

## The current 1wire decoders situation in sigrok is :

in addition to the *1wire-link* and *1wire-network decoders*, the existing 1wire devices decoders are:

- DS2408        8 channels switch
- DS243x       EEPROM
- DS24EA00    Temperature sensor

The **DS28EA00 device** shares a commands set with other 1wire temperature sensor devices:  
5 ROM commands + 6 Function commands.

My **proposed decoder** (named **DS18B20** for the time being but this can/must be change) implements all these commands.

Devices list sharing this commands set supported by my **proposed decoder**:

- DS1822
- DS1825
- DS18S20
- DS18B20 / DS18B20-PAR
- DS28EA00

The existing **DS28EA00 decoder** implements only a subset of these commands.

The existing **DS28EA00 decoder** doesn't decode all the information, it just mentions the command name.

My **proposed decoder** decodes all the information:

When decoding the ROM it decodes the device 48bits unique ID, the device type and the CRC.

When decoding a "read scratchpad" command it displays: Temperature, TH (high threshold alarm), TL (low threshold alarm) and resolution.

Screenshot exemples here after.

The same applies for a "write scratchpad command".

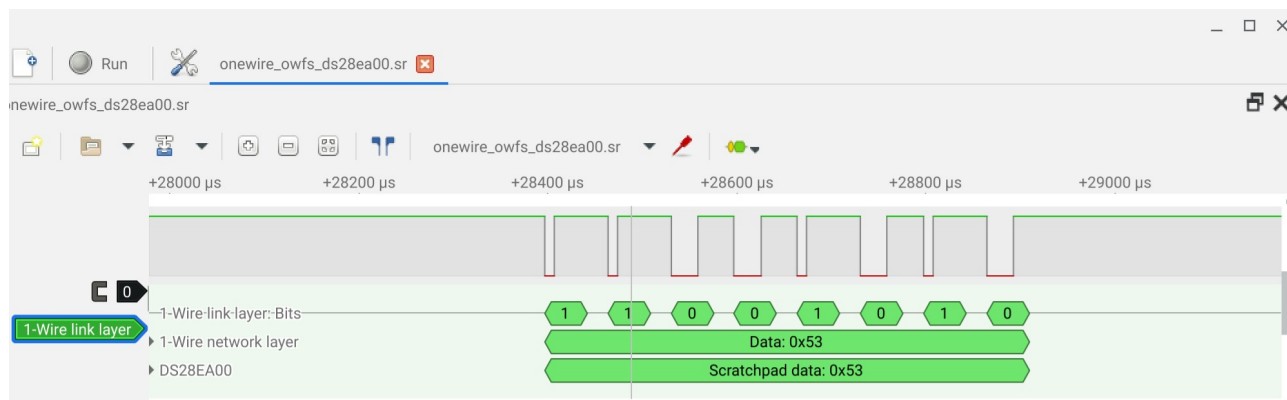
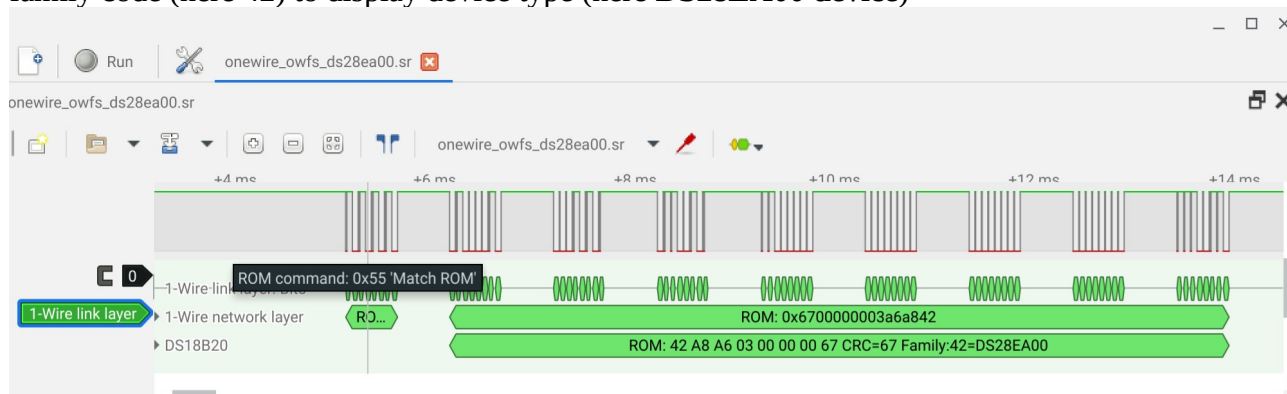
## Differences between ds28ea00 decoder and ds18b20

Reading the same file : onewire\_owfs\_ds28ea00.sr from sigrok git



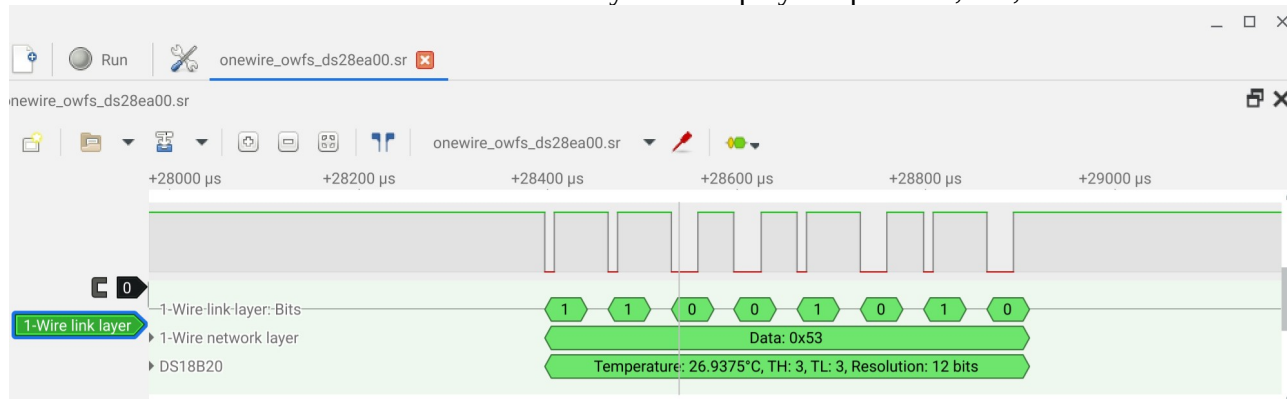
Above **DS28EA00 decoder** showing ROM as received from 1-Wire-network-layer

Here under **DS18B20 decoder** showing ROM in correct order (1wire standard) + CRC + decoding family code (here 42) to display device type (here **DS28EA00 device**)

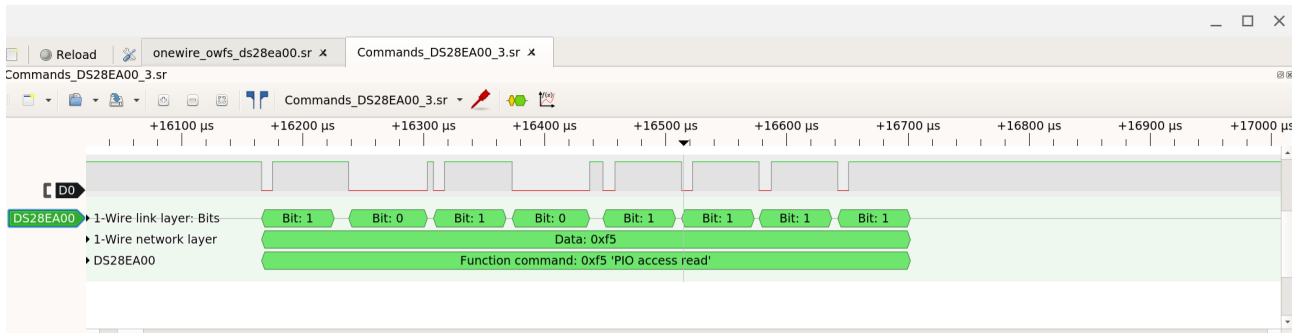


Above **DS28EA00 decoder** displaying last read scratchpad byte (the 9th)

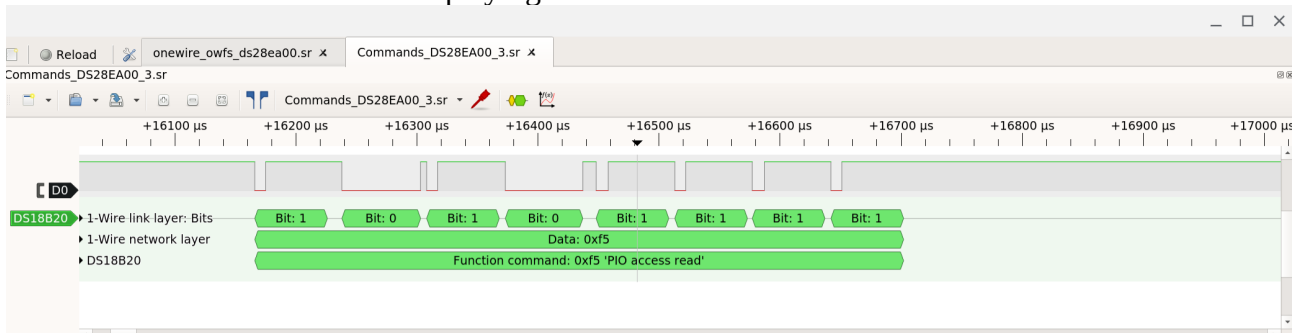
Here under **DS18B20 decoder** decodes the 9 bytes to display temperature, TH, TL and resolution.



However the **DS28EA00 decoder** implements 3 commands that are not shared with other 1wire temperature devices. My proposed decoder currently doesn't implement these 3 commands. But I can easily add them. It doesn't hurt as other devices will never use these commands. In this case the **DS28EA00 decoder** can be removed (or kept).



Above **DS28EA00 decoder** displaying one “**DS28EA00 only command**”  
Here under **DS18B20 decoder** displaying the same



### Summary:

- Choose if yes/no I add the 3 “**DS28EA00 only commands**”.
- Change the name of my proposed decoder, because it's not DS18B20 only. May be something like “DS\_Temperature” or “1wireTemperature”

Let me know what do you think of that.

Thanks for having taken the time to read.