STM32F103V MINI BOARD schematic diagram. Key components and labels visible:

JTAG&SWD connector JP1 (pins 1-20) with signals NJTRST, JTDI, JTMS, JTCK, JTDO, NRST. Pull-up resistors R8, R9, R10, R11, R12 (10k), R13 (220), "do not fit". Supply +3.3, V5_JTAG_SUPPLY. R6, R7 (10k). DGND.

LEDs D1, D2 (LED) with R14, R15 (300) from PE5, PE6, +3.3.

USB section: PA11 via R17 (22), PA12 via R16 (22) to JP3 (USB-D, pins 1-6), VCC, R18 (1.5k), +3.3, J6 CON2, DGND.

Switches S2, S3 (SW-PB) from PC0, PC1, DGND.

Power supply: J5 CON3, VCC, V5_JTAG_SUPPLY, C11 (10uF), C12 (1.0uF), U3 LM1117-3.3 (INPUT OUTPUT GND), +5, +3.3, C13 (10uF), C19 (0.1uF), DGND.

MAX3232 U2: V+, VCC, C1+, C2-, C1-, C2+, T1in, T1out, R1out, R1in, T2in, T2out, R2out, R2in, V-, GND. C14, C15, C16, C17, C18 (0.1uF). R19, R20, R21, R22 (10k). PA9, PA10, PA2, PA3. RS232 TX1, RS232 RX1, RS232 TX2, RS232 RX2. +3.3, DGND.

USART1 JP2 connector. PC RX, PC TX.

J4 HEADER 3X2: RS232 TX1, PC RX, RS232 TX2, RS232 RX1, PC TX, RS232 RX2.

D3 LED with R23 (1K), +3.3, DGND.

Decoupling caps C7, C8, C9, C10 (0.1uF), +3.3, DGND.

Boot config: J1 BOOT1 (pins 1-3), R5 (10k) to PB2, +3.3, DGND. J2 BOOT0 (pins 1-3), R4 (10k) to BOOT0, +3.3, DGND.

Battery 3V VBAT.

Reset: R3 (10k), +3.3, NRST, S1 SW-PB, C3 (0.1uF), DGND.

Crystals: Y2 32.768k, C4, C5 (10pF), DGND. Y1 8M, C1, C2 (20pF), DGND.

L1 (10uH), VDDA, C6 (0.1uF), VREF+, +3.3, DGND.

U1 STM32F103V microcontroller (100-pin):
Left side pins 1-25: PE2(1), PE3(2), PE4(3), PE5(4), PE6(5), VBAT(6), PC13(7), PC14(8), PC15(9), VSS_5(10), VDD_5(11), OSC_IN(12), OSC_OUT(13), NRST(14), PC0(15), PC1(16), PC2(17), PC3(18), VSSA(19), Vref-(20), Vref+(21), VDDA(22), PA0(23), PA1(24), PA2(25).
Pin labels: PE2, PE3, PE4, PE5, PE6, VBAT, PC13-ANTI_TAMP, PC14-OSC32_IN, PC15-OSC32_OUT, VSS_5, VDD_5, OSC_IN, OSC_OUT, NRST, PC0, PC1, PC2, PC3, VSSA, Vref-, Vref+, VDDA, PA0-WKUP, PA1, PA2.
Bottom pins 26-50: PA3, VSS_4, VDD_4, PA4, PA5, PA6, PA7, PC4, PC5, PB0, PB1, PB2, PE7, PE8, PE9, PE10, PE11, PE12, PE13, PE14, PE15, PB10, PB11, VSS_1, VDD_1.
Right side pins 51-75: PB12(51), PB13(52), PB14(53), PB15(54), PD8(55), PD9(56), PD10(57), PD11(58), PD12(59), PD13(60), PD14(61), PD15(62), PC6(63), PC7(64), PC8(65), PC9(66), PA8(67), PA9(68), PA10(69), PA11(70), PA12(71), JTMS(72), NC(73), VSS_2(74), VDD_2(75).
Top pins 76-100: JTCK, JTDI, PA15, PC10, PC11, PC12, PD0, PD1, PD2, PD3, PD4, PD5, PD6, PD7, NJTRST, PB3, PB4, PB5, PB6, PB7, BOOT0, PB8, PB9, PE0, PE1, VSS_3, VDD_3.

LCD CON 2X20 connector: pins 1-40 with signals GND, +3.3, PD11, PD5, PD4, PE11, PE12, PE13, PE14, PE15, PD8, PD9, PD10, PD7, PC1, +3.3, PD14, PD15, PD0, PD1, PE7, PE8, PE9, PE10, PA5, PB7, PA7, PD13, PD12, PD11, PD10, PD9, PD8, PB15, PB14, PB13, PB12, PA6, PB6.

J8 CON44: pins 1-44, signals +3.3, PC0, PC1, PC2, PC3, PA0, PA1, PA2, PA3, PA4, PA5, PA6, PA7, PC4, PC5, PB0, PB1, PB2, PE7, PE8, PE9, PE10, PE11, PE12, PE13, PE14, PE15, PB10, PB11, PB12, PB13, PB14, PB15, PD8, PD9, PD10, PD11, PD12, PD13, PD14, PD15, DGND, +5.

J7 CON44: pins 1-44, signals PC15, PC14, PC13, PE6, PE5, PE4, PE3, PE2, PE1, PE0, PB9, PB8, PB7, PB6, PB5, NJTRST, JTDO, PD7, PD6, PD5, PD4, PD3, PD2, PD1, PD0, PC12, PC11, PC10, JTDI, JTCK, JTMS, PA12, PA11, PA10, PA9, PA8, PC9, PC8, PC7, PC6, +5, DGND.

Title block:
Title: STM32F103V MINI BOARD
Size: B
Date: 2011/5/12
File: F:\Lcsoft\..\STM32F103V.SCH
Drawn By: lhf
Sheet of

Comment	Description	Designator	Footprint	LibRef	Quantity
Battery	Multicell Battery	3V	BAT-2	Battery	1
20pF	Capacitor	C1, C2	0805	CAP	2
0.1uF	Capacitor	C3, C6, C7, C8, C9, C10, C14, C15, C16, C17, C18, C19	0805	CAP	12
10pF	Capacitor	C4, C5	0805	CAP	2
10uF	Capacitor	C11, C13	0805	CAPACITOR POL	2
1.0uF	Capacitor	C12	0805	CAP	1
LED		D1, D2, D3	LED0805	LED	3
BOOT1	Connector	J1	SIP3	CON3	1
BOOT0	Connector	J2	SIP3	CON3	1
HEADER 3X2		J4	IDC6	HEADER 3X2	1
CON3	Connector	J5	SIP3	CON3	1
CON2	Connector	J6	SIP2	CON2	1
CON44	Connector	J7, J8		CON44	2
JTAG&SWD		JP1	IDC20	HEADER 10X2	1
USART1		JP2	DB9RA/ F	DB9	1
USB-D	Connector	JP3	USB-B	CON6	1
10uH		L1	0805	INDUCTOR1	1
CON 2X20		LCD		CON 2X20	1
10k		R3, R4, R5, R6, R7, R8, R9, R10, R11, R19, R20, R21, R22	0805	RES1	13
do not fit		R12	0805	RES1	1
220		R13	0805	RES1	1
300		R14, R15	0805	RES1	2
22		R16, R17	0805	RES1	2
1.5k		R18	0805	RES1	1
1K		R23	0805	RES1	1
SW-PB		S1, S2, S3	KEY	SW-PB	3
STM32F103V		U1		STM32F103RB	1
MAX3232		U2	MAX232	MAX3232	1
LM1117-3.3		U3	LM1117	LM1117	1
8M	Crystal	Y1	XTAL	CRYSTAL	1
32.768k	Crystal	Y2	XTAL	CRYSTAL	1