

# Bill of Materials - Wireless Sense and Control Module

Version: 1.1

Created: 11/3/2010

Updated: 11/10/2010

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Description	Manufacturer	Part Number	Quantity	Designator	Supplier
Capacitor - ceramic, 0.1uF, 25V, 10%, 0603	Any	Any	28	C1, C2, C3, C4, C5, C6, C7, C8, C11, C12, C13, C14, C15, C16, C17, C24, C26, C27, C29, C32, C33, C34, C35, C36, C37, C40, C41, C42	
Capacitor - ceramic, 0.01uF, 50V, 10%, 0603	Any	Any	2	C9, C10	
Capacitor - ceramic, 2.2nF, 50V, 10%, 0603	Any	Any	1	C18	
Capacitor - ceramic, 0.15uF, 25V, 10%, 0603	Any	Any	1	C19	
Capacitor - ceramic, 10uF, 6.3V, 20%, 0603	Any	Any	2	C21, C22	
Capacitor - ceramic, 1uF, 25V, 10%, 0603	Any	Any	1	C23	
Capacitor - ceramic, 0.5pF, 50V, +/- 0.1p, 0603	Any	Any	1	C25	
Capacitor - ceramic, 10pF, 50V, 10%, 0603	Any	Any	1	C28	
Capacitor - ceramic, 6.8pF, 50V, +/- 0.5pF, 0603	Any	Any	2	C30, C31	
Capacitor - ceramic, 18nF, 50V, 5%, 0603	Any	Any	1	C38	
Capacitor - ceramic, 1nF, 50V, 5%, 0603	Any	Any	1	C39	
Capacitor - ceramic, 10pF, 200V, 5%, through hole axial	Any	Any	1	C43	
Capacitor - electrolytic, 220uF, 35V, 20%, through hole	Nichicon	UVZ1V222MHD	1	C20	Mouser
Resistor - 10k Ohms, 1/10W, 1%, 0603	Any	Any	13	R1, R2, R3, R4, R5, R6, R9, R10, R21, R22, R23, R24, R25	
Resistor - 115k Ohms, 1/10W, 1%, 0603	Any	Any	1	R7	
Resistor - 33.2k Ohms, 1/10W, 1%, 0603	Any	Any	1	R8	
Resistor - 280 Ohms, 1/10W, 1%, 0603	Any	Any	1	R15	
Resistor - 499 Ohms, 1/10W, 1%, 0603	Any	Any	2	R16, R17	
Resistor - 34.8k Ohms, 1/10W, 1%, 0603	Any	Any	1	R19	
Resistor - 392 Ohms, 1/10W, 1%, 0603	Any	Any	1	R20	
Resistor - 475k Ohms, 1/10W, 1%, 0603	Any	Any	1	R26	
Resistor - 182 Ohms, 1/4W, 1%, 1206	Any	Any	1	R14	
Resistor - 1k Ohms, 1/4W, 1%, 1206	Any	Any	1	R18	
PTC - 50mA hold, 100mA trip, through hole	Bourns	MF-R005-0	3	R11, R12, R13	

Inductor - 220uH, 410mA, 20%, SMT	Panasonic	ELL-6UH221M	1	L1	
Inductor - 4.7nH, 800mA, 5%, 0603	Epcos	B822496C3479J	1	L4	
Inductor - 8.2nH, 300mA, 5%, 0603	Johanson Tech	L-14C8N2JV4T	1	L5	
Ferrite bead - 600 Ohms @ 100MHz, 0603	Murata	BLM18AG601SN1D	1	L2	
Balun - ceramic, 50/200 Ohms, 2.4GHz, 0805	Johanson Tech	2450BL15B200E	1	T2	
Transformer - 115VAC/6VAC, 83mA, through hole	Pulse	BV020-5370.0	1	T1	
Antenna - ceramic, 2.4GHz, SMT	Johanson Tech	2450AT43A100E	1	ANT1	
Crystal - 16MHz, 10ppm, 7.2pF, SMD-4	NDK	NX4025DA-16.000000MHZ-B5	1	Y1	
Diode - Schottky, 1A, 30V, SOD123	NXP	PMEG3010ER, 115	3	D1, D2, D5	Mouser
TVS - bidirectional, 33.3V op, 37.1V b/d, DO-214AA	LiteLfuse	P6SMB43CA	1	D3	
Diode bridge - Schottky, 200mA, 40V, SOT143	Infineon	BAS 4002A RPP E6327	1	D4	
TRIAC - 16A, 700V, D2PAK	STMicro	T1635-700G-TR	1	Q1	Mouser
6	STMicro	ESDA5V3SC6	2	U9, U10	
MCU with built in ZigBee transceiver - 8 bit, LGA-71	Freescala	MC13213R2	1	U1	
Op Amp - dual, 80mA, MSOP-10	Microchip	MCP665-E/UN	1	U2	
Instrumentation amplifier - dual, SOIC-8	Cirrus	CS3014-FSZR	1	U13	
RS232 transceiver - 1Tx/1Rx, TSSOP-16	Texas Instruments	SN65C3221EPWR	1	U3	
Digital Temp sensor - 11bit, 12C, TSSOP-8	NXP	SA56004ADP, 118	1	U4	Mouser
Switching voltage regulator - buck, 300mA, 550KHz, TSOT-6	National	LM2841XMK-ADJL/NOPB	1	U5	
Opto isolator - triac out, zero cross, 70mA, 400V, SMD-4	Toshiba	TLP161G(U,C,F)	1	U6	
Digital Pot - 100k, 8 bit, 12C, MSOP-8	Microchip	MCP4551-104E/MS	1	U11	
Current sensor - 20A AC peak, 2.1kV, QSOP-24	Allegro Micro	ACS709LLFTR-20BB-T	1	U12	
Relay - solid state, 1A, 60V, SOP-4	Toshiba	TLP3123(F)	2	U7, U8	
Header - 2x3, 2.54mm pitch, through hole	FCI	68602-406HLF	1	J1	Mouser
Header - 1x3, 2.54mm pitch, friction lock, through hole	Molex	22-23-2037	1	J2	Mouser
9V battery terminal - through hole	MFD	BS61-MC	1	J5	
Terminal block - 1x3, 5.08mm pitch, 16A, R/A, through hole	On Shore Tech	OSTV1032152	1	J7	
Terminal block - 1x6, 2.54mm pitch, 10A, R/A, through hole	Tyco	282834-6	1	J8	
Terminal block - 1x8, 2.54mm pitch, 10A, R/A, through hole	Tyco	282834-8	1	J9	
Case - ABS plastic, 3.4" x 2.2" x 1.4"	Hammond	1591XXLSBK	1	N/A	Mouser