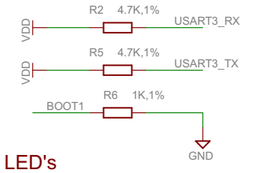
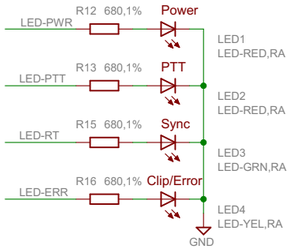
DATE	REVISION	ECN	REV	BY
04/21/14	Added to SourceForge Repository			RGB
04/25/14	Pre-Release to Prototype		A	RGB
05/28/14	Release for Review		B	RGB
06/13/14	Release for Prototype		B	RGB

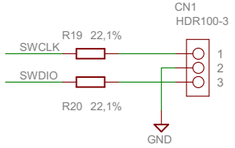
PULLUPS & PULLDOWNS



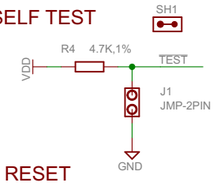
LED's



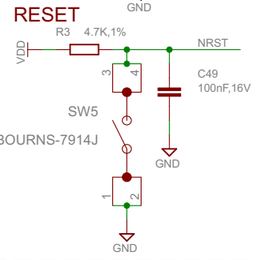
STLINK

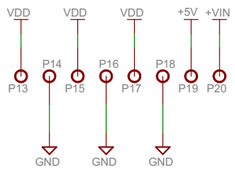


SELF TEST

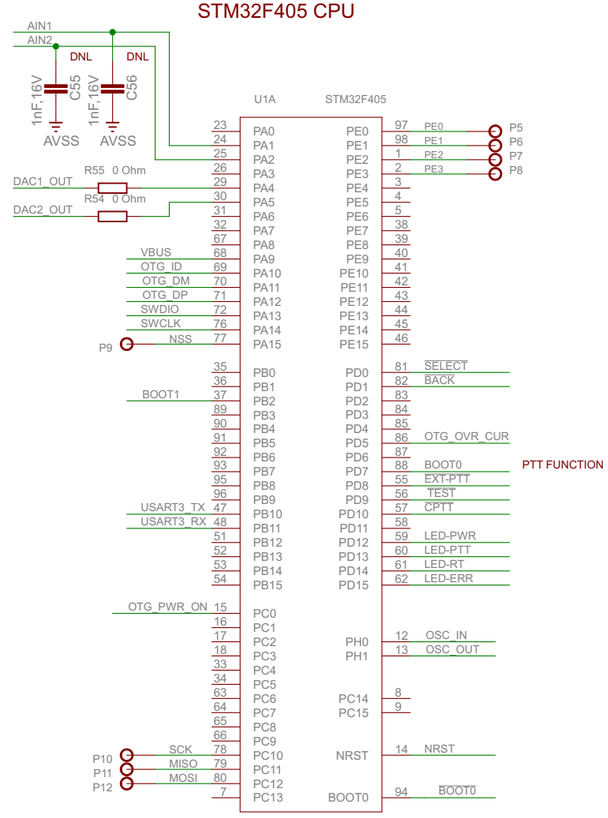


RESET

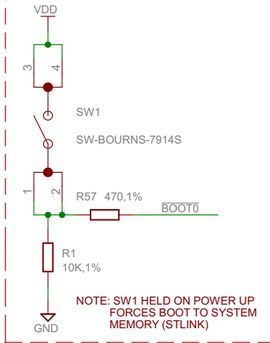




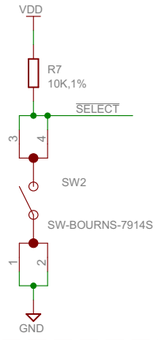
STM32F405 CPU



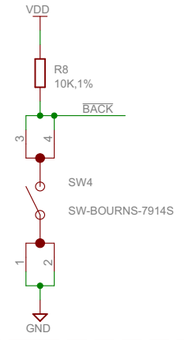
Push To Talk (PTT)



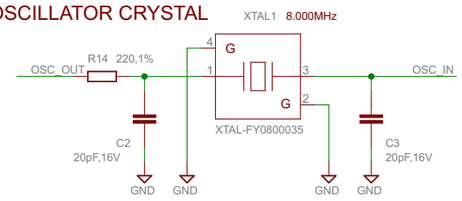
SELECT



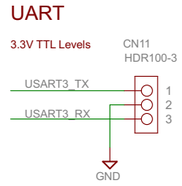
BACK



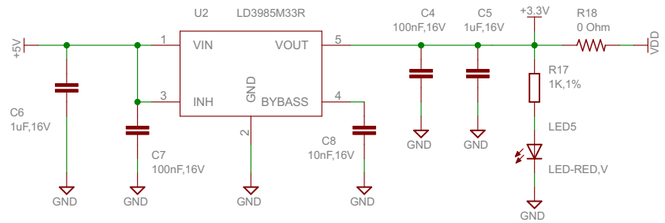
OSCILLATOR CRYSTAL



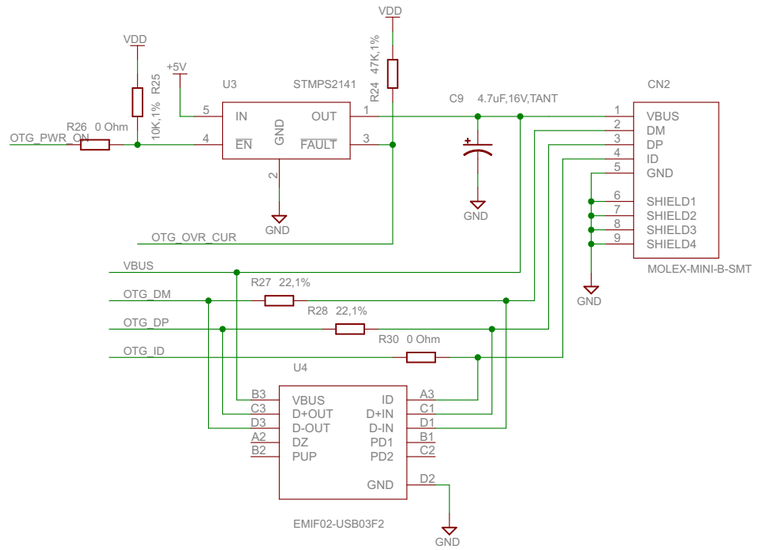
UART



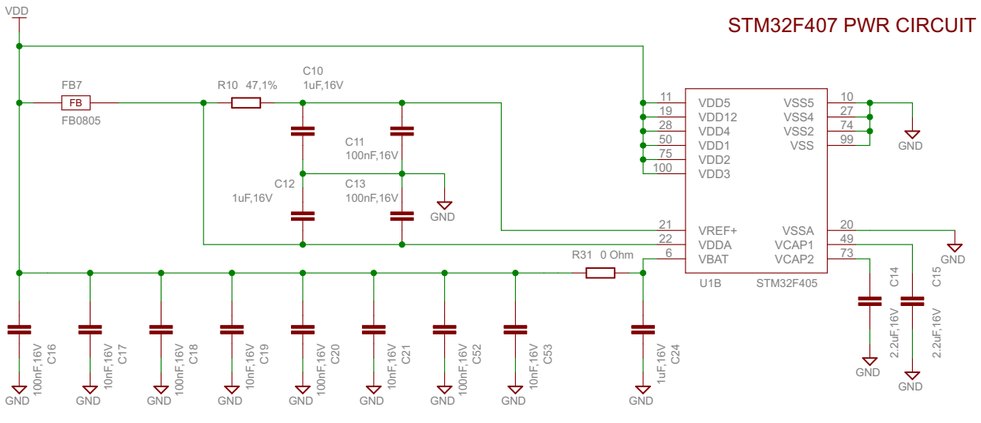
5.0V -> 3.3V PS



OTG USB INTERFACE



STM32F407 PWR CIRCUIT



TODO:
1. Enlarge pads on R46 POT
2. AVDD has no source.
3. Check polarity & source of LMV341 pin 5.
4. Reposition 3.5mm jacks for 11.3mm plug spacing.

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-C

REV: C

Date: 10/7/2014 1:32:26 PM

Sheet: 1/2

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

EXTERNAL POWER

12 - 15VDC -> 5.0VDC

CN3 RASM722PX, FB5 FB5 FB0805, D2 BAT60J, SW3 DPDT PUSH, C30 10nF,25V, C1 R21 1nF,25V 0 Ohm, C46 100nF,25V, C25 22uF,25V,6032-28,Tant, +VIN, U5 TPS54329E (VIN, VBST, EN, SW, VREG5, SS, GND, EP, VFB), R34 10K,1%, C48 470nF,25V, C31 8.2nF,25V, C26 100nF,25V, 4.2uH L2, D1 RSX051VA30, C27 20pF,50V, C29 10uF,25V,3528,Tant, C28 10uF,25V,3528,Tant, R35 124.0K,1%, R36 22.1K,1%, R33 2.2K,1%, LED-RED,RA LED8, +5V

EXT. PTT INPUT

MJ-3523-SMT, CN10, VDD, R37 10K,1%, R56 2.2K,1%, EXT-PTT, C51 100nF,16V

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 FB0805, R11 100,1%, C33 100nF,16V, C34 1nF,25V, SH3 JMP-2PIN J3, R32 100,1%, C62 100nF,16V, C32 100uF,6.3V,EL, R58 2.2K,1%, C22 100nF,16V, C35 2.2uF,16V, R42 500K, C54 1nF,16V, R53 2.2K,1%, R41 2.2K,1%, U9 LMV341, R29 1.5K,1%, AIN2, P4, C59 100uF,6.3V,EL, C58 100nF,16V, R40 2.2K,1%, R38 2.2K,1%

SPEAKER OUT

P3, DAC2_OUT, C37 100nF,16V, R22 22.1K,1%, R46 100K, C23 100nF,25V, +VIN, R39 4.7,0.5W,1206, C60 220uF,25V, C57 3.9nF,16V, U8 LM386M-1, C39 220uF,25V, C40 47nF,25V, R50 10,1%, FB3 FB0805, JMP-2PIN J4, SJ-3524-SMT, CN8

INTERNAL SPEAKER

RIG INTERFACE

C41 100nF,16V, C50 2.2uF,16V, R23 10K,1%, U6 LMV341, R9 1.5K,1%, AIN1, P1, R43 10K,1%, C36 100uF,10V, R52 1K, T1 SM-LP-5001, R45 10K,1%, R44 10K,1%, C61 100nF,16V

CN12 HRS-DF11-16DS, CN4 RJ-45, RF_SPKR, RF_MIC, RF_PTT, C44 100pF,50V

SPKR ← RIG

FB1 RF_SPKR FB0805, SJ-3524-SMT, CN6, C43 100pF,50V

MIC → RIG

FB2 RF_MIC FB0805, CN7 MJ-3523-SMT

PTT → RIG

FB6 RF_PTT FB0805, MJ-3523-SMT, CN9

DAC1_OUT, P2, C42 100nF,16V, U7 LMV341, C38 100uF,10V, T2 SM-LP-5001, R48 10K,1%, R47 500, R49 4.7,1%, C47 100uF,10V, C45 100pF,50V

VDD, R51 390,1%, LD2 LTV-817S, CPTT

ROWETEL

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