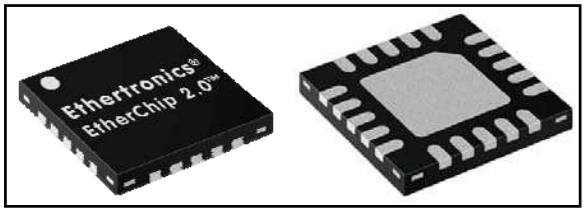
ethertronics® INNOVATE

Ether Switch&Tune™AFE Chip

BT, GSM/WCDMA/LTE, WiFi, RFID

100 MHz to 3000 MHz



Ethertronics' EtherChip 2.0™ using Ether Switch&Tune™ AFE (Antenna Front End) chip technology solves the challenges facing today's wireless industry and product designers. EtherChip 2.0 allows a single antenna element to cover global bands and seamlessly improve performance in a dynamically changing RF environment by employing active tuning. EtherChip 2.0 can be used in a variety of applications including:

- Cellphones
- Tablets and Notebooks
- M2M Products
- Other Wireless Devices

TECHNOLOGY ADVANTAGES

Ethertronics' Ether Switch&Tune technology and the EtherChip 2.0 product provide wider global band coverage (including LTE) with a single antenna element using parasitic loading and active impedance matching techniques to improve RF front end performance and antenna efficiency. Combining Ethertonics' extensive antenna systems expertise and proprietary algorithms, we can seamlessly adjust the characteristics of a wireless antenna:

- Covering all 2G/3G/4G cellular, Bluetooth®, GSM, ISM, RFID, WiFi bands and correcting the impedance mismatch.
- Retuning the antenna for frequency shifts automatically.
- Compensating for hand, head and environmental effects.
- Reducing the antenna's physical volume by up to 50 percent without performance tradeoffs.

Antenna performance can be significantly improved by applying these techniques especially for stringent low band requirements for LTE.

KEY BENEFITS

Features

Operation Frequency
- Operation Frequency is 100MHz ~ 3000MHz.

4 Switch RF Branches and 2 Tunable Capacitors Driven by SPI
- Utilizing dynamic combinations of two tunable banks.

Tuning Range for Capacitor
- Tuning Range is 0.66 ~ 3.30pF at Shunt Configuration.

Control by SPI
- Control by 3-wire SPI (Serial Peripheral Interface).

ESD Tolerance
- Endure Peak 2kV ESD (Electrostatic Discharge).

Small Package
- Total package size is 3 x 3 x 0.45 mm^3.
- Package type is QFN 20-pin.

END USER ADVANTAGES

Fewer Dropped Calls
- Improved connectivity due to the capacitor's ability to dynamically re-tune the antenna for frequency shifts or hand and head effects.

Thin Devices
- Reduced antenna volume enables "sleek" form factors desired by consumers and additional differentiating features by OEMs.

SERVICE AND SUPPORT

Extensive RF Experience
- EtherChip 2.0 is supported by documentation, and when needed, by the expertise of RF engineers who have integrated hundreds of antenna and RF system designs into wireless devices.

Global Operations & Design Support
- Ethertronics' global operations encompass an integrated network of design centers that provide local customer support.

Preliminary—specifications subject to change and are dependent upon actual implementation.

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