

SD card user guide

SD card handling

CAUTION: Before inserting or ejecting the SD card, please make sure that the device is in sleep mode or powered off! Otherwise, there is a risk that the file system gets corrupted! Use only high-quality micro SD cards formatted with a FAT32 file system.

Logging function

If an SD card is present, the device writes all sensor data to a log file before sending (the green LED is on during the SD card access). If no SD card is present, the device just continues with sending. Log file name: “01234.csv”, where “01234” is the particular device ID. If the log file “01234.csv” is already present on the SD card, new data is appended at the end of the file. Otherwise, a new file named “01234.csv” is created automatically.

File format

The file contains comma-separated values (CSV) in plain text. Each line shows a time stamp followed by all available sensor data. The time stamp value is the number of seconds passed since the last device reset multiplied by 1024. Example:

```
...  
693604601, 33146, 20838, 33148, 22937, 2897  
694219001, 33147, 20838, 33148, 22937, 2897  
...
```

First line:

- Time stamp: $693604601 / 1024 \approx 677348 \text{ s} \approx 188 \text{ hours}$ passed since last device reset.
- 5 sensor values; e.g. last value: battery voltage = 2897 mV.

Second line:

- Time stamp advanced by $614400 = 600 \text{ s} = 10 \text{ min}$ since last measurement.
- 5 sensor values: see above.

If sensor values are missing (because a sensor is not connected), the respective fields are empty:

```
...  
693604601, 33146, 20838, , , 2897  
694219001, 33147, 20838, , , 2897  
...
```

CSV files can conveniently be opened and edited by spreadsheet programs (Excel or similar), where the values are presented in columns.