

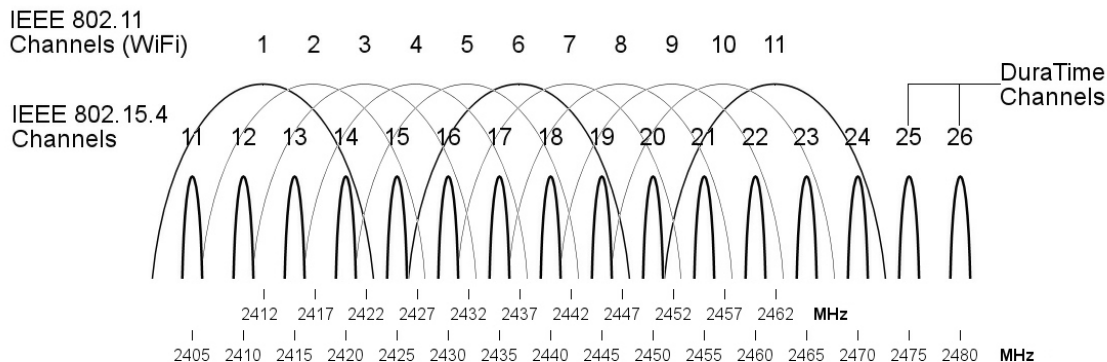


DuraTime and WiFi (and other wireless systems)

DuraTime wireless clock and mass notification systems use the standard IEEE 802.15.4 wireless communications protocol located in the 2.4 GHz radio band. WLAN or WiFi also resides in this band. The question is, can IEEE 802.15.4 coexist with other radio systems?

Yes, the IEEE 802.15.4 standard has been specifically designed to coexist with other radio systems operating in the ISM bands, and to provide robust transmission in the presence of interference. The IEEE 802.15.4 standard defines interference avoidance protocols ('Energy Detect', 'Link Quality Indication' and 'Clear Channel Assessment') and also implements direct sequence spread spectrum modulation. This reduces the power spectral density and lowers the required signal to noise ratio, improving interference immunity.

The data packets used by the DuraTime wireless clock system are small and non-streaming. Therefore, band loading as a result of DuraTime transmissions is highly unlikely.



Even though IEEE 802.15.4 was specifically designed to coexist with WiFi, BRG has taken this compatibility a step further by only using IEEE 802.15.4 channels that lie outside the WiFi frequency range. All DuraTime wireless clock and mass notification products use radio channels above the channels used by WiFi devices. Additionally, DuraTime uses AES 128 bit data encryption to enhance security and reliability.

DuraTime wireless products will not interfere with properly operating WiFi products. Furthermore, properly operating WiFi, Bluetooth, or Wireless USB devices will not interfere with DuraTime wireless products. However, broad radiation sources such as microwave ovens in close proximity can interfere with DuraTime communications; but, due to the highly redundant nature of the DuraTime system, overall operation is not affected by broad radiation sources.