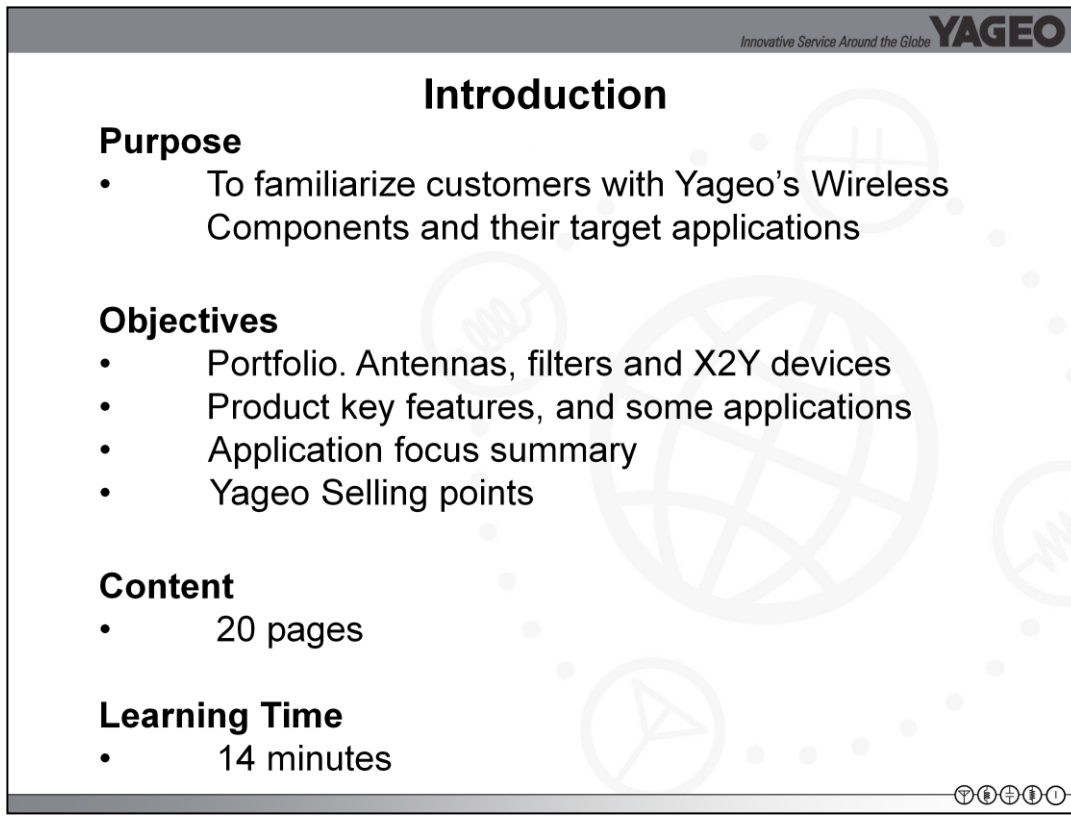


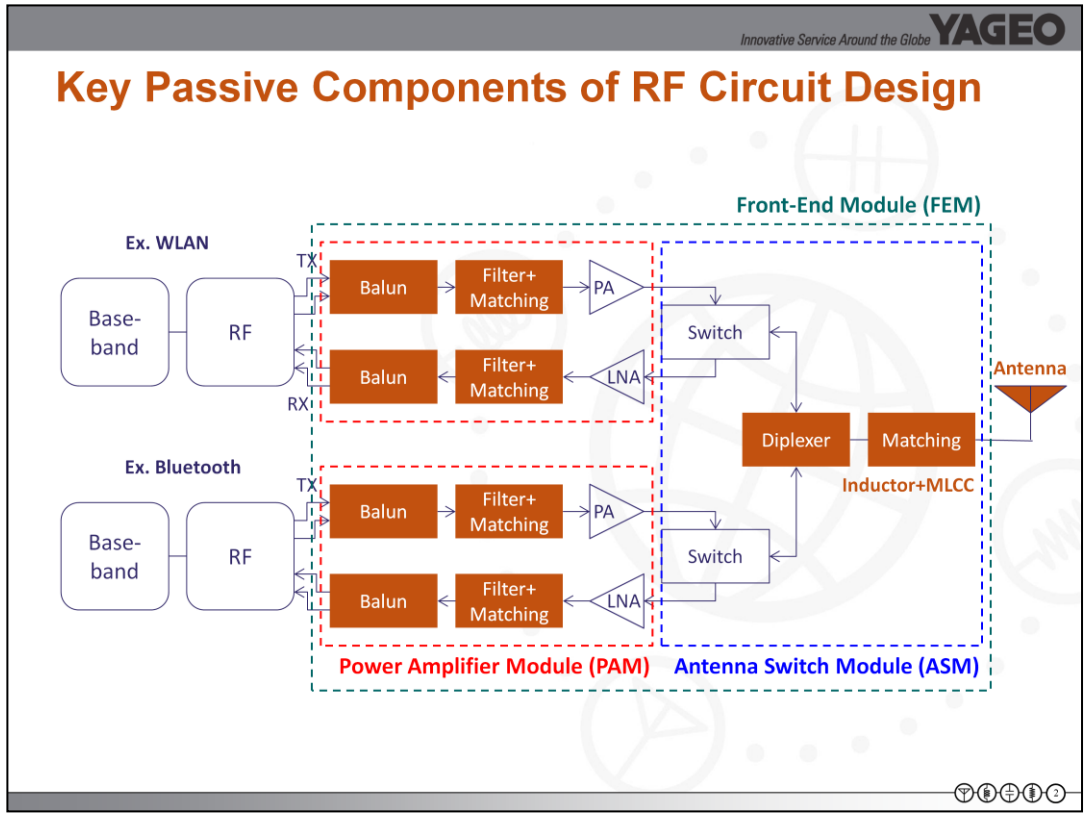
Welcome to Yageo Wireless product training module. This module will introduce customers to antennas, filters, X2Y devices but also to their key applications.

Lastly, in one slide we will summarize the focus applications and the key selling points for yageo. I.e. answer the questions ' why use/consider yageo products?

There are 20 slides and my time target for completing this training unit is about 14minutes.

However there is a lot of information that I could not cover in such a short time, I will only highlight the most important things.

For any additional info or suggestions pls contact our local sales team. Thank you for your interest.



For RF FEM (front end modules) designs, Yageo offers many critical components such as antennas, filters, baluns and the corresponding matching networks.

Yageo components/blocks in brown.

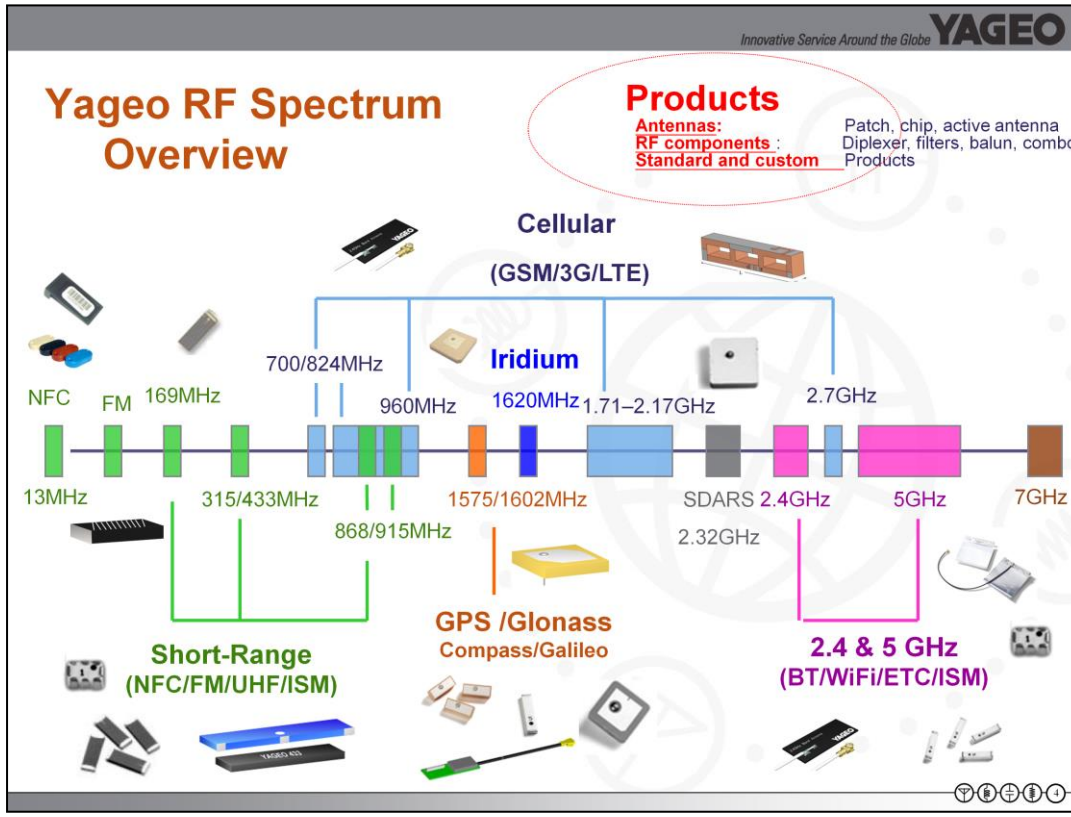
Yageo produces a wide range of wireless components however two main categories:

1.antennas (chip, patch, metal, PCB/FPCB) and active antennas

2.RF Components (filters, baluns, diplexers).

Most of these products are offered as standard products, however we also offer some custom design solutions.

The pictures above give an idea of how the antennas/components look like. Ex. Patch antenna or diplexer.



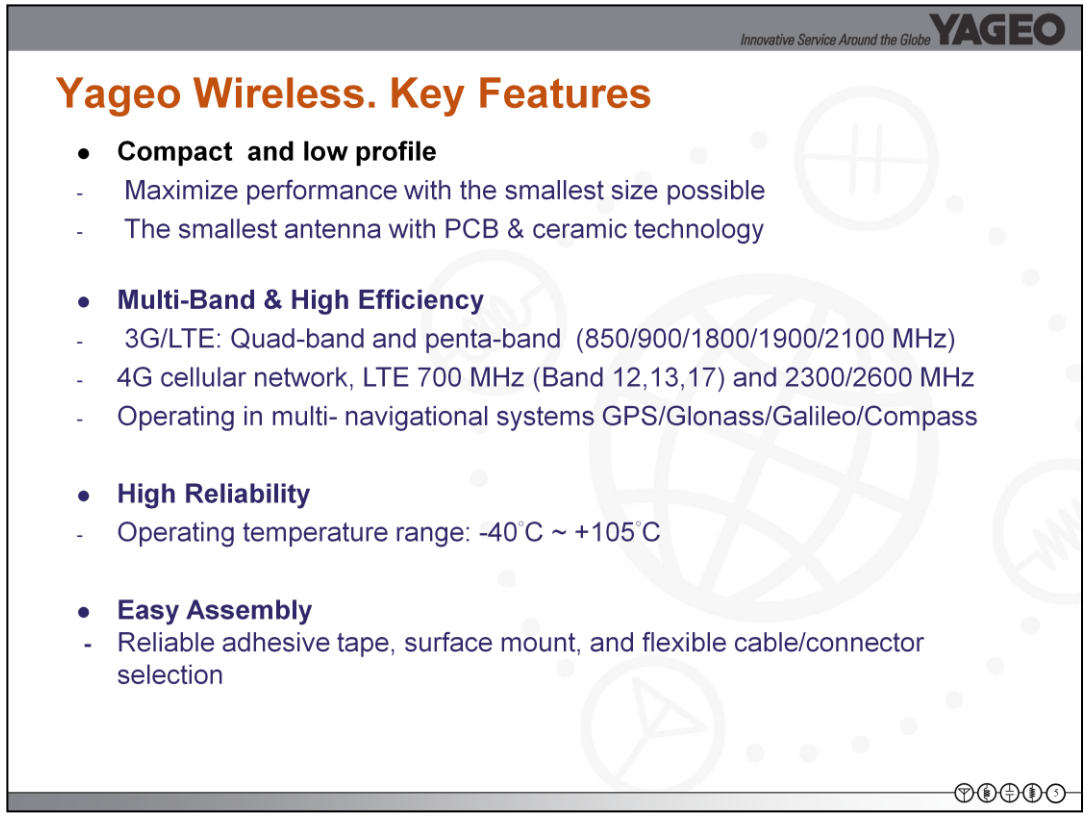
Yageo offers a broad range of components covering the wide range from 13MHz/NFC to above 7GHz.

Our products support :

1.Bluetooth, WiFi, SDARS (XM/Sirius satellite radio), 3G/LTE+, and GPS/Glonass/Compass.

2. Other technologies such as NFC, Iridium Satellite, Zig-Bee, Short Range ISM bands are also supported.

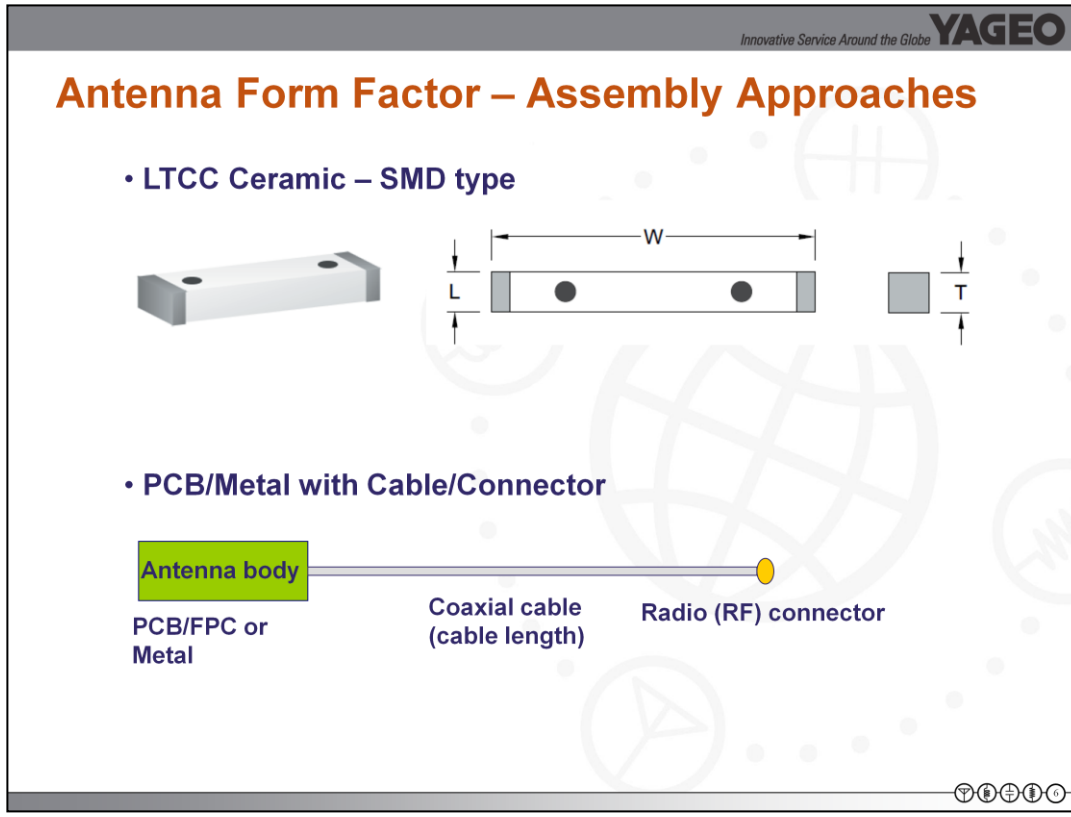
Additionally we support other bands and applications.



Key features of Yageo wireless components include:

- size/compactness,
- low profile,
- performance (multi-band and high efficiency),
- high reliability and easy assembly.

All of these features reduce PCB requirement and TTM/Time to Market.



There are different form factors for antennas:

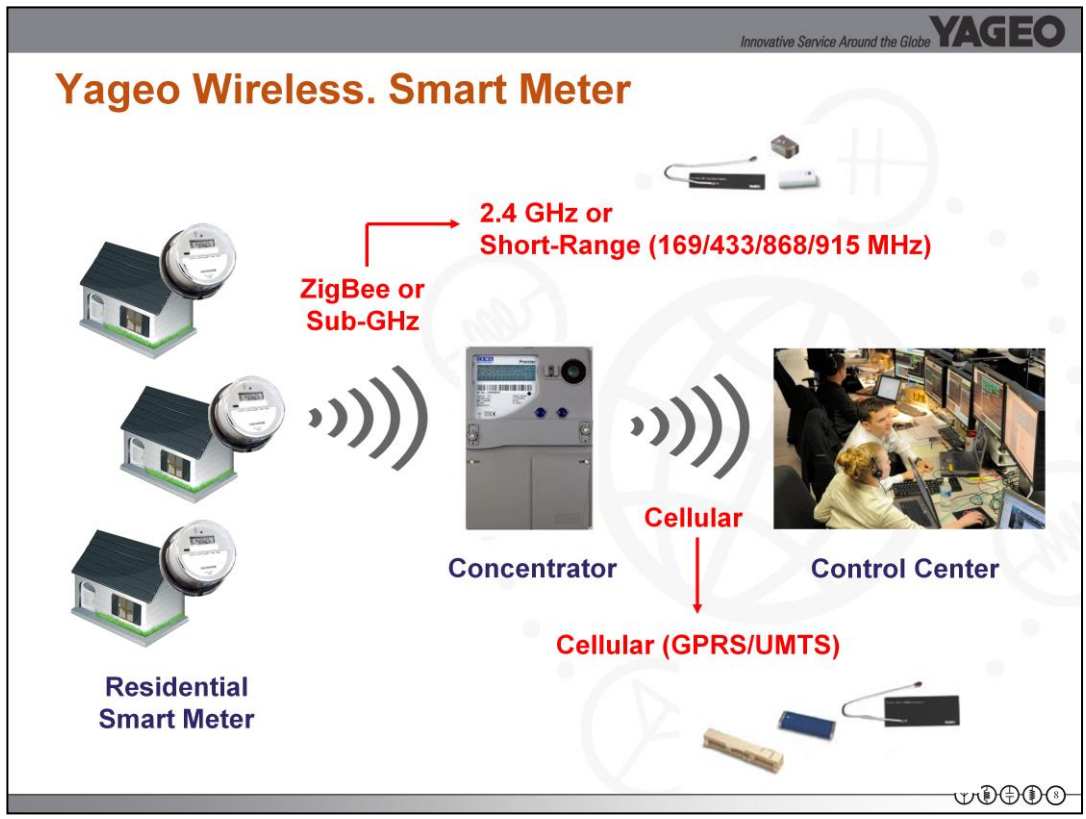
1. Surface-mount type
2. PCB/metal with cable/connector.

Ex. Automotive applications supported by Yageo's wireless components

The applications supported are :

- Telematics (eCall, OnStar, BMW Assist, MBrace),
- GPS & GLONASS (tracking/navigation),
- Bluetooth connectivity for Infotainment (phones, cameras, surrounding sound),
- TPMS (Tyre Pressure Monitoring Systems),
- Cellular ,
- SDARS (Sirius/XM),
- Access (NFC) etc.

Just some examples of supported technologies.

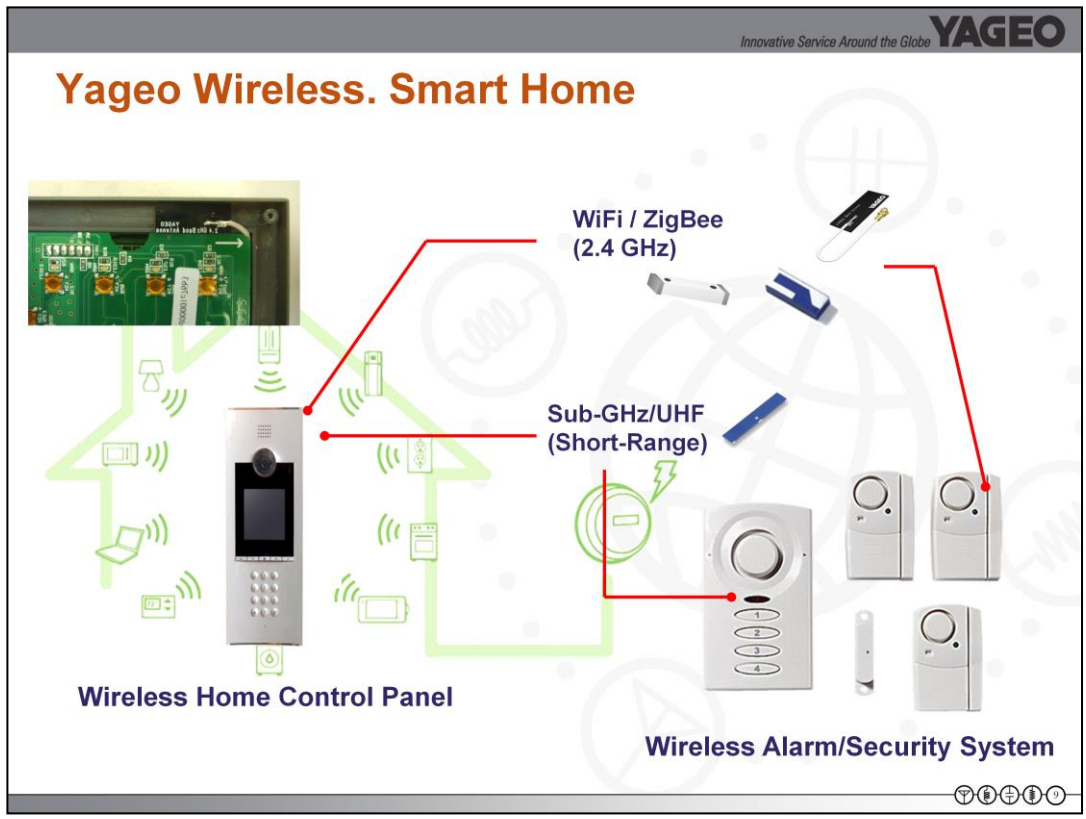


Example. The smart grid is currently one of the fastest growing applications supporting power distribution.

Smart meter, Concentrator are devices sending information wirelessly through technologies such as ZigBee, WiFi, UHF RF (Sub-GHz), and GSM/GPRS.

Every device requires antenna to broadcast and receive signals.

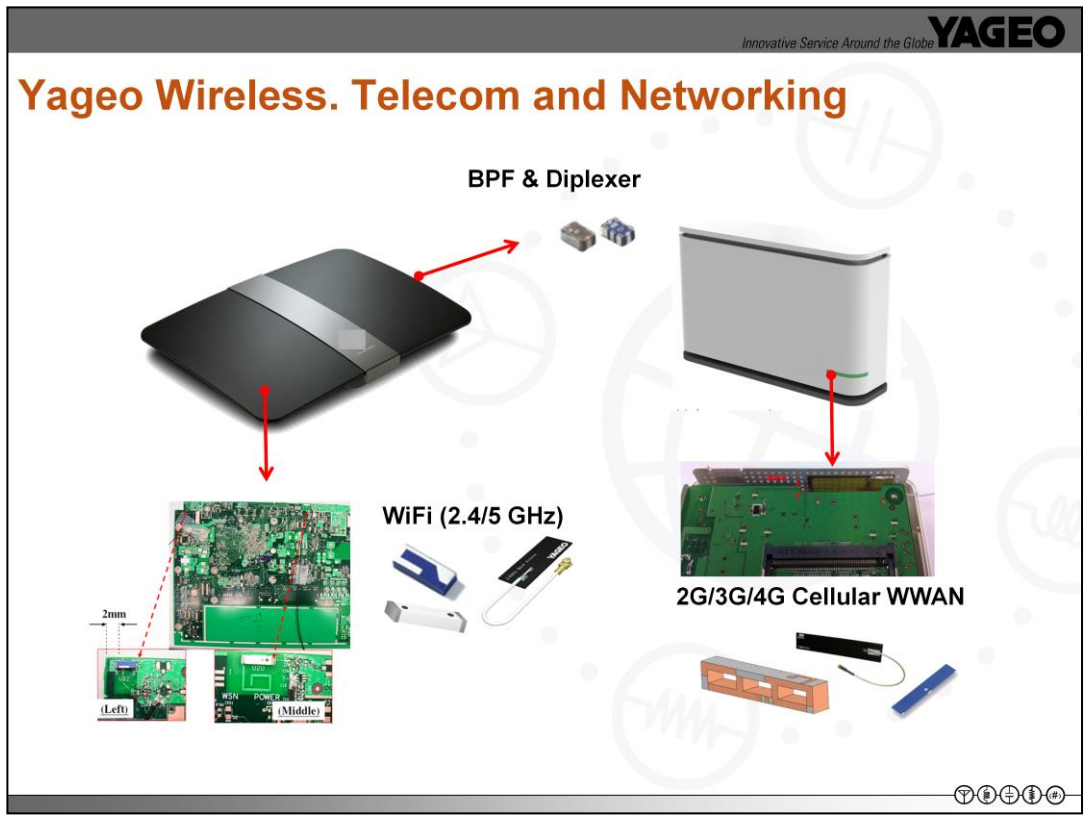
Yageo offers numerous devices supporting this application.



Example. The 'Smart Home' is an efficient system to manage home applications such as appliances, AC/Heating, Access and home security.

Many systems/applications such as appliances (washing machine, dryer), security (lights, alarm system, blinds, doors, cameras, garage door…), garden appliances (watering, lighting..) could be monitored and controlled via a smart phone.

Yageo offers numerous antennas/RF components supporting this growing market.



Example. Yageo chip and PCB/metal antennas, balun/filter have been successfully implemented into wireless networking devices such as

WiFi router, gateway, repeaters, base station/Femtocell and STB /Set-Top-Box.

Yageo offers a wide range of products supporting this market segment.

Example. Yageo offers a wide range of antennas and filters for the consumer industry for laptop, tablet, mobile phones.

We design extremely small size antennas allowing savings in:

- PCB size/cost,
- assembly cost
- development costs and TTM/Time To Market.

Single mode to multi-band and multi-standard antenna/RF solutions meet today worldwide customer's requirements.

Example.

Navigation, Tracking and Tracing systems based on all GNSS standard, GPS/GLONASS/Compass/Galileo systems, are used widely in vehicle, asset tracking.

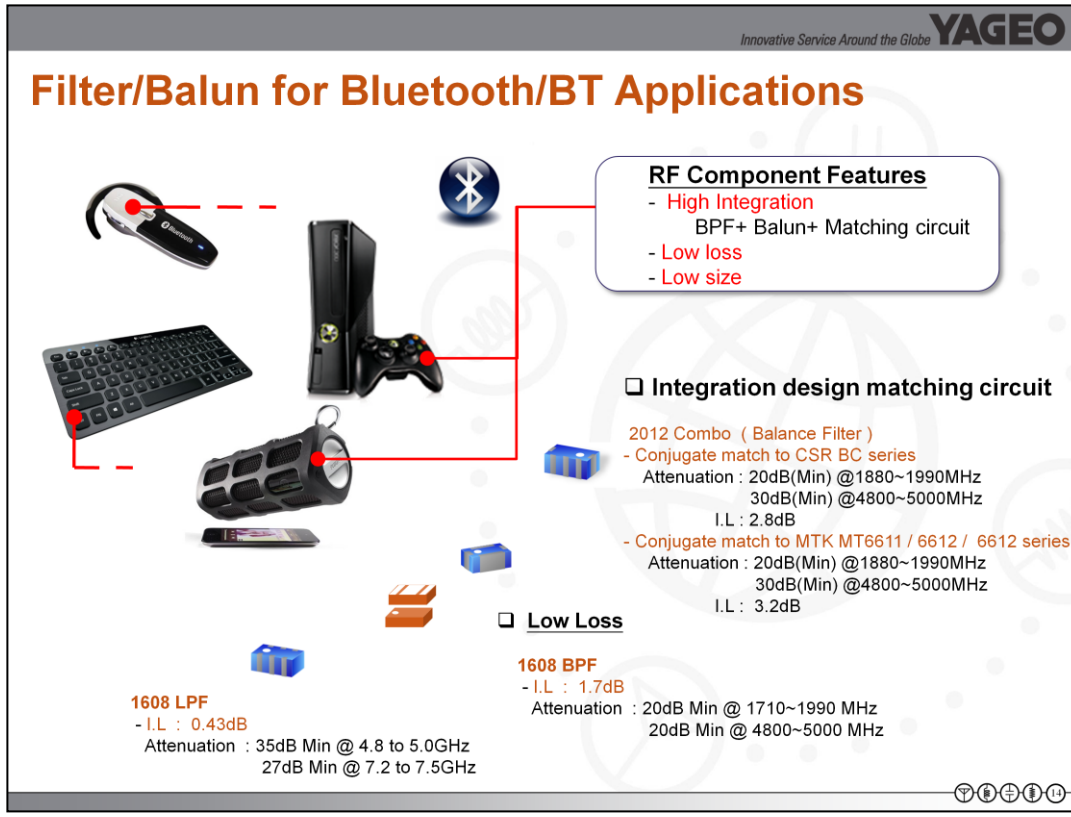
We are now offering a **new all GNSS band patch antenna** supporting this growing application and market. This quad-band GNSS antenna is able to cover all existing standards for years to come.

Additionally we provide many antenna options for size/shape, model (PIFA/Monopole/patch), pin/SMD type, and active antenna module.

Example:

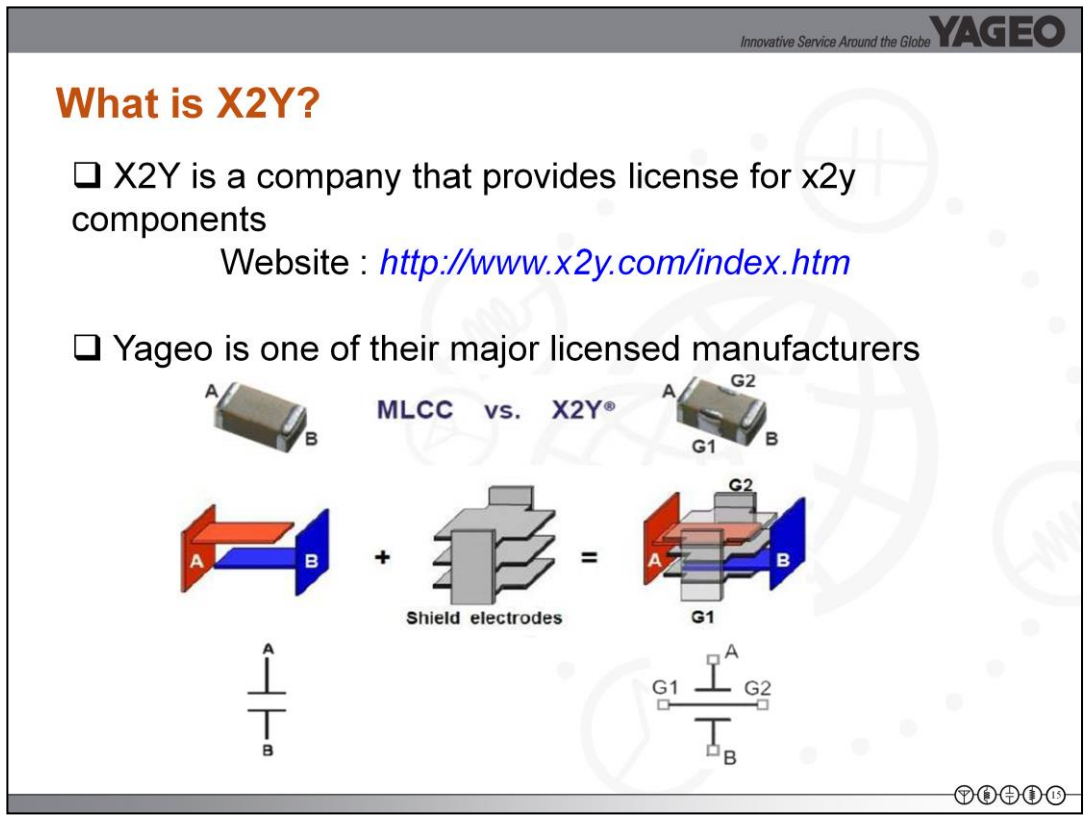
For mobile computing application, filters are usually miniature size and profile, however they require high attenuation outside the GSM and WCDMA bands.

Yageo provides a wide range of filters and baluns to support customer designs.



Example.

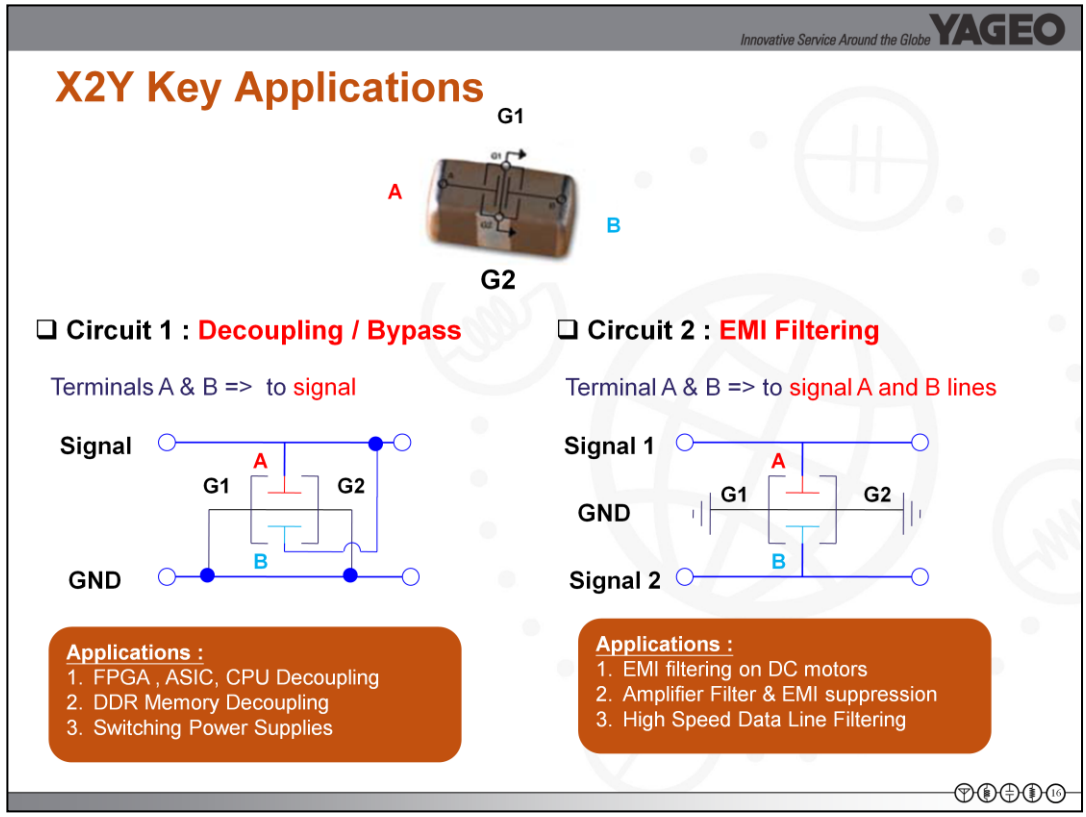
For Bluetooth applications the filters/baluns need to be highly integrated, small size but also low loss as they are usually embedded into portable (low power) devices.



The company X2Y licenses its products (x2y capacitors) to Yageo and other selected manufacturers.

Basically the X2Y devices are three capacitors in one package (aligned: two on x-axis and one on y-axis).

This configuration provides lower inductance (hence better high frequency operation) than conventional three capacitor designs.

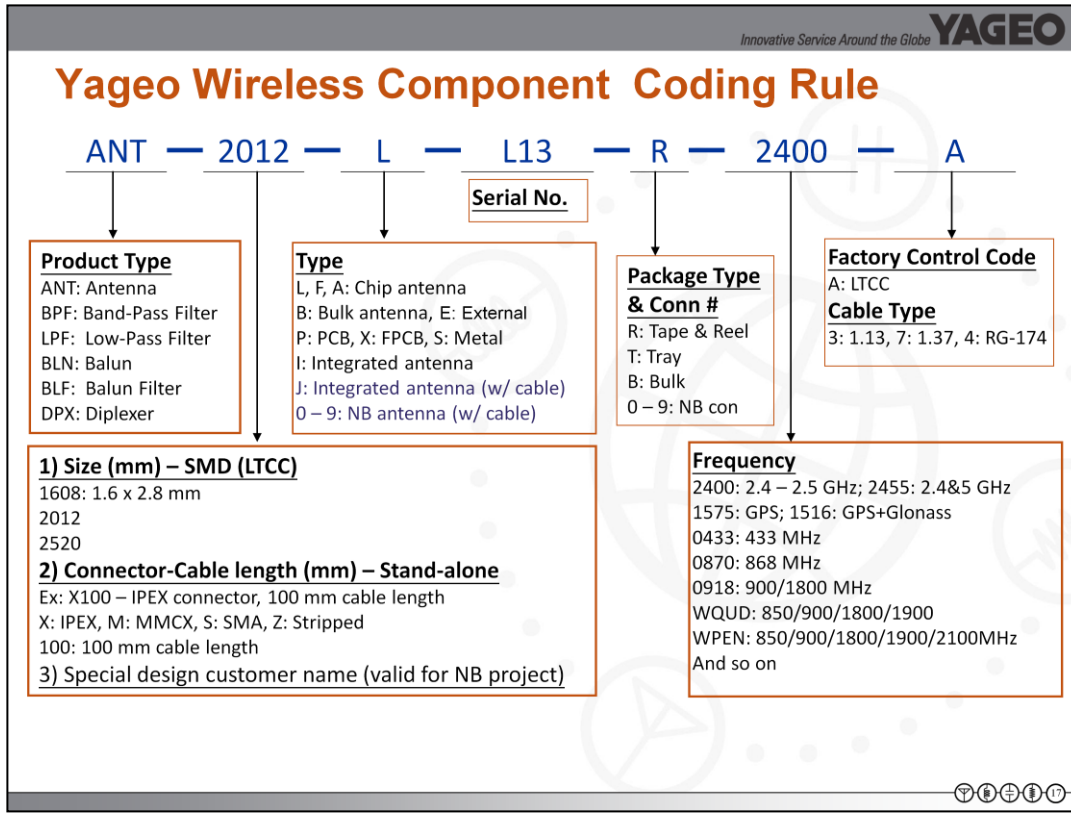


There are almost infinite use for x2y device, however the two key applications are Decoupling/Bypass and EMI filters.

In the case of **decoupling/bypass** a Typical application could be the switched power supplies (DC/DC converters) where there is a lot of noise, signal harmonics from the switching module.

In the case of **EMI filtering, x2y work well** for motor applications where there is a lot of noise/harmonics generated by the rotor and its moving parts. X2y devices provide excellent EMI filtering for such applications.

We have multiple customers considering our x2y devices for these two key applications.



This slide shows Yageo's part number breakdown for wireless components.

Useful for order and product information.

However when in doubt, pls contact one of our local sales team.

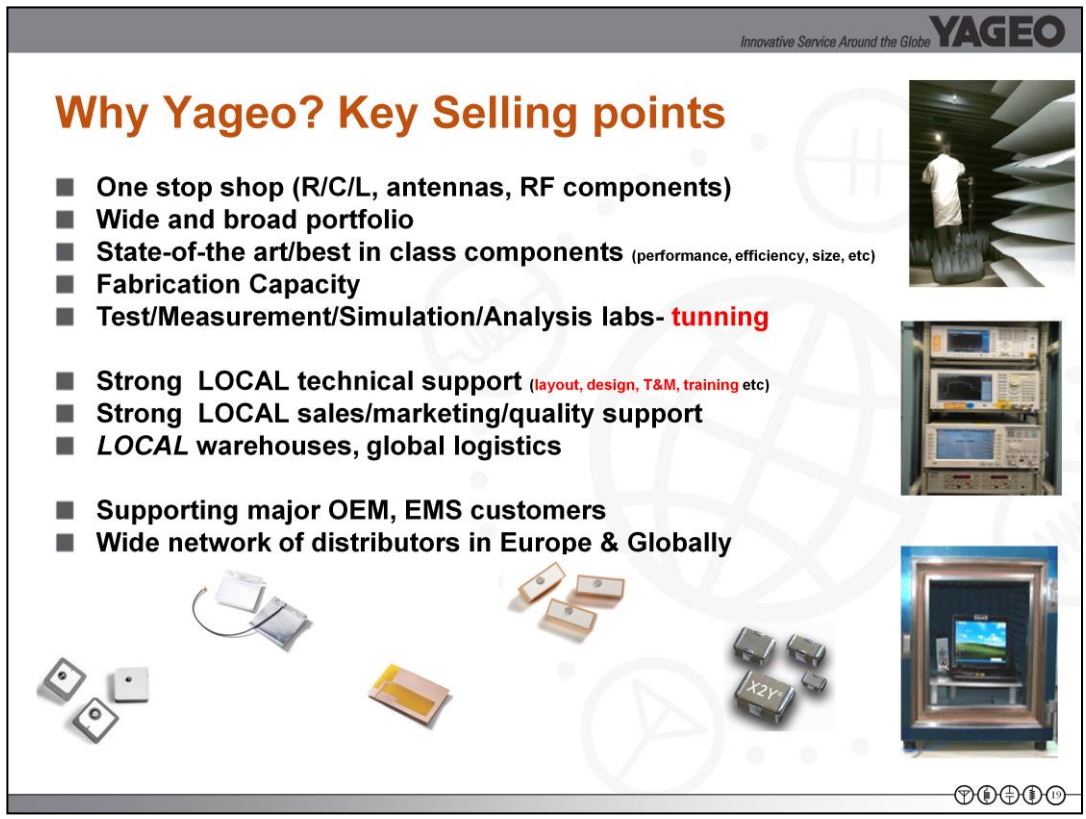
A picture is worth 1000 words.

Here is a summary of the key markets and applications we are present today.

>>From Automotive to Industrial, Telematics, Consumers, Telecom and others.

>>Basically anytime a customer is using a wireless interface, Yageo is there to support the customer requirements

>>both standard products, and with custom made products.



Many customers may ask you ‘ why yageo? I already have two/three antenna suppliers. What is so unique about Yageo?’

This slide summarizes key selling points about Yageo, starting with:

1.‘one stop shop’

2.to free ‘tunning/layout advice’ (RF designers could save days/weeks of testing by relying on our technical support),

3.to ‘local technical/sales support’ and

4.‘local warehouse’ (a huge advantage for samples, quick pilot projects..).

We are a truly a local and at the same time a global antenna and RF components manufacturer.

Thank you for your interest.

For additional information, comments etc, pls contact our local sales team.