



Firmware of
Temperature Monitor

Programmers

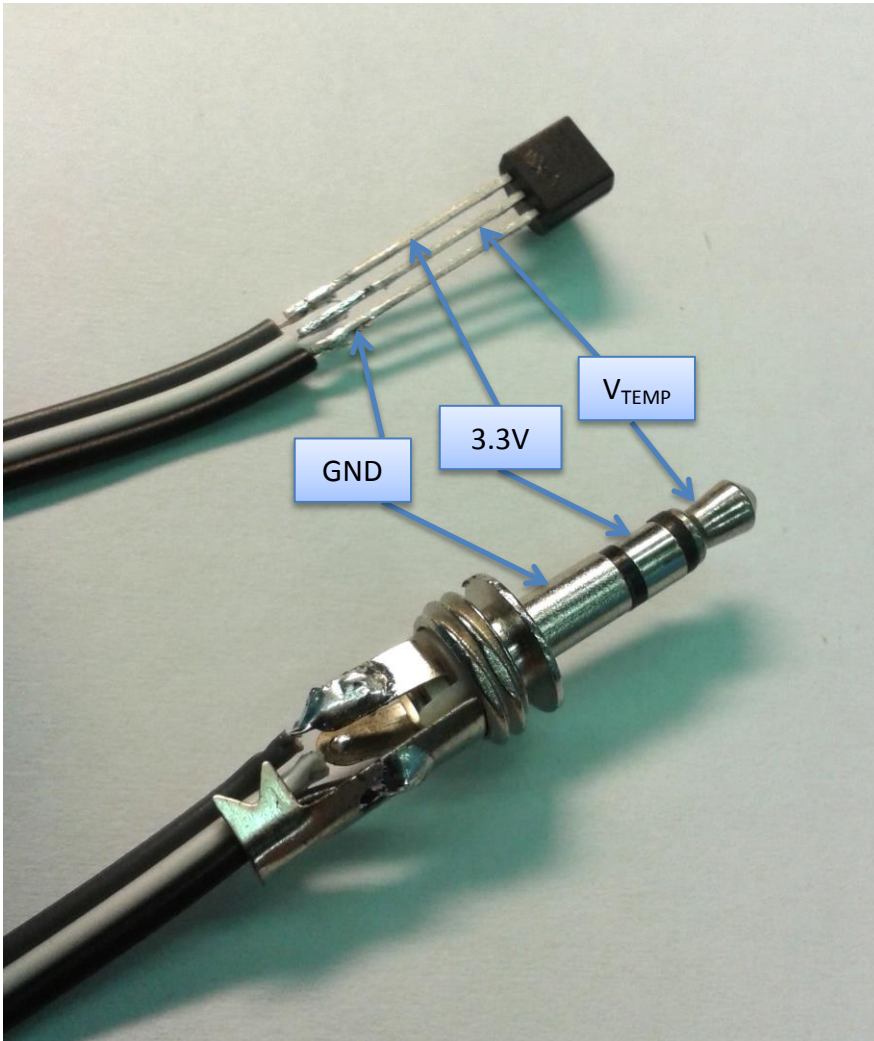
Manual

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Introduction

Temperature monitor uses analog sensor MCP9700 with range -40°C to $+125^{\circ}\text{C}$, manufacturer rated accuracy $\pm 4^{\circ}\text{C}$ (max.), 0°C to $+70^{\circ}\text{C}$.



FTDI descriptor

"Temperature Monitor SN:001"

Communication protocol

Frame structure

Command frame (PC -> TempMon):

Command
CMD

Answer frame (PC <- TempMon):

Frame Start	Main data	End of frame
0x55	Data	0xAA

Commands

Command overview

Code	Cmd name	DataOut
'h'	Send all Temperatures bin	6
'a'	Send all Temperatures txt	
't'	Send one Temperature txt	

Send all Temperatures bin ('h')

Report temperatures of attached sensors in binary form

Input Frame:

Command
0x68

Output Frame:

Frame Start	Main data						End of frame
0x55	Hi3	Lo3	Hi2	Lo2	Hi1	Lo1	0xAA

Temperature1 = (Hi1 * 256 + Lo1)/10 [°C]

Temperature2 = (Hi2 * 256 + Lo2)/10 [°C]

Temperature3 = (Hi3 * 256 + Lo3)/10 [°C]

Not connected sensor reports Hi = 0x7F, Lo = 0xFF

Send all Temperatures txt ('a')

Report temperatures of attached sensors in human readable form

Input Frame:

Command
0x61

Output Frame:

T3 * 10	Separ.	T2 * 10	Separ.	T1 * 10	Separ.
274	\t	32767	\t	32767	\n

Send one Temperature txt ('t')

Report temperature of attached sensors in human readable form