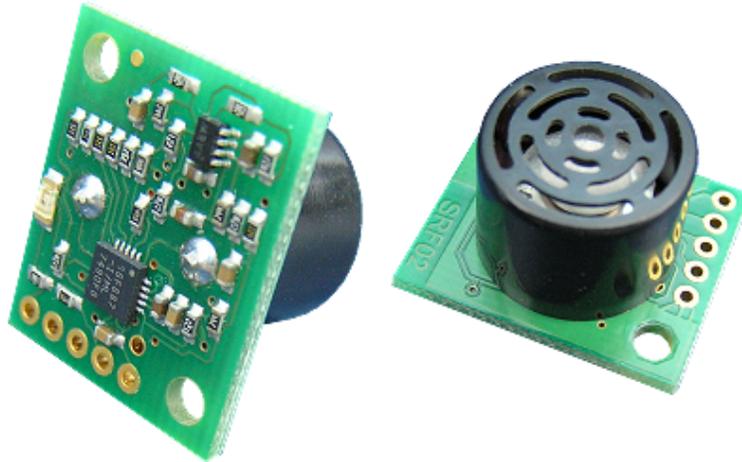# SRF02 Ultrasonic range finder
Technical Specification


Overview
The SRF02 is a single transducer ultrasonic rangefinder in a small footprint PCB. It features both I2C and a Serial interfaces. The serial interface is a standard TTL level UART format at 9600 baud,1 start, 2 stop and no parity bits, and may be connected directly to the serial ports on any microcontroller. Up to 16 SRF02's may be connected together on a single bus, either I2C or Serial. New commands in the SRF02 include the ability to send an ultrasonic burst on its own without a reception cycle, and the ability to perform a reception cycle without the preceding burst. This has been as requested feature on our sonar's and the SRF02 is the first to see its implementation. Because the SRF02 uses a single transducer for both transmission and reception, the minimum range is higher than our other dual transducer rangers. The minimum measurement range varies from around 17-18cm (7 inches) on a warm day down to around 15-16cm (6 inches) on a cool day. Like all our rangefinders, the SRF02 can measure in uS, cm or inches.

Operating Modes
There are two operating modes for the SRF02. I2C mode and Serial Mode. This is set with the Mode pin, connected to 0v Ground for Serial Mode and left unconnected (or tied to +5v Vcc) for I2C Mode. These are documented on individual pages. For I2C Mode click here, and for Serial Mode click here.

SRF02 USB
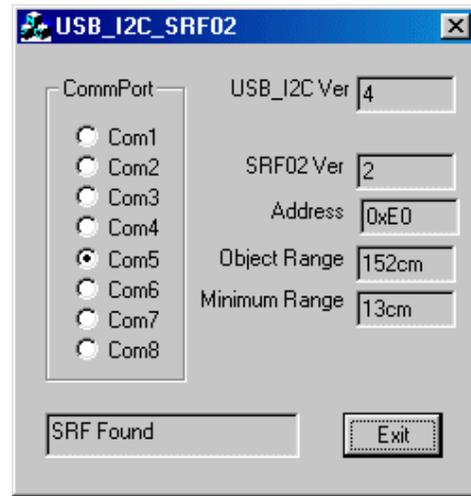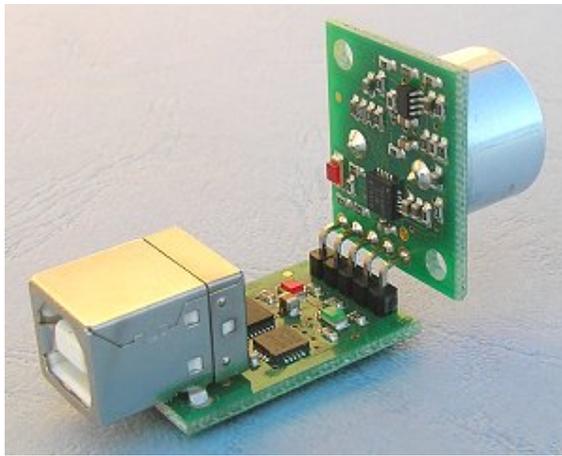
Connecting the SRF02 to your PC via USB is this easy. The USBI2C module supplies the SRF02 with power directly from the USB bus. The USB_I2C_SRF02 program can be downloaded here.

Beam Width
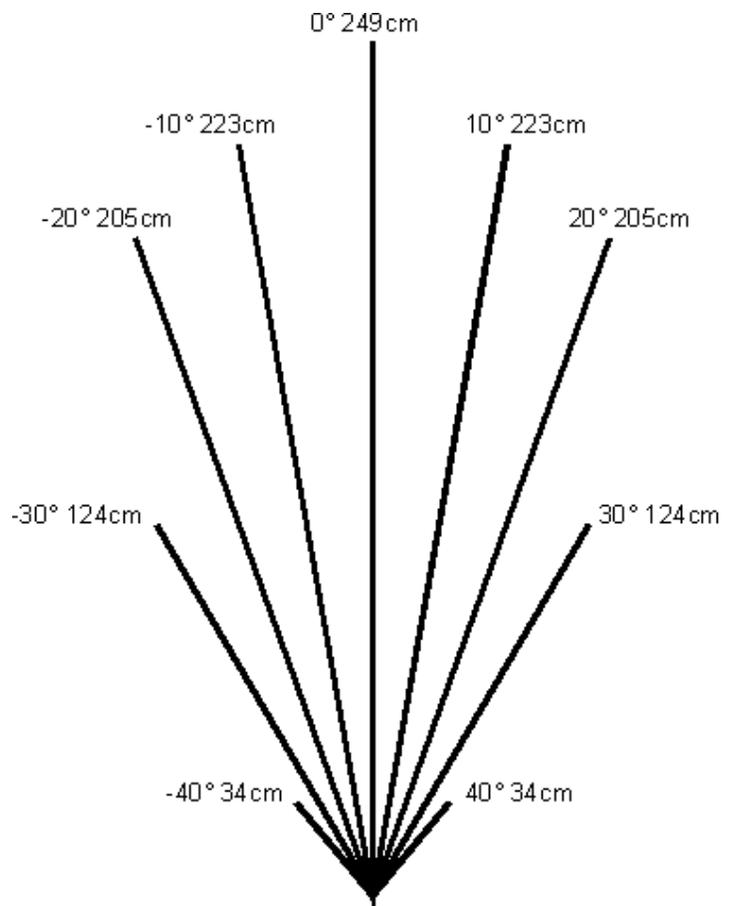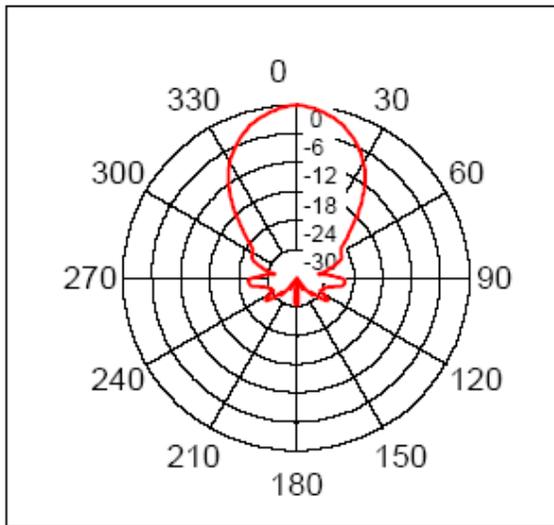
The manufacturers beam pattern, showing the
sensitivity of the transducer in db.

This is the measured beam pattern for the SRF02,
showing the maximum detection range of a 55mm diameter
plastic pipe.

Dimensions