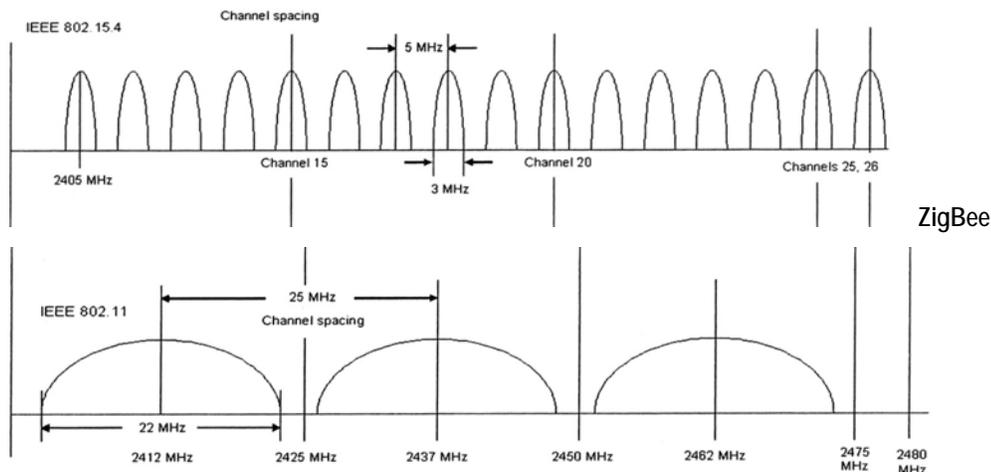


## MobileCollect Does Not Create RF Interference

Interference issues with wireless systems are a concern of every wireless implementation. The 3<sup>rd</sup> generation MobileCollect from MicroRidge is actively used by the world's largest manufacturers, and has a "Zero Interference" record. MicroRidge wireless has not had interference issues for many reasons.

- The design and technology platform in MobileCollect is a somewhat unique use of the 2.4 GHz ISM band (Industrial, Scientific and Medical). This is especially interesting as MobileCollect continues to replace other wireless systems operating in the 400 and 900 ranges while solving their interference and reliability issues.
- MobileCollect has a packet transmitter "on" time of only approximately 15 msec (including response). If there are 20 inspectors, each taking 500 measurements a day each for a daily total of 10,000 measurements, then actual "wireless air time" for the entire day is about 150 seconds!
- Instant-on technology, extremely small data packets and pre-association helps make the system lightning fast. The Base listens but there is "zero air time" until data is sent by a Mobile Module or a Remote.
- The range and power of MobileCollect is limited to what is required. Mobile Module range is limited to about 133 feet eliminating unnecessary wireless overlap in implementations.
- MobileCollect is built around ZigBee in the 2.4 GHz ISM band. MicroRidge has implemented the features of the ZigBee standard that are important to making measurement collection very reliable. These include channel selection, data packet acknowledgements, point to point transmission, data validation checks, etc.
- Because both ZigBee and WiFi are "spread spectrum", they occupy not just one but multiple "bands of frequencies". The "band of frequencies" used by ZigBee is only 3 MHz wide, while WiFi channels are 22 MHz wide. The center of these bands transmit more data and with higher energy levels.
- Standard 2.4 Wi-Fi has 3 channels without overlap: 1, 6 and 11. MobileCollect gives you control over 16 of the narrow ZigBee channels. Several of the available MobileCollect channels operate in the frequencies in-between or on the outskirts of standard Wi-Fi channels (see below).



- 32-bit encryption is integrated into every MobileCollect Mobile Module and Remote.
- MobileCollect has been purposefully designed for reliability in the hostile RF environments that routinely exist in manufacturing and industrial applications. Additional reliability of the data is ensured with checksums sent with every read and retries if needed.
- When you consider the control given over frequency selection, the fact that the wireless may only be on for seconds a day and the other important features in the design, it becomes clear that MobileCollect is a great choice for wireless gaging.

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