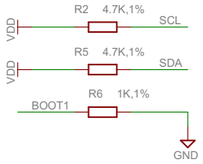
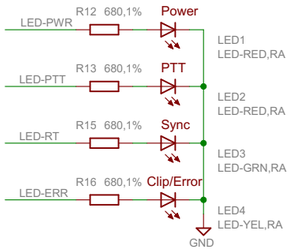
DATE	REVISION	ECN	REV	BY
04/21/14	Added to SourceForge Repository			RGB
04/25/14	Pre-Release to Prototype		A	RGB
05/28/14	Release for Review		B	RGB
06/13/14	Release for Prototype		B	RGB

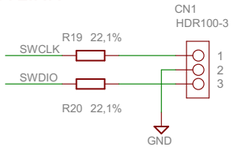
PULLUPS & PULLDOWNS



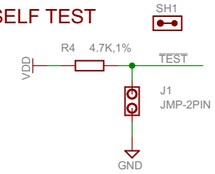
LED's



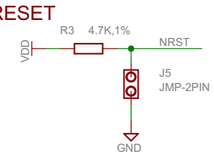
STLINK



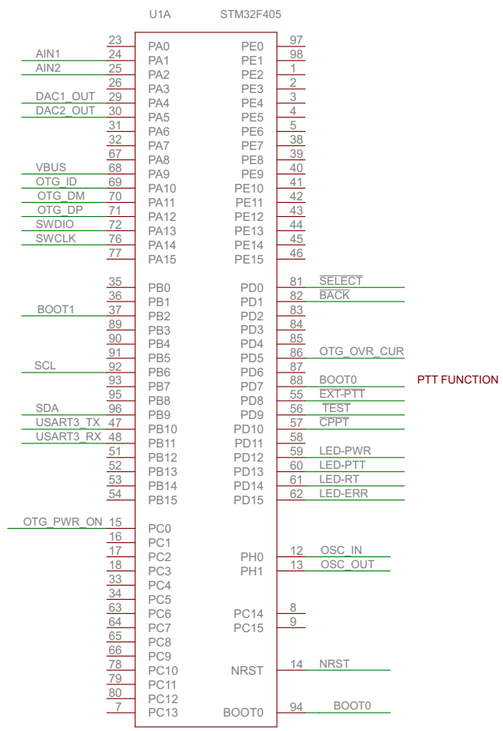
SELF TEST



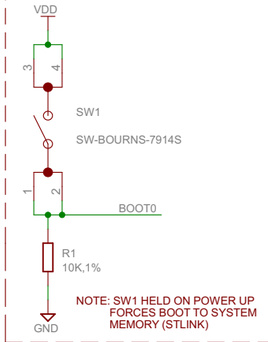
RESET



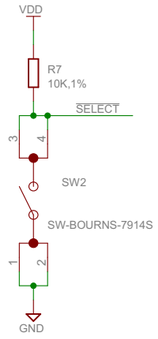
STM32F405 CPU



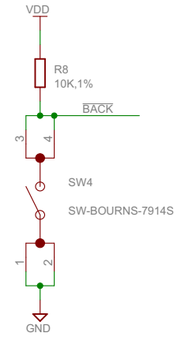
Push To Talk (PTT)



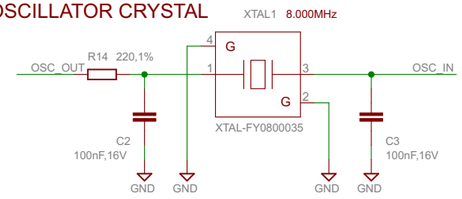
SELECT



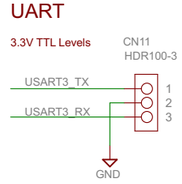
BACK



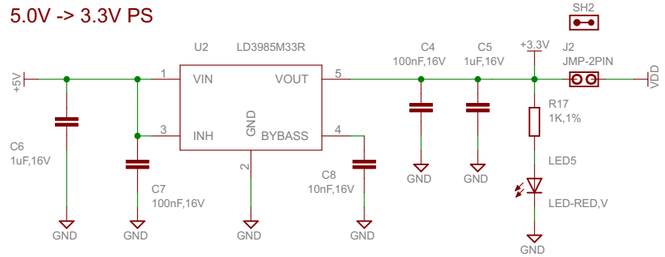
OSCILLATOR CRYSTAL



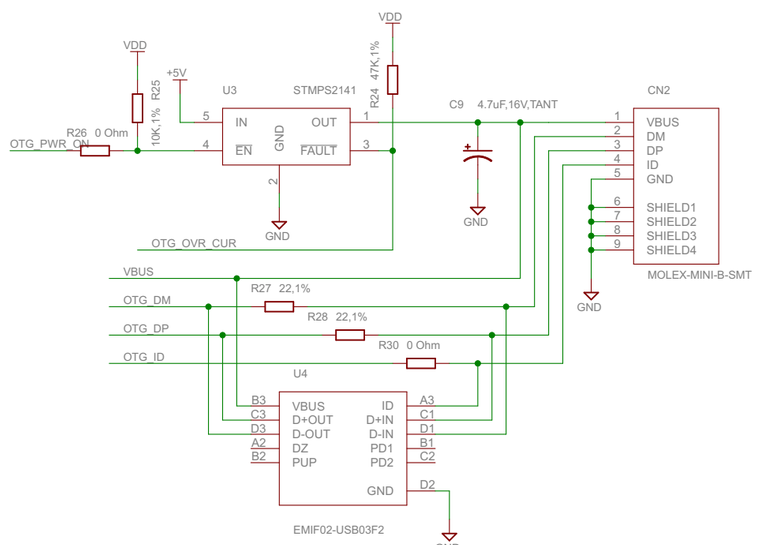
UART



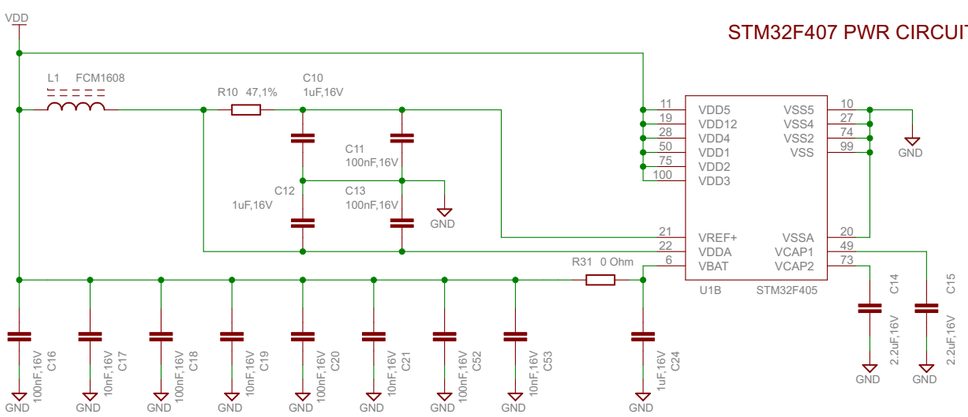
5.0V -> 3.3V PS



OTG USB INTERFACE



STM32F407 PWR CIRCUIT



Note: All non-polarized capacitors packages are 0603 unless otherwise noted.
Note: All resistor packages are 0603 unless otherwise noted.

PCB1
SM1000A
PRINTED CIRCUIT BOARD

ROWETEL

TITLE: SmartMic Circuit Board

Document Number: SM1000-REV-B

REV: B

Date: 6/15/2014 9:12:07 AM

Sheet: 1/2

DATE	REVISION	ECN	REV	BY
04/21/14	Added to SourceForge Repository			RGB
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EXTERNAL POWER

12 - 15VDC -> 5.0VDC

CN3 RASM712PX
FB5 FB FB1210
D2 BAT60J
+VEXT
SW3 DPDT PUSH
SH6 J7 JMP-2PIN
+VIN
C46 100nF,25V
C25 22uF,25V,1210
U5 TPS54329E
VIN VBST EN SW VREG5 SS VFB GND EP
C26 100nF,25V
4.7uH L2
C27 7.0pF
R34 10K,1%
C48 470nF,25V
C31 8.2nF,25V
C29 10uF,25V,1206
C28 10uF,25V,1206
R33 2.2K,1%
+5V
R35 124.0K,1%
R36 22.1K,1%
LED-RED,RA LED8
GND

EXT. PTT INPUT

MJ-3523-SMT
CN10
R37 2.2K,1%
BAT60J D3
EXT-PTT
C51 100nF,16V
VDD
GND

INTERNAL / EXTERNAL MIC PREAMP

MIC1 CMA-4544PF-W

NORMAL - 1-2
OPT MIC - 1 ONLY,
OPT MIC - 2-3

MJ-3523-SMT
CN5
EXT MIC INPUT
FB4 FB FB0805
SH3 JMP-2PIN J3
R39 22.1K,1%
C32 2.2uF,16V
C33 100nF,16V
C34 100pF,50V
C22 100nF,16V
C35 2.2uF,16V
R53 2.2K,1%
R41 2.2K,1%
R40 2.2K,1%
R38
R42 500K
U9 LMV341
AIN2
VDD GND

SPEAKER AMP

DAC2_OUT
C37 100nF,16V
R46 10K
+VIN
C23 100nF,25V
U8 LM386M-1
C39 220uF,25V
C40 100nF,25V
R50 10,1%
FB3 FB FB0805
JMP-2PIN J4
SPEAKER OUT
MJ-3523-SMT
CN8
INTERNAL SPEAKER
GND

RIG INTERFACE

C41 100nF,16V
C50 2.2uF,16V
U6 LMV341
AIN1
R43 10K,1%
C36 100uF,10V
R52 1K
T1 SM-LP-5001
R45 10K,1%
R44 10K,1%
C45 100pF,50V
C44 100pF,50V
C43 100pF,50V
DF11-16DS CN12
CN4 RJ-45
RF
FB1 FB FB0805
SPKR RIG
CN6 MJ-3523-SMT

DAC1_OUT 1
U7 LMV341
C38 100uF,10V
T2 SM-LP-5001
R48 4.7K,1%
R47 500
R49 4.7,1%
C47 100uF,10V
C42 100nF,16V
FB2 FB FB0805
MIC RIG
CN7 MJ-3523-SMT

CPPT
R51 390,1%
LD2 LTV-817S
FB6 FB FB0805
PTT RIG
MJ-3523-SMT
CN9

06/15/2014
36. Change C39 to 220uF,25V
35. Move Pot R52 to T1 output & change to 1K.
34. Change C40 to 25V.
33. Change C27 to 22pF.
32. Change C2 & C3 to 20pF.
31. Correct pinout for LD3985.
30. Change R1, R7 & R8 to 10K
29. Change R12, R13, R15, R16 & R17 to 680 Ohms.
28. Change C8 to 10nF.
27. Change C10 & C12 to Ceramic 0603 caps.
26. Remove signals from pins 9 & 10 DIL16.
06/12/2014
25. Change SW3 back to PBH2UUENAGX
24. Change D3 to BAT60
06/05/2014
23. Change 0603 caps to IPC packages & symbols.
22. Change 0603 resistors to IPC packages & symbols.
06/02/2014
21. Add SELECT & BACK switches.
06/01/2014
20. Delete VUSB Led & circuitry.
19. Delete USB fault LED & circuitry.
18. Delete STLINK LED & components.
17. Change SCL, SDA pulldowns to pullups.
05/29/2014
16. Change CN1 to 3-pin
15. Power electret mic from VDD
14. Change Reset switch to header.
05/28/2014
13 Added PTT SW network to permit DFU mode on power up.
12. Change C23 to 25V.
11. Change C43, C44, C45 to 100pF
10. Add hdr for speaker.
9. Change bypass caps to mix of 100nF and 10nF.
8. Change processor from STM32F407 to STM32F405.
7. Change PCB from 4 layer to 2 layer.
6. Bring GND, RF(GND) & +VEXT to IC1 connector.
5. Add ext. PTT connector and cpu DI.
4. Change mic preamp circuit to op-amp per DR.
3. Change rig mic amp circuit to pot on transformer output.
2. Move LED8 to 5V
1. Change U5 TPS54329E to RT8250

ROWETEL

TITLE: Smart Mic Circuit Board

Document Number: SM1000-REV-B

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Sheet: 2/2