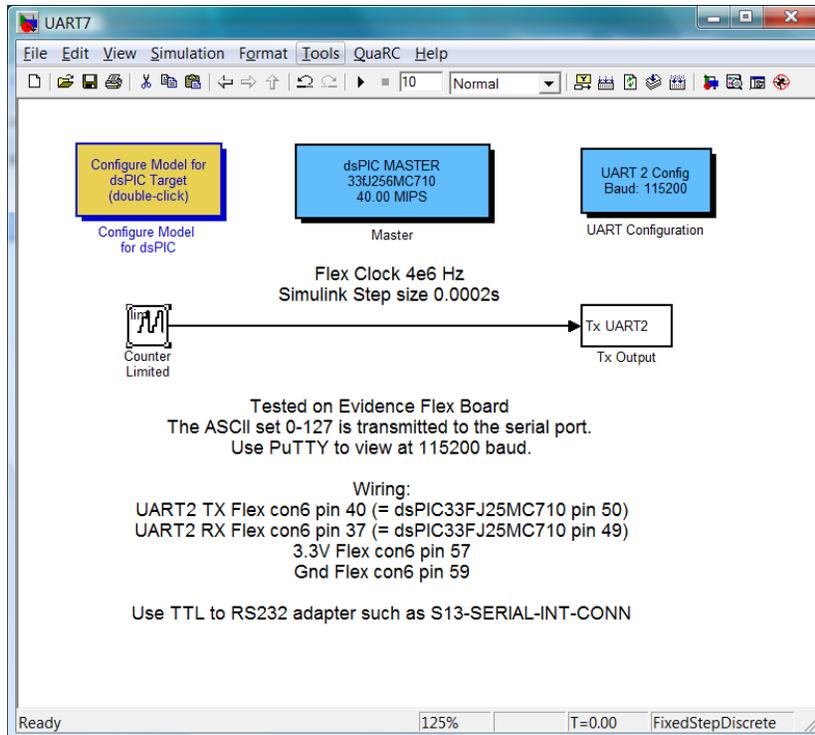


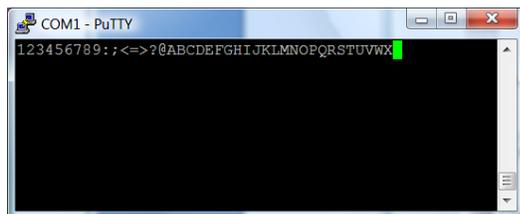
## Serial Communications with Microchip dsPIC33

The dsPIC microcontroller is programmed to transmit data on a serial line. Programming is done through the Simulink Blockset: [http://www.kerhuel.eu/wiki/Simulink - Embedded Target for PIC](http://www.kerhuel.eu/wiki/Simulink_-_Embedded_Target_for_PIC)

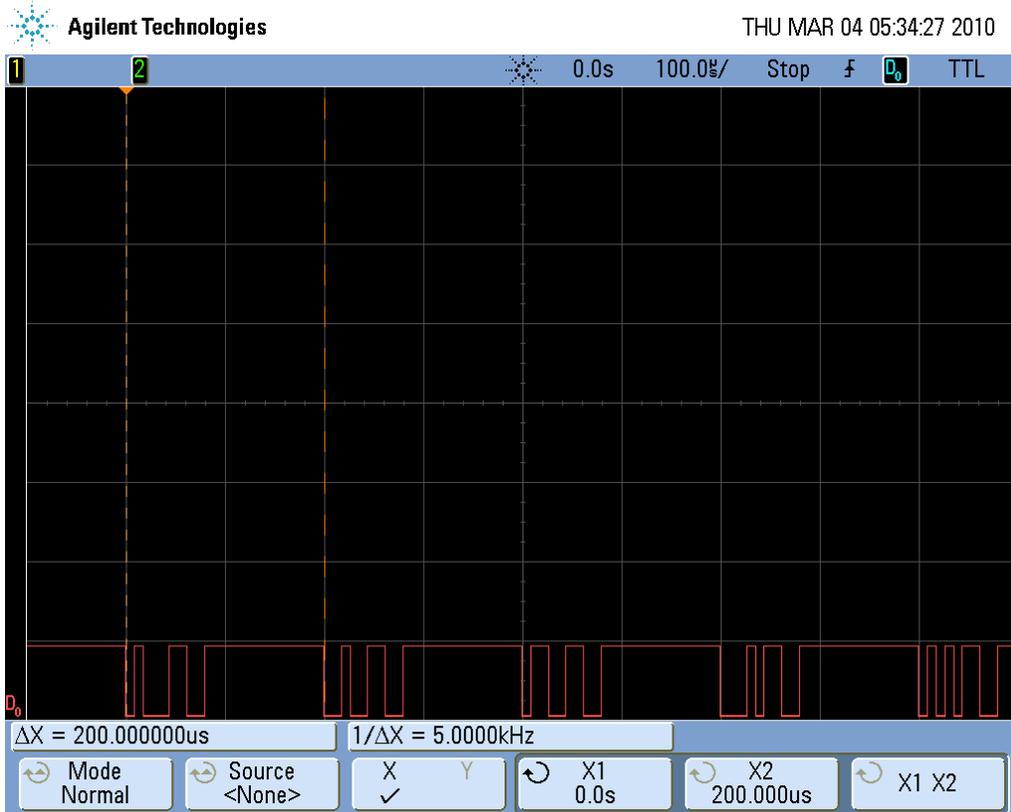


The Evidence Flex board is used for this project: <http://www.evidence.eu.com/content/view/154/207/>

The program produces a portion of the ASCII character set which can be viewed using PuTTY, Hyperterm, or other RS232 terminal program.



An Oscilloscope trace of the Flex board TX pin shows the data being transmitted. At a baud rate of 115200, an 8-bit word with one stop bit has a duration of about 80 microseconds. Setting the Simulink sample rate to 0.0002 seconds (200 microseconds) allows a dead time between words. This system is transmitting 8-bit words at 5 kHz



The program is built (CTRL-B) directly from simulink. The resulting .hex file imported (file > import) to MPLAB. In MPLAB the dsPIC chip and the programmer are selected, build configuration is set to release mode, and the chip is programmed.