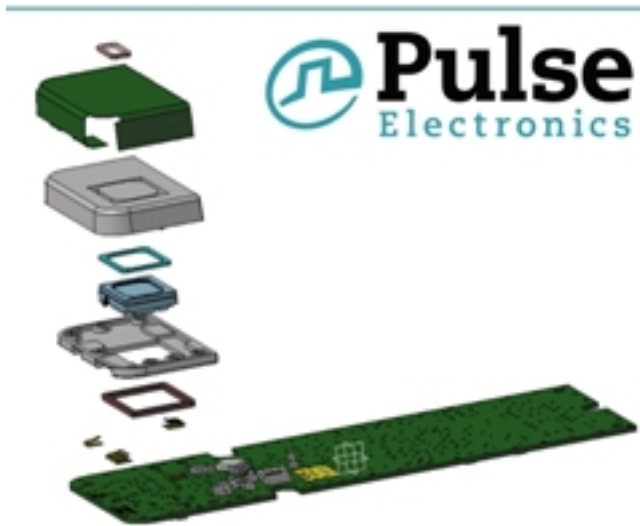


Smart Antenna Increases Mobile Device Flexibility



Pulse Electronics, a leading provider of electronic components, introduces its new adaptive antenna concept. This smart antenna can be adapted for integration into devices that use an expanding spectrum of operating frequencies and enables faster data transmission rates in mobile phones, smart phones, and tablet devices. It eliminates the hand effect in long term evolution (LTE) multiple-input and multiple-output (MIMO) antenna solutions so phone performance and function are not affected if the antenna is covered by the user's hand. Operators derive cost savings in the investments they make in the network because of the reliable downlink.

"With the right antenna, mobile device users have fewer dropped calls, higher data rates, reduced power consumption, increased talk time, improved link budget in all use conditions, and savings in money and time due to more reliable downlinks," said Prasad Ramachandran, senior research engineer, Pulse Electronics. "Pulse's new adaptive antenna technology provides consumers with those results."

The adaptivity of the antenna is based on a dynamic antenna matching (DAM) circuit with switchable antenna design that enables the antenna to change resonant frequency and input impedance to compensate effectively for the finger/hand effect, offering flexibility in positioning for the designer of the device. Either on-ground or off-ground configurations are available. Adaptivity in bottom mounted ground clearance antennas improve performance 3-5 decibels (dB) for single hand browse modes, while on-ground top mounted antennas enrich performance by 1.5-2.5 dB for talk mode. The antenna communicates with the host engine using an MIPI/SPI type digital control. Very little interaction is required with the engine.

Pulse's smart antennas are a continuation of its switchable antenna family that was first introduced in 2004. They are applicable for existing architectures and manufacturing technologies such as laser direct structuring (LDS) and flex and are

Smart Antenna Increases Mobile Device Flexibility

Published on Wireless Design & Development (<http://www.wirelessdesignmag.com>)

easily optimized for different antenna concepts. Several customization options for the mechanics and module structures are available. The antennas are customized and packaged in trays. Demonstrators are available. More information can be found on the Smart Antenna datasheet located on the Pulse Electronics website at http://www.pulseelectronics.com/download/3728/smart_antenna [1].

Source URL (retrieved on 01/27/2015 - 4:55pm):

<http://www.wirelessdesignmag.com/product-releases/2011/06/smart-antenna-increases-mobile-device-flexibility?qt-blogs=0>

Links:

[1] http://www.pulseelectronics.com/download/3728/smart_antenna