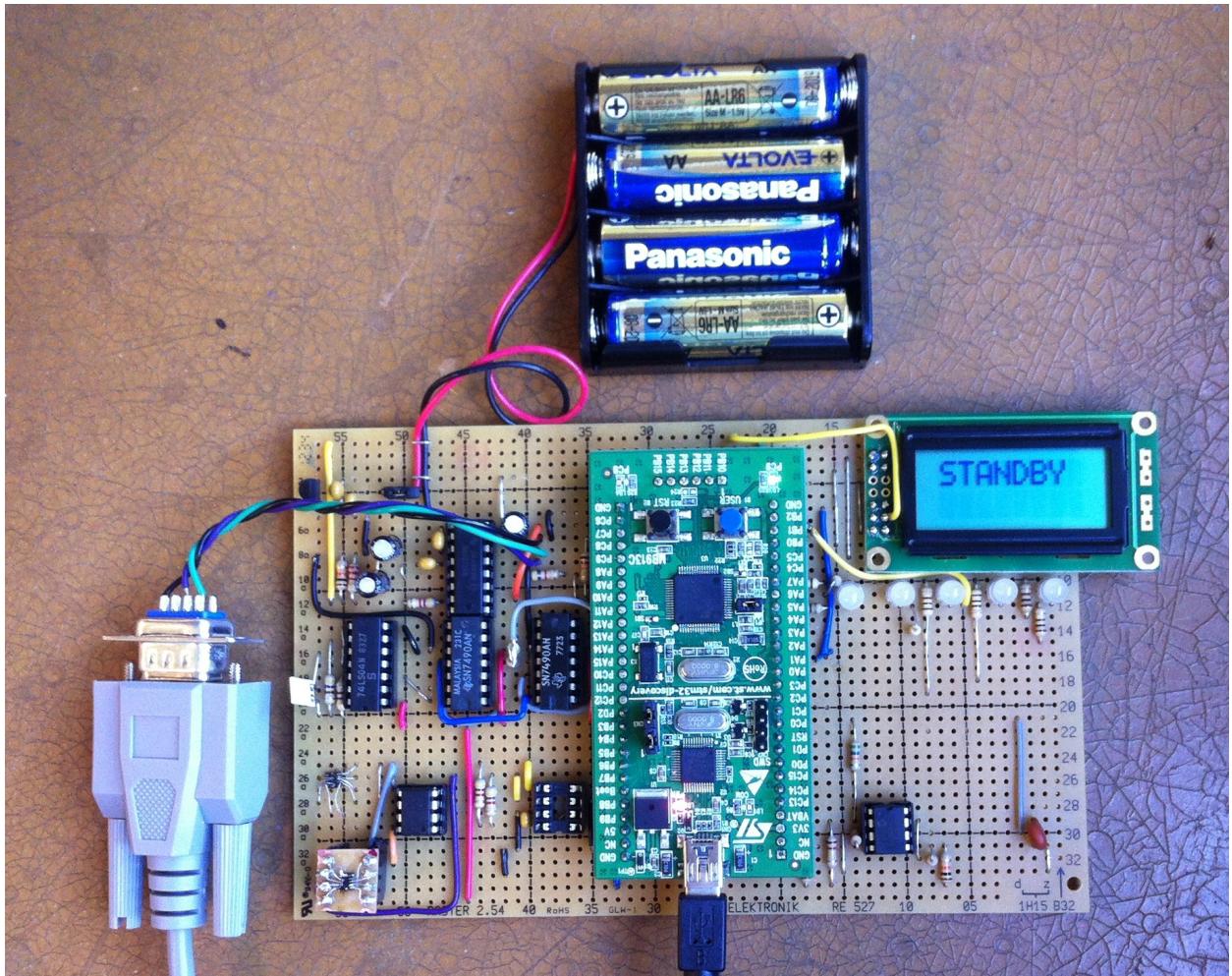


## Parcel Tracking Datalogger



### Features

- RS232 capable.
- Outputs data in CSV format.
- Low power consumption: 95mA.
- Configurable sample period: 1s to 255s
- Supply voltage: 5.5V - 9V
- Minimum battery runtime (assuming 2000mAh cells): 15 hours.

### Typical Applications

- Proving liability in cases of negligent couriering.
- Validating a cold chain used in delivery of foods, chemicals or pharmaceuticals.

## **Modes of operation**

The datalogger is always in one of the following states:

- Idle - The device is waiting for input.
- Uploading - The device is transferring EEPROM data over RS232.
- Logging - The device is logging data to EEPROM.
- Streaming - The device is streaming data over RS232.
- Erasing - The device is zero-filling its EEPROM.

## **CSV convention**

The datalogger software exports data in the CSV format (since there is no defined standard most tolerated by Microsoft Excel using UK/US regional formatting (using commas as delimiters). The CSV files are ASCII-only. The format is:

Time/s, Temperature/C, Humidity/%RH, Accx/mg, Accy/mg, Accz/mg, Shaken?  
s1,t1,h1,ax1,ay1,az1,s1  
s2,t2,h2,ax2,ay2,az2,s2  
.....

## **Serial Interface**

The serial interface operates at 115200 bps. Valid pc -> device commands are:

Rx - R is ASCII character, x is unsigned integer that is the sample rate to be set.

L - Start streaming data to pc.

S - Stop streaming data to pc.

E - Erase EEPROM

U - Upload EEPROM contents.

Data is uploaded as raw sequential bytes from EEPROM, starting immediately after the "U" character is received.

## **Software**

The pc software is provided as both a windows executable and c++ source code.