



Duty Cycle Correction factor for WIT2410

From a duty cycle standpoint, the worst case scenario of a WIT2410 transmission can be calculated as follows. The maximum time a WIT2410 can transmit on a single hop is calculated as:

$$280 \text{ bytes} * 8 \text{ bits/byte} * (1/460.8 \text{ Kbps}) = \mathbf{4.86 \text{ ms}}$$

A WIT2410 (in any configuration or operating condition) can never transmit more than **4.86 ms** during a single hop.

The minimum hop duration (time on a given channel) for this maximum transmit time is **6.94 ms**. Given that we have 75 channels in our hop set, it takes **521 ms** to go through the entire hop table and repeat a transmission on the same channel. Therefore, the WIT2410 can only transmit for 4.86 ms on any given channel over a 100 ms period.

The transmission duty cycle correction factor is then calculated as $20 * \log (4.86\text{ms}/100\text{ms}) = \mathbf{-26.3 \text{ dB}}$.

I hereby declare that the above statement is true and accurate.

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