

Document reference:		PCB reference:			Date: (dd/mm/yyyy)				
NT.LBR0004.01 - Smart Monitoring Station based on STM32, STMPE811 and SPZB260		STEVAL-IFS014V1			9/3/2009				
Company:									
STMicroelectronics									
Category	S. No.	Reference Designator	Component Description	Package	Manufacturer	Manufacturer's ordering code / Orderable Part Number	Supplier	Supplier Ordering Code	Quantity
ST Devices	1	U1	Battery Charger	DFN6	ST	STBC08PMR	ST	STBC08PMR	1
	2	U2	Step up Converter	TSSOP8	ST	L6920D	ST	L6920D	1
	3	U3	Voltage Regulator (3v Output)	SOT- 223	ST	LD1117STR	ST	LD1117STR	1
	4	U4	ZigBee Module containg SN260 Device	SMD	ST	SPZB260	ST	SPZB260	1
	5	U5	Serial Flash (1MB) - used for Data Logging	SO8W	Numonix	M25PE80-VMW6G	Arrow Electronics	M25PE80-VMW6G	1
	6	U7	Temperature Sensor (Analog)	SOT323-5	ST	STLM20W87F	ST	STLM20W87F	1
	7	U8	MEMS	QFPN-28	ST	LIS331DLH	ST	LIS331DLH	1
	8	U9	Microcontroller working as Host for all the Devices Connected	LQFP100	ST	STM32F103VBT6	ST	STM32F103VBT6	1
	9	U10	USB Protection Device	SOT-666	ST	USBLC6-2P6	ST	USBLC6-2P6	1
	10	U11	Serial Flash (16MB) - Used for Pictures Storage	SO-16	Numonix	M25P128-VMF6TP	Arrow Electronics	M25P128-VMF6TP	1
	11	U12	Reset IC	SO8W	ST	STM1061N29WX6F	ST	STM1061N29WX6F	1
	12	U13	Touch Screen Controller	QFN-16	ST	STMPE811QTR	ST	STMPE811QTR	1
	13	D4, D5	Power Diode	SMA	ST	STPS1L30A	ST	STPS1L30A	2
	14	Q3, Q4	NPN Transistor	SOT - 23	ST	2STR1215	ST	2STR1215	2
	15	Q1	P- Channel Power MOSFET	SOT- 223	ST	STN3PF06	ST	STN3PF06	1
Other Devices	16	U6	Humidity Sensor	Through Hole	Honey - Well	HIH--4003 or HIH-4000	Dishant Impex	HIH--4003 or HIH-4000	1
Crystal and Oscillator	17	Y1	Crystal 8MHz	Through Hole	ABRACON	ABL-8.000MHZ-B2	Mouser Electronics	815-ABL-8-B2	1
	18	Y2	Crystal 32.768kHz	Through Hole	ABRACON	AB26T-32.768KHZ	Mouser Electronics	815-AB26T-32.768KHZ	1

Connectors and jumpers	19	SW2	Tact Switch	Through Hole	ALPS	SKHHAPA010	Mouser Electronics	688-SKHHAP	1
	20	SW1	Slide Switches DPDT On-On (Power On/Off)	Through Hole	C&K Components	OS202011MA0QN1	Mouser Electronics	611-OS202011MA0QN1	1
	21	BT2	3V Li-Ion Coin Battery holder	Through Hole	Renata	HU2032-LF	Mouser Electronics	614-HU2032-LF	1
	22	BT1	Header for 3.7V Li-ion Battery Connection	Through Hole	Any				1
	23	J2	JTAG Connector	20 - pin (pitch 2.54mm)	3M Electronic Solutions Division	30320-6002HB	Mouser Electronics	517-30320-6002	1
	24	J7	TFT Display	SMD Connector	AMPIRE Co., LTD	AM240320L7TNQWT02H	AMPIRE Co., LTD	AM240320L7TNQWT02H	1
	25	J6	Mini USB Connector	USB Mini B-Type	Mill-Max Manufacturing Corp.	897-43-005-00-100001	Digikey	ED90341C TND	1
	26	J4	Micro SD Card Connector		Proconn Technology	MSPN09-X0-1000	Global Sources	MSPN09-X0-1000	1
	27	J3	Connector for Touch Key Daughter Board	Through hole, 2.54mm BergStrip	Samtec	TSW-108-23-G-S	Integerated Electronics	TSW-108-23-G-S	1
	28	J9	Header for Stack Updation of Zigbee Module SPZB260	SMD	Samtec	FTSH-105-01-F-DV-K	Integerated Electronics	FTSH-105-01-F-DV-K	1
	29	J1	20 pin Cable Connector	SMD	Samtec	ZF1-20-01-T-WT	Integerated Electronics	ZF1-20-01-T-WT	1
	30	J8	20 pin Cable Connector	SMD	Samtec	FC1-20-02-T-WT	Integerated Electronics	FC1-20-02-T-WT	1
LEDs	31	D1	Blue LED - ZigBee Activity	Through Hole, 3mm Round	Kingbright	WP7104QBC/D	Mouser Electronics	604-WP7104QBC/D	1
	32	D2	Green LED - Power status of the System	Through Hole, 3mm Round	Kingbright	WP7104GC	Mouser Electronics	604-WP7104GC	1
	33	D3	Orange LED - Indication of Battery Charging ongoing	Through Hole, 3mm Round	Kingbright	WP7104NC	Mouser Electronics	604-WP7104NC	1
	34	D6	Red LED - Alarming Signal Indicator	Through Hole, 3mm Round	Kingbright	WP7104SRC/D	Mouser Electronics	604-WP7104SRC/D	1
	35	D7	Yellow LED - Light Lamp	Through Hole, 3mm Round	Kingbright	WP7104YC	Mouser Electronics	604-WP7104YC	1
Capacitors	36	C36, C37, C38, C39	2pF	SMD0805	Any				4
	37	C30, C31	10pF	SMD0805	Any				2
	38	C28, C29,	20pF	SMD0805	Any				2
	39	C32	4.7nF	SMD0805	Any				1
	40	C23, C24, C25, C26, C34	10nF	SMD0805	Any				5
	41	C33	47nF						1
	42	C1,C2,C3,C4,C5,C6,C7,C8,C9,C10,C11,C12,C13,C14,C15,C16,C17,C18, C35, C40	100nF	SMD0805	Any				20

	43	C21, C22, C27,	Tantalum Cap 10uF	SMD1206	Rohm Semiconductor	TCA1A106M8R	Digikey	511-1463-1-ND	3
	44	C19,C20	Tantalum Cap 47uF	SMD1206					2
Inductors	45	L1	22uH (630 MA)	SMD (6.0mm X 6.0mm X 1.2mm) (L X W X H)	Taiyo Yuden	NR6012T220M	Digikey	587-1708-1-ND	1
	46	L2	1uH (Reactance 600 at 100MHz)	SMD0805	Murata	BLM21B601S	Digikey	490-1046-1-ND	1
Resistors	47	R29, R30, R31, R32, R41, R61, R65	0	SMD0805	Any				7
	48	R51, R52	22	SMD0805	Any				2
	49	R47	47	SMD0805	Any				1
	50	R11, R58	100	SMD0805	Any				2
	51	R1, R2	220	SMD0805	Any				2
	52	R25, R54	330	SMD0805	Any				2
	53	R8, R9, R10	470	SMD0805	Any				3
	54	R64, R66	511	SMD0805	Any				2
	55	R34, R43,R44,R45, R62, R67	1k	SMD0805	Any				6
	56	R50, R63	1k5	SMD0805	Any				2
	57	R7	2k7	SMD0805	Any				1
	58	R33, R35, R36, R37, R38, R39, R40, R57, R68, R69	4k7	SMD0805	Any				10
	59	R14,R15, R16, R17, R18, R19, R20, R21, R22, R23, R24, R26,R28, R55, R56	10k	SMD0805	Any				15
	60	R12	15k	SMD0805	Any				1
	61	R46	33k	SMD0805	Any				1
	62	R3, R4, R5, R6, R59, R60	100k	SMD0805	Any				6
	63	R13	180k	SMD0805	Any				1
	64	R48, R49	1M	SMD0805	Any				2
Misc Components	65	BZ1	BUZZER	AXIAL	CUI Inc	CEP-2242	Digikey	102-1115-ND	1
	66	LDR 1	Light Dependant Resistor	Through Hole	Advanced Photonix Inc	PDV-P5001	Digikey	PDV-P5001-ND	1
	67	-	Cable to connect J1 and J8 after breakup of the board	-	Samtec	FJ-20-D-03.00-4	Integetherated Electronics	FJ-20-D-03.00-4	1
				PCB Manufacturing	Hi-Q				1
				Casing	OKW	A9052107 and A952017 and A9152007	Schurter Electronics (India)	A9052107 and A952017 and A9152007	1

Note:

Note:

Note:

Out of R30 and R31 only one resistor is to be mounted

R32 Not to be Mounted.

Components SW2, BT1, J2, J3, J4 and J9 are not mounter. So their cost is not taken into account during calculations.