

Ether Switch&Tune™

BT GSM/WCDMA/LTE, WiFi, RFID

100 MHz to 3000 MHz



Ethertronics' EtherChip EC686™ using Ether Switch&Tune™ technology and high performance RF switching solves the challenges facing today's wireless industry and product designers. EC686 allows the RF front end to cover global bands and seamlessly improve performance in a dynamically changing RF environment by employing active tuning. EC686 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 EC686 provide wider global band coverage (including LTE) with a single antenna element using parasitic loading and active tuning techniques to improve RF front end performance, especially for stringent low band antenna efficiency requirements (LTE). Combining Ethertronics' 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 and RFID bands.
- Retuning the antenna for frequency shifts.
- Reducing the antenna's physical volume by up to 50 percent without performance tradeoffs.

SYSTEM APPROACH—EASY INTEGRATION

Ethertronics' provides a total solution. The antenna, RFIC and algorithms are co-designed and optimized as a system to provide an easy to integrate, cost effective solution.



KEY BENEFITS

Features

Operation Frequency: 100 MHz ~ 3000 MHz

RF Switch:

- SP4T (shuntless architecture)
- Ultra-low R_{ON} ($<1 \Omega$)
- Exceptional linearity (IIP3 +80 dBm)

Flexible Control Interface

- SPI (Serial Peripheral Interface)
- MIPI (Mobile Industry Processor Interface)
Fully compliant to MIPI RFFE v1.10
- GPIO

Small Package

- Total package size is $2.0 \times 2.0 \times 0.5 \text{ mm}^3$
- Package type is QFN 16-pin

END USER ADVANTAGES

Fewer Dropped Calls

- Improved connectivity due to better antenna performance.

Thin Devices

- Reduced antenna volume enables "thin" form factors desired by consumers even with the need to cover more frequency bands for LTE.

SERVICE AND SUPPORT

Extensive RF Experience

- EC686 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.