**Difference between I2C/SPI**

Here the differences between I2C/SPI

* SPI supports full duplex communication with higher throughput than I2C. It is not limited to 8-bit words so you can send any message sizes with arbitrary content and purpose.
* The SPI interface does not require pull-up resistors, which translates to lower power consumption. However, I2C is simpler by having fewer lines which means fewer pins are required to interface to an IC.
* When communicating with more than one slave, I2C has the advantage of in-band addressing as opposed to have a chip select line for each slave.
* I2C also supports slave acknowledgment which means that you can be absolutely sure that you’re actually communicating with something. With SPI, a master can be sending data to nothing at all and have no way to know that. In general SPI is better suited for applications that deal with longer data streams and not just words like address locations. Mostly longer data streams exist in applications where you’re working with a digital signal processor or analog-to digital converter.
* Moreover, since SPI can support significantly higher data rates comparing to I2C, mostly due to its duplex capability, it is far more suited for higher speed applications reaching tens of megahertz. And since there is no device addressing involved in SPI the protocol is a lot harder to use in multiple slave systems. This means when dealing with more than one node, generally I2C is the way to go.
* Speed

100-400Kbits (I2C)  
1 to 50Mhz (SPI)