PULLUPS & PULLDOWNS

R2 4.7K,1% — VDD — USART3_RX
R5 4.7K,1% — VDD — USART3_TX
R6 1K,1% — BOOT1 — GND

LED's

LED-PWR	R12 680,1%	Power	LED1 LED-RED,RA
LED-PTT	R13 680,1%	PTT	LED2 LED-RED,RA
LED-RT	R15 680,1%	Sync	LED3 LED-GRN,RA
LED-ERR	R16 680,1%	Clip/Error	LED4 LED-YEL,RA

STLINK

CN1 HDR100-3
R19 22,1% — SWCLK
SWDIO
R20 22,1% — GND

SELF TEST

R4 4.7K,1% — VDD — TEST
SH1 — J1 JMP-2PIN — GND

RESET

R3 4.7K,1% — VDD — NRST
SW5 TS-02B — C49 100nF,25V — GND

VDD — P13
+5V — +VIN — P14 P16 P18 P19 P20 — GND GND GND

AIN1
AIN2
C55 1nF,25V,0402 — GND
C56 1nF,25V,0402 — GND
DAC1_OUT — R55 0 Ohm
DAC2_OUT — R54 0 Ohm

STM32F405 CPU

U1A STM32F405VGT6

		PA0	23	PE0	97 PE0 — P5
		PA1	24	PE1	98 PE1 — P6
		PA2	25	PE2	1 PE2 — P7
		PA3	26	PE3	2 PE3 — P8
		PA4	29	PE4	3
		PA5	30	PE5	4
		PA6	31	PE6	5
		PA7	32	PE7	38
	VBUS	PA8	67	PE8	39
	OTG_ID	PA9	68	PE9	40
	OTG_DM	PA10	69	PE10	41
	OTG_DP	PA11	70	PE11	42
	SWDIO	PA12	71	PE12	43
	SWCLK	PA13	72	PE13	44
P9	NSS	PA14	76	PE14	45
		PA15	77	PE15	46
		PB0	35	PD0	81 SELECT
		PB1	36	PD1	82 BACK
	BOOT1	PB2	37	PD2	83
		PB3	89	PD3	84
		PB4	90	PD4	85
		PB5	91	PD5	86 OTG_OVR_CUR
		PB6	92	PD6	87
		PB7	93	PD7	88 BOOT0 — PTT FUNCTION
		PB8	95	PD8	55 EXT-PTT
		PB9	96	PD9	56 TEST
	USART3_TX	PB10	47	PD10	57 CPPT
	USART3_RX	PB11	48	PD11	58
		PB12	51	PD12	59 LED-PWR
		PB13	52	PD13	60 LED-PTT
		PB14	53	PD14	61 LED-RT
		PB15	54	PD15	62 LED-ERR
	OTG_PWR_ON	PC0	15		
		PC1	16		
		PC2	17	PH0	12 OSC_IN
		PC3	18	PH1	13 OSC_OUT
		PC4	33		
		PC5	34		
		PC6	63	PC14	8
		PC7	64	PC15	9
		PC8	65		
		PC9	66		
P10	SCK	PC10	78	NRST	14 NRST
P11	MISO	PC11	79		
P12	MOSI	PC12	80		
		PC13	7	BOOT0	94 BOOT0

Push To Talk (PTT)

VDD — G2 6 5 4 G1 — SW-SPDT-8US8WR2C2M7RES — SW1
R57 470,1% — BOOT0
GND — R1 10K,1% — GND

NOTE: SW1 HELD ON POWER UP FORCES BOOT TO SYSTEM MEMORY (STLINK)

SELECT

VDD — TS-026 — R7 10K,1% — SELECT — SW2 TS-026 — GND

BACK

VDD — TS-026 — R8 10K,1% — BACK — SW4 TS-026 — GND

OSCILLATOR CRYSTAL

XTAL1 8.000MHz
OSC_OUT — R14 220,1% — G 4 1 3 G 2 — XTAL-FY0800035 — OSC_IN
C2 20pF,50V — GND GND
C3 20pF,50V — GND GND

UART

3.3V TTL Levels
CN11 HDR100-3
USART3_TX
USART3_RX
GND

5.0V -> 3.3V PS

U2 LD3985M33R
+5V — VIN 1 — VOUT 5 — +3.3V
INH 3 — GND — BYBASS 4
2
C6 1uF,16V — GND
C7 100nF,25V — GND
C8 10nF,25V — GND
C4 100nF,25V — GND
C5 1uF,16V — GND
R18 0 Ohm — VDD
R17 1K,1%
LED5 SML-LX0603SRW-TR — GND

OTG USB INTERFACE

VDD — R25 10K,1% — +5V
U3 STMPS2141
R24 47K,1% — VDD
OTG_PWR_ON — R26 0 Ohm
IN 5 — OUT 1
EN 4 — GND — FAULT 3
2 — GND
C9 4.7uF,16V,TANT — GND
OTG_OVR_CUR
CN2 JS-MU3-002
VBUS 1
DM 2
DP 3
ID 4
GND 5
SHIELD1 6
SHIELD2 7
SHIELD3 8
SHIELD4 9
GND
VBUS
OTG_DM — R27 22,1%
OTG_DP — R28 22,1%
OTG_ID — R30 0 Ohm
U4
VBUS B3 — ID A3
D+OUT C3 — D+IN C1
D-OUT D3 — D-IN D1
DZ A2 — PD1 B1
PUP B2 — PD2 C2
GND — D2
EMIF02-USB03F2 — GND

STM32F407 PWR CIRCUIT

VDD
FB7 FB FB0805
R10 47,1%
C10 1uF,16V
C11 100nF,25V
C12 1uF,16V
C13 100nF,25V — GND
R31 0 Ohm

U1B STM32F405VGT6

		VDD5	11	VSS5	10
		VDD12	19	VSS4	27
		VDD4	28	VSS2	74
		VDD1	50	VSS	99 — GND
		VDD2	75		
		VDD3	100		
		VREF+	21	VSSA	20
		VDDA	22	VCAP1	49
		VBAT	6	VCAP2	73

C14 2.2uF,16V — GND
C15 2.2uF,16V — GND
C16 100nF,25V — GND
C17 10nF,25V — GND
C18 100nF,25V — GND
C19 10nF,25V — GND
C20 100nF,25V — GND
C21 10nF,25V — GND
C52 100nF,25V — GND
C53 10nF,25V — GND
C24 1uF,16V — GND

DATE	REVISION	ECN	REV	BY
11/23/14	SM1000-C -> SM1000-D		D	RGB
01/13/15	Change SW1 to MULTICOMP SPDT		D	RGB
01/13/15	FIX TS-026 FOOTPRINT		D	RGB
01/13/15	CHANGE R42,R47 & R52 TO TYPE 3361		D	RGB
01/13/15	MOVE USB CONN 1MM TOWARDS EDGE		D	RGB
01/13/15	MOVE SW3,4 TO EDGE		D	RGB
01/13/15	SHOW SH1 POSITION		D	RGB
01/13/15	ADD MISC. PARTS TO BOM		D	RGB
01-23-15	RELEASE REV. D TO PRODUCTION		D	RGB

MISC. PARTS

SPKR1 SPKR-HY4004M-001
PCB1 SM1000D PRINTED CIRCUIT BOARD

ROWETEL

TITLE: SmartMic Circuit Board
Document Number: SM1000-D
REV: D
Date: 1/23/2015 10:53:56 AM
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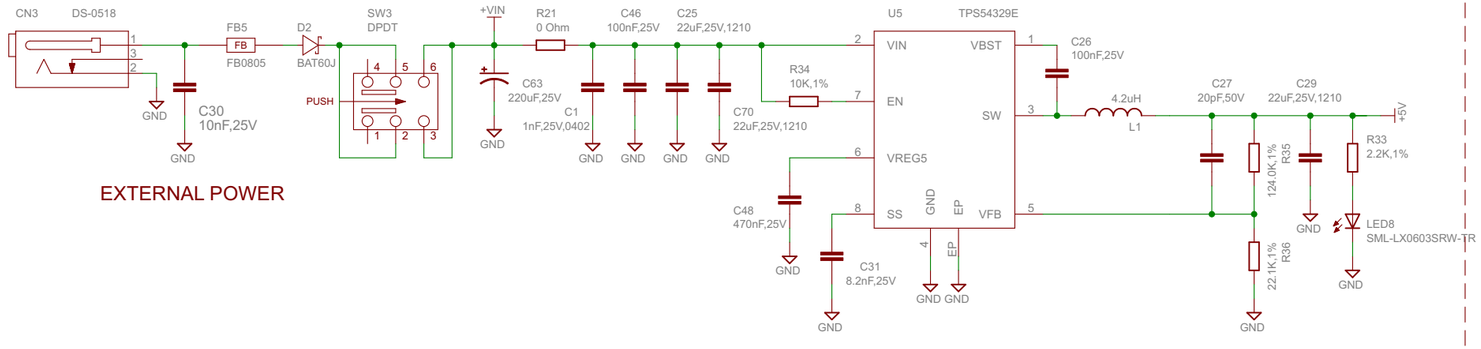
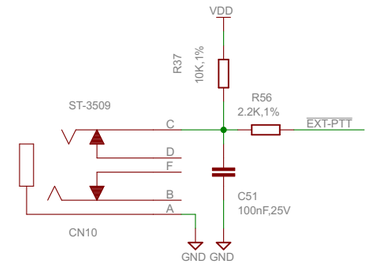
DATE	REVISION	ECN	REV	BY
01/14/15	SM1000-C -> SM1000-D		D	RGB
01/23/15	RELEASE REV. D TO PRODUCTION.		D	RGB

12 - 15VDC -> 5.0VDC

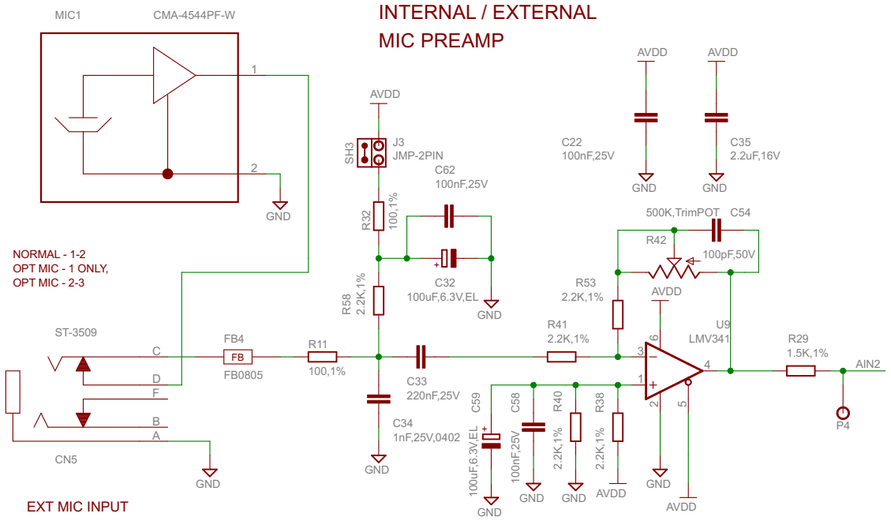


EXTERNAL POWER

EXT. PTT INPUT

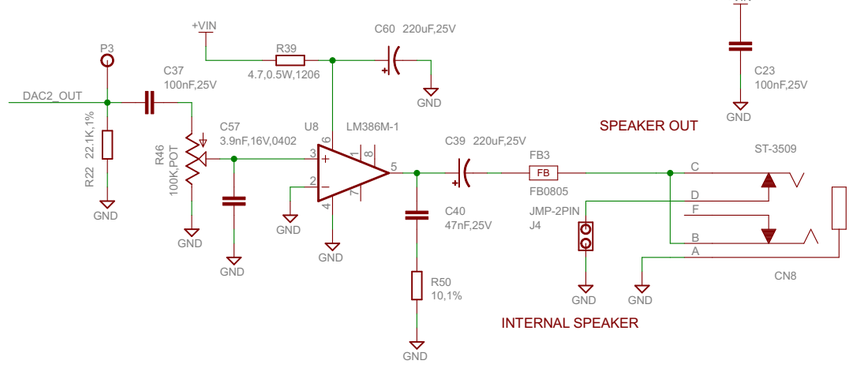


INTERNAL / EXTERNAL MIC PREAMP

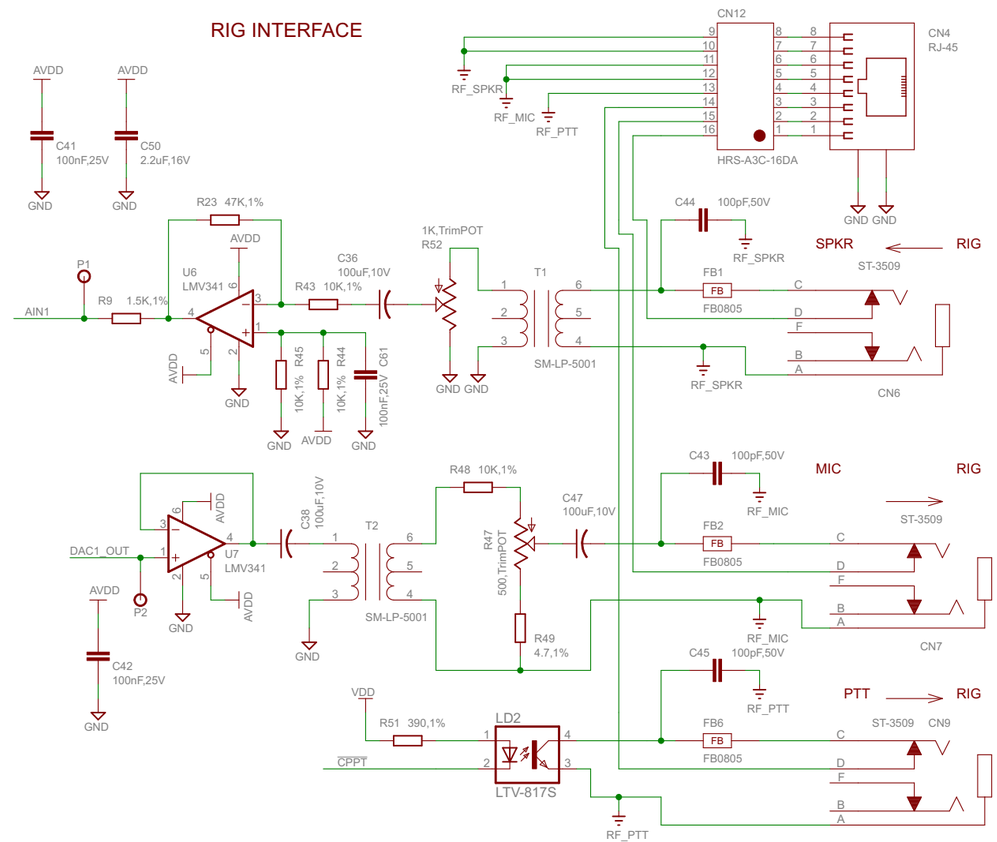


EXT MIC INPUT

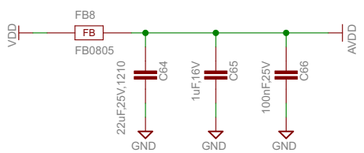
SPEAKER AMP



RIG INTERFACE



VDD -> AVDD POWER SOURCE



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TITLE: Smart Mic Circuit Board

Document Number: SM1000-D

REV: D

Date: 1/23/2015 10:53:56 AM

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