AntennaWare & Silicon Labs Partnership

Innovative antenna technology company AntennaWare has joined the Silicon Labs technology partner program in a partnership that will address the wireless performance bottlenecks for on or near-body wireless wearables in Bluetooth markets including connected healthcare, audio, and sports applications.

Placing devices on difficult platforms, such as the human body, is challenging due to the twin issues of body blocking and detuning limiting wireless coverage. Body blocking occurs when there is no direct line of sight communication between a wearable device and the remote receiving data collector. The wearer's body blocks the signal path causing reduced communication ranges, reduced performance in open spaces, poor performance in noisy RF environments, and dropout caused by user movement. In attempts to counteract this issue, system designers have traditionally increased transmission power, using diversity, and increasing the surrounding access point infrastructure. However, this comes at a significant cost and ultimately doesn't solve the fundamental problem of body blocking and unreliable wireless coverage.

AntennaWare has developed a more elegant solution to overcome these difficulties with wireless coverage. AntennaWare's BodyWave technology generates waves that flow efficiently around the body, supporting communication links even when the body is blocking the signal. Side-by-side testing of the AntennaWare/Silicon Labs reference design, which integrates the BodyWave Bluetooth antenna and the Silicon Labs Thunderboard BG22, demonstrates an additional 16dB link margin, resulting in maximized performance, dependability, longer communication ranges, or lower power levels, without the need for additional access points.

Connectivity issues caused by body blocking are a known problem for any application where a wireless device is worn close to, or on the body, impacting wireless adoption and market growth in areas of the wireless wearable market such as asset and personnel monitoring, connected health, and sports. This issue is particularly critical for wireless applications that rely on real-time, continuous reporting and monitoring such as close-fitting medical patches worn on the body, wireless health monitors which track an individual's vital signs in real-time such as blood pressure monitoring, and glucose monitors.

Dr Gareth Conway, AntennaWare Co-founder comments, "By joining forces with a partner with the reach and reputation of Silicon Labs, we will be able to offer the market a robust solution to a very real problem for many wireless manufacturers – one that has held back adoption of wireless technologies in many areas up to now."

"One of the stickiest trends from the COVID-19 pandemic has been the adoption of wearable devices by consumers to gain greater insights into their own health," said Anders Pettersson, Director of Mass Market, Silicon Labs. "Our partnership with AntennaWare gives us a new way to address one of the most common challenges with wearables and improve their connectivity."

www.antennaware.co.uk