# Debugging de la trama de datos del sensor PMS5003

- Logic analyzer → http://vdwaa.nl/logic%20analyzer/pulseview/arch/linux/5-euro-usb-logic-analyzer/

## Communication protocol

Serial port baudrate: 9600; Parity: None; Stop Bits: 1; packet length is fixed at 32 bytes.

| | |
|---|---|
| Start Character 1 | 0x42(fixed bit) |
| Start Character 2 | 0x4d(fixed bit) |
| Frame Length 16-byte | Frame Length = 2*9+2 (data+check bit) |
| Data 1, 16-byte | concentration of PM1.0, ug/m3 |
| Data 2, 16-byte | concentration of PM2.5, ug/m3 |
| Data 3, 16-byte | concentration of PM10.0, ug/m3 |
| Data 4, 16-byte | Internal test data |
| Data 5, 16-byte | Internal test data |
| Data 6, 16-byte | Internal test data |
| Data 7, 16-byte | the number of particulate of diameter above 0.3um in 0.1 liters of air |
| Data 8, 16-byte | the number of particulate of diameter above 0.5um in 0.1 liters of air |
| Data 9, 16-byte | the number of particulate of diameter above 1.0um in 0.1 liters of air |
| Data 10, 16-byte | the number of particulate of diameter above 2.5um in 0.1 liters of air |
| Data 11, 16-byte | the number of particulate of diameter above 5.0um in 0.1 liters of air |
| Data 12, 16-byte | the number of particulate of diameter above 10.0um in 0.1 liters of air |
| Data 13, 16-byte | Internal test data |
| Check Bit for Data Sum, 16-byte | Check Bit = Start Character 1 + Start Character 2 + ...all data |

- https://www.dfrobot.com/wiki/index.php/Air_Quality_Monitor_(PM_2.5,_Formaldehyde,_Temperature_%26_Humidity_Sensor)_SKU:_SEN0233#Board_Overview
- https://www.dfrobot.com/wiki/index.php/PM2.5_laser_dust_sensor_SKU:SEN0177

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