[Texas Instruments Electronics](http://challenges.robotevents.com/challenge/50) Challenge

**1. Introduction**

2.4G Optical Wireless Mouse is one of most of common wireless mouse, which is a plug and play device. Wireless transmission is achieved by using 2.4GHz Wireless spread spectrum communication for wireless mouse. The longest sensing distance is 10-14 meters where transmission isn’t interfered from obstacle. Therefore, the wireless transmission model can be used for programming wireless downloading for VEX IQ.

1. **Chips and Component**

The nRF24L01 chip is a single chip 2.4GHz Transceiver that is found in 2.4G Optical Wireless Mouse. The nRF2L01 is configured and operated through a Serial Peripheral Interface(SPI) so that data can be send and received. Current Consumption is very low if use the nRF24L01 chip. Current consumption with transmit mode is 9mA and 12.3mA in receive mode, respectively. I think that nRF24L01 is a kind of Texas Instruments components.

1. **Findings**
2. The nRF24L01 chip is a role of transit mode in wireless mouse system. The wireless transmission is achieved by using 2.4GHz communication that send to USBNANO connected with computer.
3. The nRF24L01 chip can be used wireless programming downloading for VEX IQ by configuring SPI in Robot brain if possible.
4. **Conclusion**

One chip can be used in different devices according to the particular function. Therefore, you will find that science and technology is originated in life if you observe more.







