openKeyboard Chatpad360

This version forked from https://github.com/Neo-Desktop/OpenChatpad360

Note: on my unit baudrate appears to be 5340 bps (not 4800 as expected)

development blog

Open Keyboard Project

Serial connections

Chatpad J1	colour	function
1	red	3v3
2	brown	Rx
3	black	Tx
4	oange	Gnd
5	yellow	J2 tip
6	blue	J2 ring
7	white	J2 com

Note: j2 com is not connected to Gnd

Configuration key presses

```
Holding [people] button (that at this point should be called [user settings]) and pres
1) [user settings]+[right] increase backlight luminosity
2) [user settings]+[left] decrease backlight luminosity
3) [user settings]+[s] put keyboard into serial mode
4) [user settings]+[a] put keyboard into scan/advanced mode (still no ps2 mode...not o
5) [user settings]+[0-9] set backlight duration (0 = no light, 1 = on 2sec...9 = alway
6) other settings yet coded but not interfaced
```

minipro commands

Minipro Manual

Minipro Gitlab

programing connections

Chatpad JP1			TL866 ICSP	
1	V+	red	2	Vcc
2	MCLR	grey	1	Vpp/MCLR
3	ICSPCLK	grey	5	PGC
4	ICSPDAT	grey	4	PGD
5	PGM		n/c	(6-N/C)
6	GND	black	3	GND

check programmer

```
david@I7MINT:~/Github/sdcc-examples/test$ minipro -p "PIC16F883@DIP28" -I -D
Found TL866II+ 04.2.132 (0x284)
Device code: 19351299
Serial code: XV8HRFZBRYN6UM0A7RKQ
Activating ICSP...
Chip ID: 0x0101, Rev.0x2000  OK
david@I7MINT:~/Github/sdcc-examples/test$
```

read contents

- minipro -p "PIC16F883@DIP28" -I -r junk.hex

write test program

- minipro -I -d PIC16F883@SOIC28 -w blink_led.hex

program device

- minipro -p "PIC16F883@DIP28" -I -c code -e -w openKeyboard.hex
- minipro -p "PIC16F883@DIP28" -I -m openKeyboard.hex
- minipro -p "PIC16F883@DIP28" -I -e -c data -w openKeyboard.eeprom.bin
- minipro -p "PIC16F883@DIP28" -I -e -c config -w openKeyboard.fuses.conf

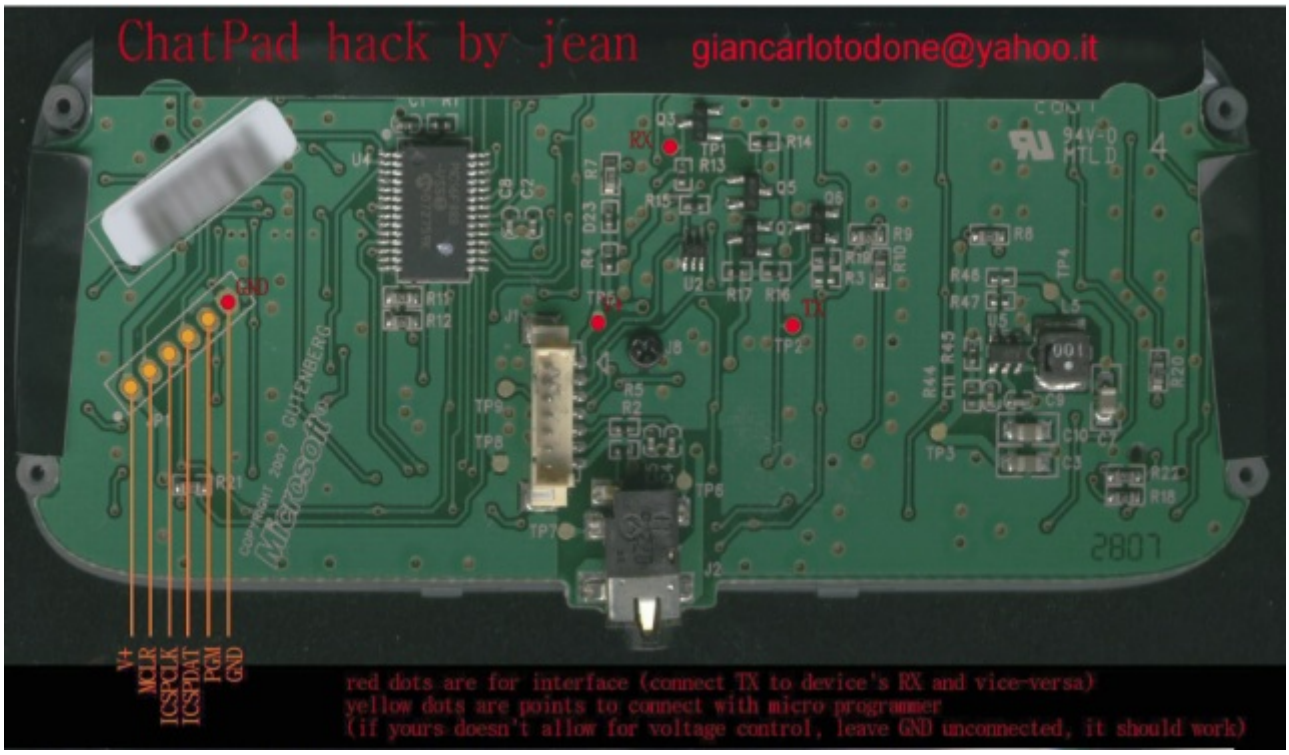
eeprom contents

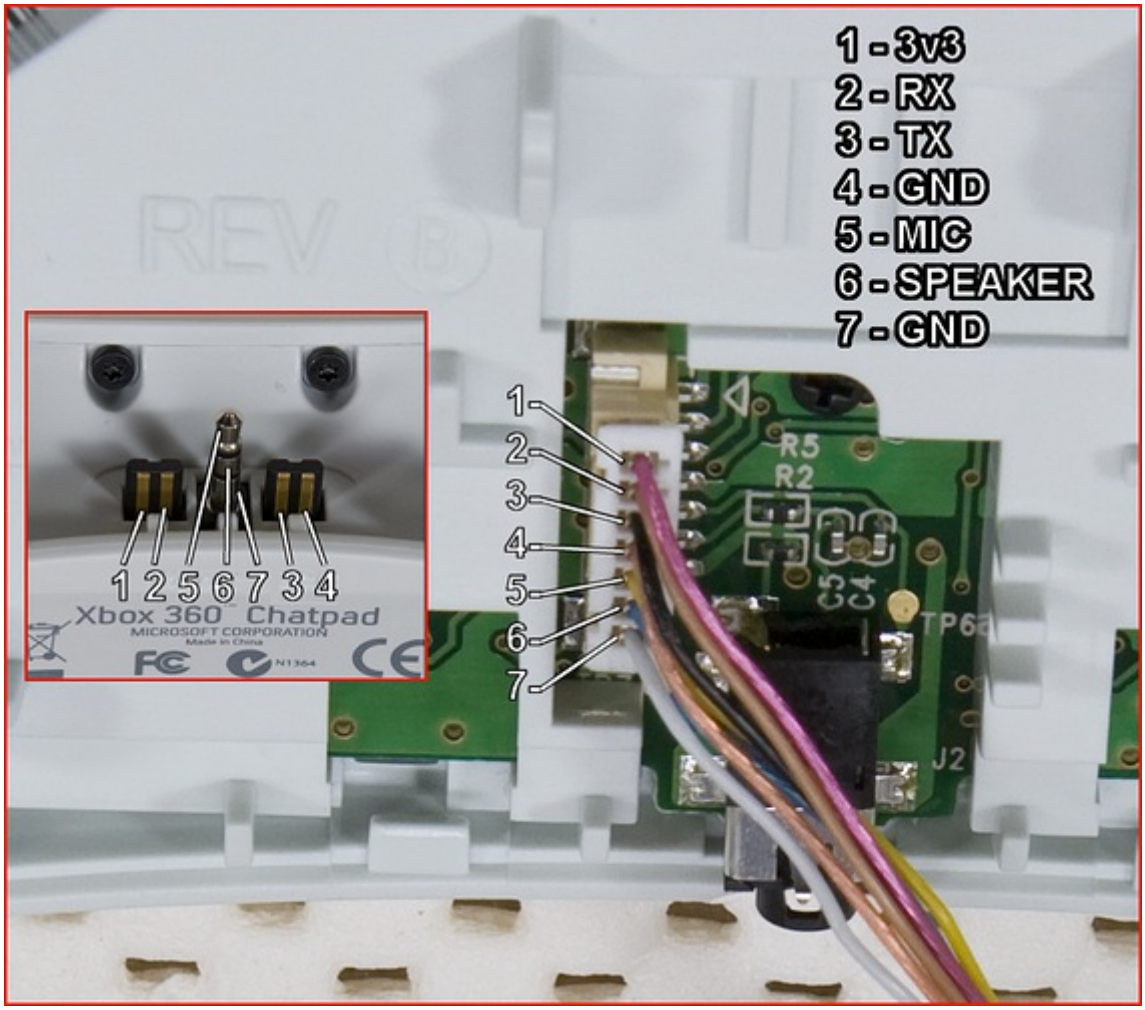
```
0000: FF 04 00 02 80 02
```

Config fuses

```
word1 = 0x20C4
word2 = 0x3fff
user_id0 = 0x3fff
user_id1 = 0x3fff
user_id2 = 0x3fff
user_id3 = 0x3fff
```

[Pic16f883 datasheet]





The pinout for the 28pin SSOP gives the SSI interface on:
pin 14 - SCLK/SCL
pin 15 - SDI/SDA
pin 16 - SDO

And the UART on:
pin 17 - TX/CK
pin 18 - RX/DT

Tracing the tracks from the J1 header should easily tell you which one they are using

The device supports ISP (in-circuit programming via JP1 header?) on:
pin 24 - PGM
pin 27 - ICSPCLK
pin 28 - ICSPDAT
pin 1 - _MLCR/VPP

Controlling leds from pic's PORTC...bit 0 is for general backlight, subsequent (in an order i did not wrote down and don't remember) are to independantly control shift, green, people and red backlights.And, of course, i could half-power each of them in PWM fashion...