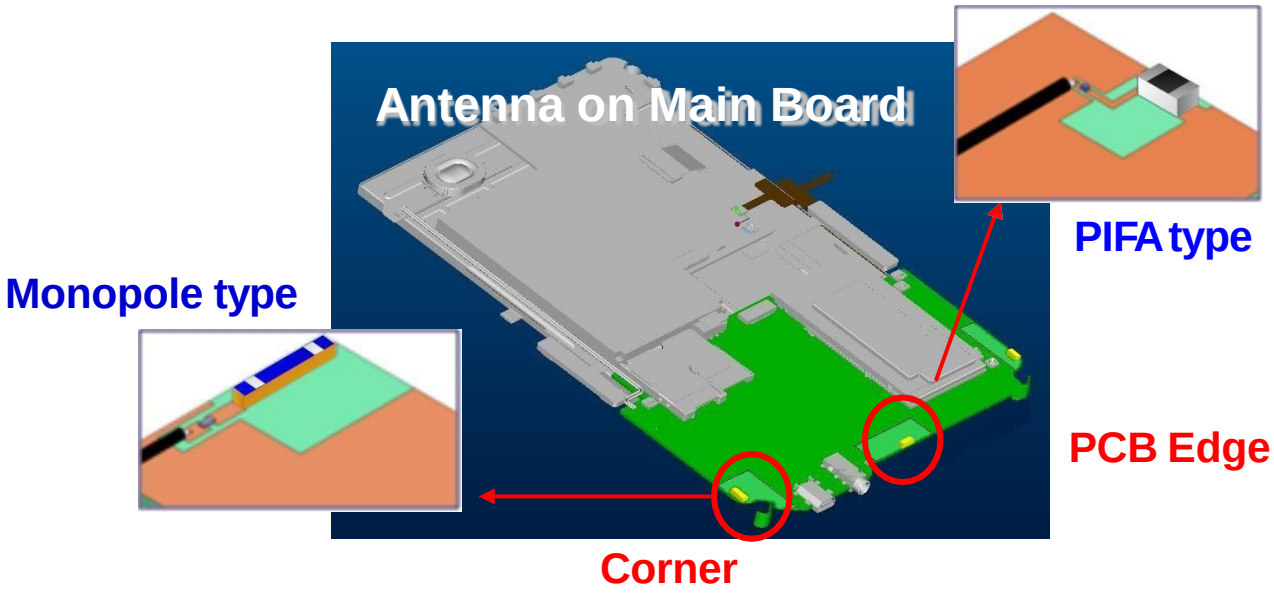
- Feature
  - SMD – low process cost, instead of manual cost and mistake.
  - Low Cost – without customized expense.
  - High Reliability – embedded metallic radiation body, not expose in air.
  - High Performance – combine the system ground plane.
  - Ultra Impact – high K material and 3D structure.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



Monopole vs. PIFA







Smart Home (IOT)

Motion Detector

Lighting

Smoke Detector

Surveillance

Door/Window
Lock/Security

Thermostat

Works with
Apple HomeKit

2.4GHz WLAN and Bluetooth

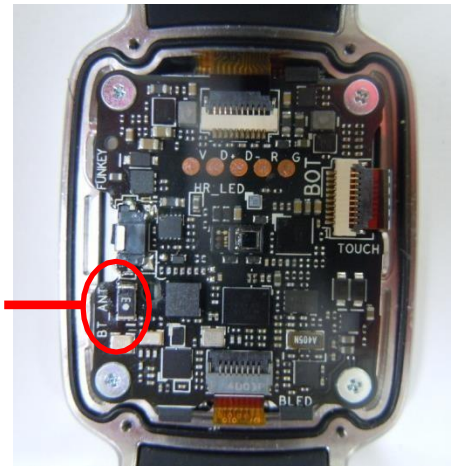
Power Plug

Home Appliance

Wearable Devices

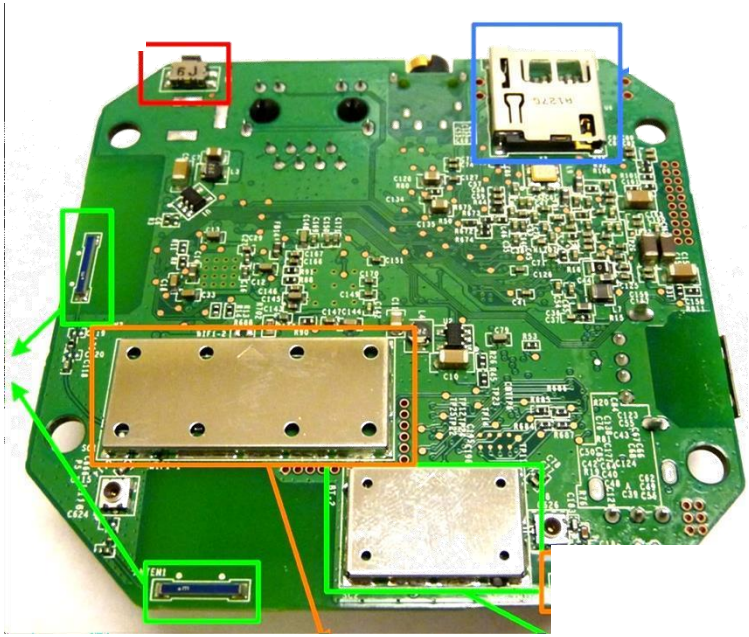
Smart Watch

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

Amega 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, Amega 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.

Amega

Networking
Smart Home

Home Security
Home Control
Remote Control
IOT

Telematics
Automotive

GPS
Glonass
Galileo
BDs

M2M

Telemeter
Gas meter
Healthcare
WCDMA

Telemetry
Smart meter

Application Segment

Wireless Module

- WWAN
- Bluetooth
- Zigbee

Telematics/ Automotive

- Navigation
- Vehicle Tracking

Telemetry/ Smart Meter

- e-meter
- Surveillance

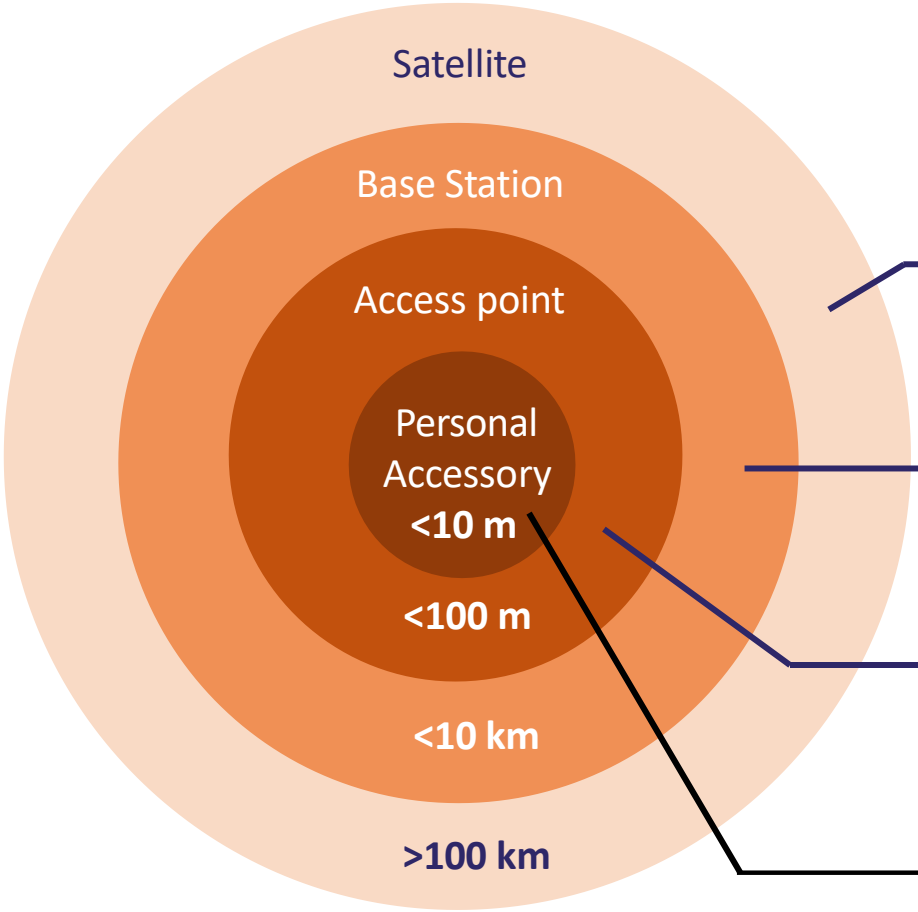
Industrial/ Medical/POS

- POS terminal
- Automation

Networking/ Smart Home

- Set-top-box
- Wireless router

Antenna Communication



Satellite Audio Radio Service: **SDARS**
Satellite Positioning: **GPS/Glonass**

Wireless Wide Area Network (WWAN)
IEEE 802.20
GSM, GPRS, 3G-UMTS, HSPA, 4G-LTE

Wireless Local Area Network (WLAN),
IEEE 802.11 a/b/g/n/ac
WiFi, IOT

Wireless Personal Area Network (WPAN)
IEEE 802.15
Bluetooth, Zigbee, UWB