

Description:

The Logy protocol is a simple protocol to save raw data from DS18B20 1-wire Temperature sensors to a standard sd (1.00 spec.) card. It depends on a fixed block size of 512bytes and is able to save several series of measurements on one sd-card.

Notice: This protocol is project specific to Logy (v1) and might not be useful for other projects

First block:

First (1bit) = 1	Block ID (16 bit)
Number of sensors (7 bit)	
Reserved (8 bit) = 0	
Serial Number (Number of sensors * 48 bit) <i>REPEATED FOR EVERY SENSOR</i>	
Padding (to then end) = 0	

First:

Indicates if this is the first block of a measurement series.

Block ID:

Identifies a specific block. At the start of the series of measurements a random number is generated and used as the first Block ID. From this point every successive block belonging to this series of measurement will have this number incremented by one. This makes it possible to see where the series starts and ends without a index table. If the ID exceeds the boundary it wraps around to 0.

Number of sensors:

Contains the number of sensors attached to the logger.

Serial Number:

1-wire serial number of the device.

Successive blocks:

First (1bit) = 0	Block ID (16 bit)
Last battery voltage (10 bit)	
Number of entries (9 bit)	
Reserved (8bit) = 0	
Sensor reading (13 bit * Number of sensors) <i>REPEATED FOR EVERY ENTRY</i>	
Ok (1bit)	Raw Sensor reading (12 bits)
...	
Padding (to then end) = 0	

Notice: For the other field description see First block.

Ok:

Flag indicating if this sensor could be read out without any errors. (Ok = 1 | Error = 0)

Sensor reading:

Contains one single reading of all sensors, is repeated for every measurement in the block.

Raw Sensor reading:

Contains one single reading of a single sensor. Is contained in the sensor data field. Is repeated for every sensor.