

My Tech notes

collection of my electronics projects and ideas

Reprogramming a HC-11 CC1101 433MHz Wireless Transceiver Module

Posted on September 3, 2016 by mauritsvandelande

The HC-11 and HC-12 are low cost 433MHz Wireless Transceiver Modules. It would be fun if opensource firmware could be developed for the on-board STM8S003F3P6 microcontroller. A free IDE for STM8 can be downloaded at Cosmic <http://cosmic-software.com/download.php> or look at STVD-STM8 from ST.

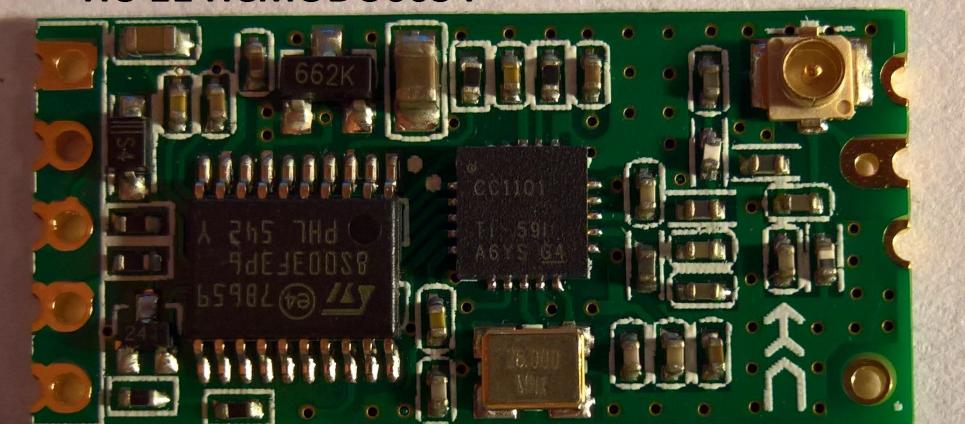
After investigating the HC-11 pcb two test pads are identified. One connects to the SWIM port, the other to RESET. This is a HC11 HCMODUo054.

Luckily all digital CC1101 pins are connected to the STM8. See the connection matrix for details.

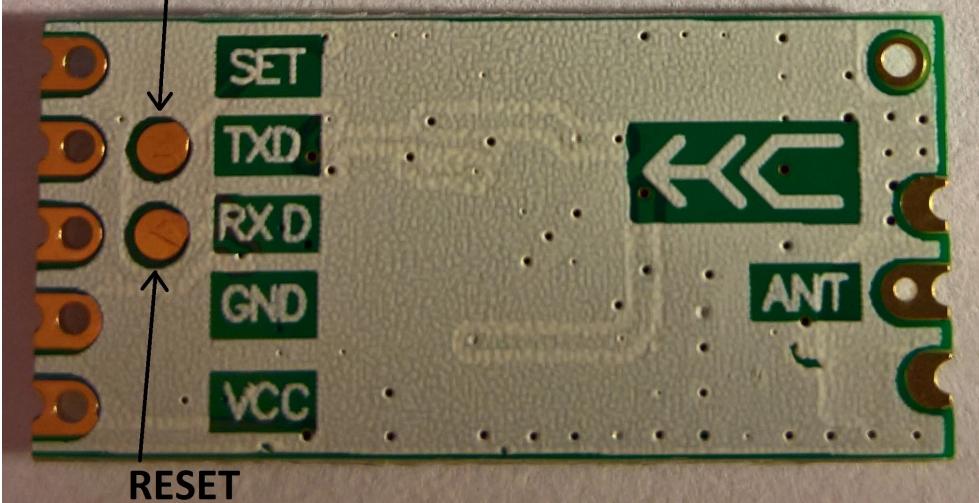
Connection matrix :

Pin Name	From	Pin Name	To	remarks
SET	Edge	PC3	STM8	1K resistor between SET and PC3 10k pullup to VDD
TXD	Edge	UART_TX	STM8	200R resistor between NPN Collector and 10k pullup to VCC NPN base connected to UART_TX
RXD	Edge	UART_RX	STM8	Diode between RXD and UART_RX (Cathode connected to RXD) 10k pullup to VDD at UART_RX
GND	Edge	GND		
VCC	Edge	Vin	XC6206P	VDD 3.3V
CSn	CC1101	PD4	STM8	
GDO0	CC1101	PD3	STM8	
SI	CC1101	MOSI	STM8	
SCLK	CC1101	SCK	STM8	
SO (GDO1)	CC1101	MISO	STM8	
GDO2	CC1101	PD2	STM8	
na	Bottom	SWIM	STM8	Pad between TXD pin and TXD label. See picture for more info
na	Bottom	nRST	STM8	Pad between RXD pin and RXD label. See picture for more info

HC-11 HCMODU0054



SWIM



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