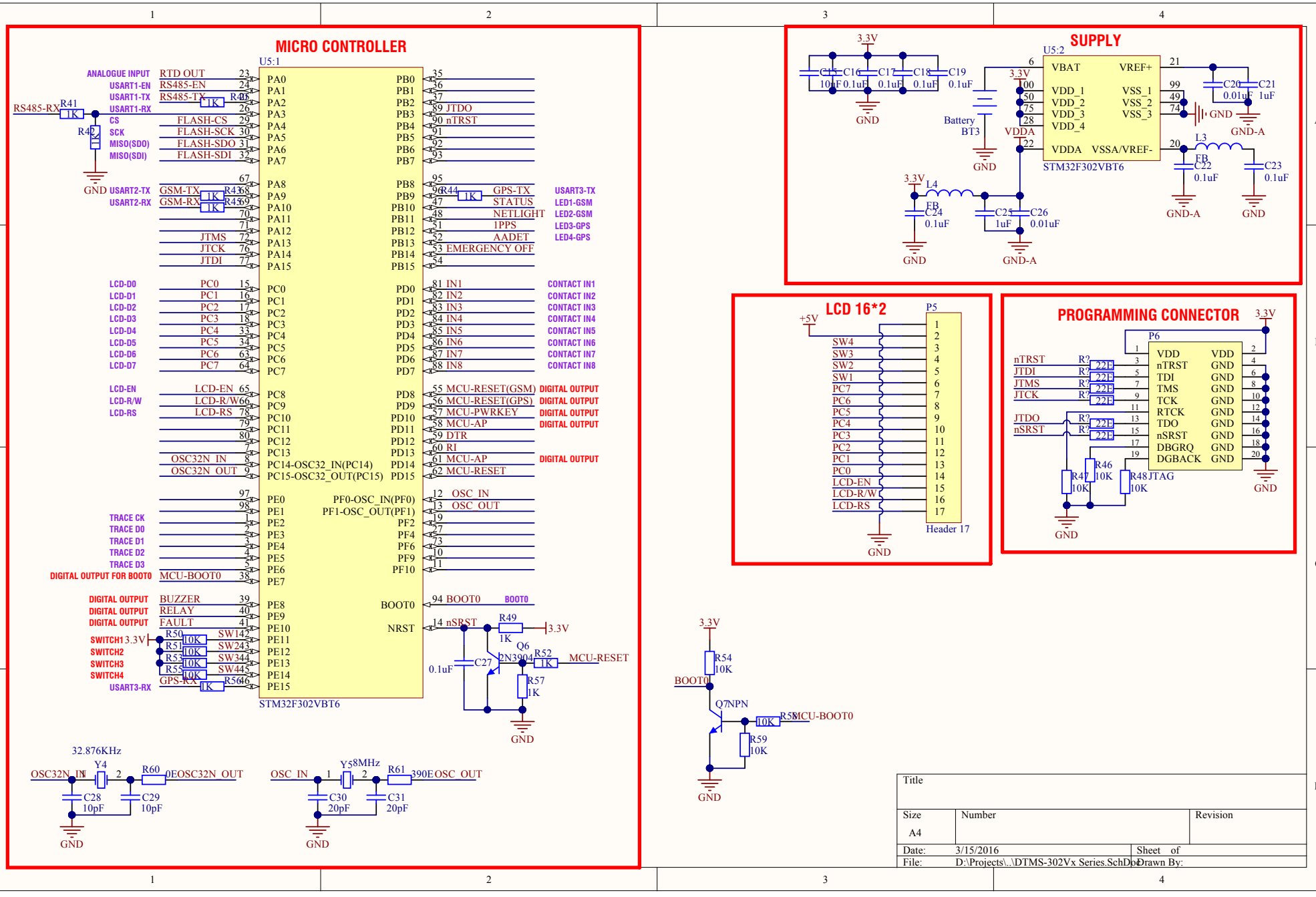
MICRO CONTROLLER
U5:1
STM32F302VBT6
SUPPLY
U5:2
STM32F302VBT6
LCD 16*2
P5
Header 17
PROGRAMMING CONNECTOR
P6
JTAG
Title
Size
A4
Number
Revision
Date: 3/15/2016
Sheet of
File: D:\Projects\...\DTMS-302Vx Series.SchDoc
Drawn By:

Comment	Description	Designator	Footprint	LibRef	Quantity
Battery	Multicell Battery	BT3	BAT-2	Battery	1
RMC2	Multicell Battery	BT7	RMC2	Battery	1
BUZZER		BZ?	BUZZER CX-0905C	BUZZER	1
10uF	Capacitor, CERAMIC CAPACITOR-SMD	C1, C7	CAP-0805	Cap, Cap2	3
0.1uF	Capacitor	C2, C5, C13, C14, C7	CAP-0805	Cap	9
33pF	Capacitor	C3, C10, C11, C12	CAP-0805	Cap	4
10pF	Capacitor	C4	CAP-0805	Cap	1
470uF	Capacitor	C5	2917(7343)	Cap2	1
4.7uF	Capacitor	C13	CAP-0805	Cap	1
10uF	Capacitor	C15, C7	RAD-0.3	Cap	2
0.1uF	Capacitor	C16, C17, C18, C19, C22, C23, C24, C27, C7	RAD-0.3	Cap	10
0.01uF	Capacitor	C20, C26	RAD-0.3	Cap	2
1uF	Capacitor	C21, C25	RAD-0.3	Cap	2
10pF	Capacitor	C28, C29	RAD-0.3	Cap	2
20pF	Capacitor	C30, C31	RAD-0.3	Cap	2
0.1µF	Capacitor	C7	CAP-0805	Cap	1
0.1µF/50V	Ceramic Capacitor 0.1uF 50V 10% X7R 0805	C7	CAP-0805	Cap	3
1uF	Polarized Capacitor (Radial)	C7	CAP-1206(New)	Cap Pol1	1
1µF/50V	Ceramic Capacitor 0.1uF 50V 10% X7R 0805, Ceramic Capacitor 1µF 50V 10% X7R 0805	C7	CAP-1206(New)	Cap	9
10uF	Polarized Capacitor (Radial)	C7	CAP-1206(New)	Cap Pol1	2
10uF/16V	Polarized Capacitor (Radial)	C7	CAP-1206(New)	Cap Pol1	1
100uF	Capacitor	C7	100uF3.81/8.2	Cap	1
470uF/35V	Capacitor	C7	470uF/16V	Cap	1
1000uF	Polarized Capacitor (Radial)	C7	RB5/11	Cap Pol1	1
SIM HOLDER	PUSH-PUSH SIM HOLDER	CN1	SIM CARD SOCKET	SIM HOLDER	1
LED0	Typical INFRARED GaAs LED	D10, D7	LED 5MM	LED0	7
1N5820	SCHOTTKY DIODE	D?	SOD123W	SCHOTTKY DIODE	1
Diode	Default Diode	D?	DO-214AC [SMA]	Diode	1
LED1	Typical INFRARED GaAs LED	D?	LED 5MM	LED0	2
PMEG2005AEA	SCHOTTKY DIODE-SMD	D?	SOD323	Diode	2
SMAJ12CA	TVS DIODE	D?	DO-214AC [SMA]	TVS DIODE	3
Relay-SPDT	Single-Pole Dual-Throw Relay	K?	Relay JQC-3FC	Relay-SPDT	1
1uH	Inductor	L1, L2, L3	L0805	Inductor	4
FB	Inductor	L3, L4	0402-A	Inductor	2
47uH	Inductor	L?	INDUCTOR12.5*12.5	Inductor	1
Header 9	Header, 9-Pin	P1	HDR1X9	Header 9	1
UMCC	Header, 4-Pin	P1, P2	UMCC	Header 4	2
Header 17	Header, 17-Pin	P5	HDR1X17	Header 17	1
JTAG	Programming connector	P6		JTAG CONNECTOR	1
Header 2	Header, 2-Pin	P?	RMC2	Header 2	1
Header 2	Header, 2-Pin	P?	TERMINAL 2	Header 2	1
Header 3	Header, 3-Pin	P?	Terminal 3	Header 3	5
PDTC143ZT,235	NPN General Purpose Amplifier	Q1, Q2, Q3, Q5, Q7	SOT-23 for MCP1700(LDO)	2N3904	8
2N3904	NPN General Purpose Amplifier	Q6	TO-92A	2N3904	1
NPN	NPN Bipolar Transistor	Q7	TO-226-AA	NPN	1
2N3904	NPN General Purpose Amplifier	Q?	SOT-23 for MCP1700(LDO)	2N3904	2
22R	Resistor	R1, R2, R4, R8	R-0805	Res2	4
10K	Resistor	R3, R7	R-0805	Res2	12
1K	Resistor	R5, R6, R7, R9, R10, R11, R12, R?	R-0805	Res2	8
0E	Resistor	R13, R?	R-0805	Res2	2
330E	Resistor	R26, R?	R-0805	Res2	7
1K	Resistor	R40, R41, R42, R43, R44, R45, R49, R52, R56, R57	AXIAL-0.4	Res2	10
10K	Resistor	R46, R47, R48, R50, R51, R53, R54, R55, R58, R59	AXIAL-0.4	Res2	10
0E	Resistor	R60	AXIAL-0.4	Res2	1
390E	Resistor	R61	AXIAL-0.4	Res2	1
2K	CHIP RESISTOR	R?	R-0805	Res Semi	1
2.1K	Resistor	R?	R-0805	Res2	1
4.7K 1%	Resistor	R?	R-0805	Res2	2
5K1	Resistor	R?	R-0805	Res2	3
10E	Resistor	R?	R-0805	Res2	2
10K 1%	Resistor	R?	R-0805	Res2	2
15K	Resistor	R?	AXIAL-0.4	Res2	1
22E	Resistor	R?	AXIAL-0.4	Res2	6
24K	Resistor	R?	R-0805	Res2	3
47K	Chip Resistor, Thin film, 1%, 0805, 0.25W, SMD	R?	R-0805	Res2	24
100K	Resistor, 1%, 1W	R?	R-2512	Res2	1
180E	Resistor	R?	R-0805	Res2	1
680E	Resistor	R?	R-0805	Res2	2
UC15	GSM	U1	UC15	UC15	1
SP3002	4-CH TVS DIODE ARRAY	U2	SOT23-6	TVS DIODE ARRAY	1
STM32F302VBT6	ARM Cortex-M4 32-bit MCU, 128 KB Flash, 24 KB Internal RAM, 87 I/Os, 100-pin LQFP, -40 to 85 degC, Tray	U5	STM-LQFP100_N	STM32F302VBT6	1
L80	GPS MODULE	U7		L80	1
lm2576	BUCK CONVERTER	U7	D2PAK	lm2576	1
LM1117		U7	SOT-223	LM1117	1
LMV358	Single-Supply, Rail-to-Rail Operational Amplifier MicroAmplifier(TM) Series, 2.5 to 5.5 V, -40 to 85 degC, 8-pin SOIC (D8), Green (RoHS & no Sb/Br)	U7	SO-8	OPA2340UA	1
LMV358	Single-Supply, Rail-to-Rail Operational Amplifier MicroAmplifier(TM) Series, 2.5 to 5.5 V, -40 to 85 degC, 8-pin SOIC (D8), Green (RoHS & no Sb/Br)	U7	TI-D8_L	OPA2340UA	1
M25P32	Flash 8Mbit (1MB), 75Mhz, I2C	U7	SOIC-8 (1.27)	M25P80	1
MCP6V02	Single-Supply, Rail-to-Rail Operational Amplifier MicroAmplifier(TM) Series, 2.5 to 5.5 V, -40 to 85 degC, 8-pin SOIC (D8), Green (RoHS & no Sb/Br)	U7	SO-8	OPA2340UA	2
MCP1700T-2502E/TT		U7	SOT-23 for MCP1700(LDO)	MCP1700T-2502E/TT	1
MCP73831T-2ATI/OT	Miniature Single-Cell, Fully Integrated Li-Ion, Li-Polymer Charge Management Controller, 4.2V, 5-Pin SOT-23, Industrial Temperature, Tape and Reel	U7	SOT23-5	MCP73831T-2ATI/OT	1
SFH620		U7	DIP-4	OPTO-AC	8
SP485	Differential Bus Transceiver, 1 TX / 1 RX, 5V, 0 to 70 degC, 8-Pin SOIC (D), Green (RoHS & no Sb/Br)	U7	SO-8	SN75176AD	1
329W	VARIABLE RESISTOR (MULTI TURN)	VR7	VR5	RES TAP	1
32.876KHz	Crystal Oscillator	Y4	R38	XTAL	1
8MHz	Crystal Oscillator	Y5	R38	XTAL	1