

## Bill of Materials for Moteino Peripherals Half-Shield

### By Component ID

Part	Value	Device	Package	Description	Comment
C1	0.1uF	CAP0805	0805	Capacitor	
C2	10uF	CAP_POL0805	0805-POL	Capacitor, Tantalum	Could likely substitute electrolytic with no ill effects.
C3	0.1uF	CAP0805	0805	Capacitor	
C4	0.1uF	CAP0805	0805	Capacitor	
JP1	10 or 7 pins	1X07_RIGHT_ANGLE		Header 10 or 7	To plug into a breadboard populate all 10 pins. To plug into Arduino as a shield populate 7 pins.
R1	4k7	RESISTOR0805-RES	0805	Resistor	
R2	4k7	RESISTOR0805-RES	0805	Resistor	
R3	4k7	RESISTOR0805-RES	0805	Resistor	
R4	10k	RESISTOR0805-RES	0805	Resistor	
R5	10k	RESISTOR0805-RES	0805	Resistor	
R6	10k	RESISTOR0805-RES	0805	Resistor	
R7	1k5	RESISTOR0805-RES	0805	Resistor	
U1	SPI_FLASH	SPI_FLASH_X25XXSMD	SO08	IC	8pin SPI Flash series X25XX
U2	MCP1701	MCP1701	SOT-89	Voltage Regulator, LDO	3.3volt
U3	RFM69W	RFM69W	Module	Radio Transceiver Module	Untested, but you can likely substitute RFM69HW for more power.

### Order List

Qty	Parts	Value	Mfg Part #	Description / Vendor
1	JP1	10 or 8-pins		Break Away Male Headers - Right Angle <a href="https://www.sparkfun.com/products/553/">https://www.sparkfun.com/products/553/</a>
1	PCB		Moteino Peripherals Half-Shield	<a href="http://oshpark.com/shared_projects/AadEx5fd">http://oshpark.com/shared_projects/AadEx5fd</a>
3	C1, C3, C4	0.1uF	C2012X7R2A104K125AA	CAP CER 0.1UF 100V 10% X7R 0805 Digi-Key #445-1418-1-ND
3	R4, R5, R6	10k	ERJ-6GEYJ103V	RES 10K OHM 1/8W 5% 0805 SMD Digi-Key #P10KACT-ND
1	C2	10uF	F951A106MRAAQ2	CAP TANT 10UF 10V 20% 0805 Digi-Key #478-8418-1-ND
3	R1, R2, R3	4k7	ERJ-6GEYJ472V	RES 4.7K OHM 1/8W 5% 0805 SMD Digi-Key #P4.7KACT-ND
1	R7	1k5		
1	U2	MCP1701	MCP1701AT-3302I/MB	IC REG LDO 3.3V 0.15A SOT89-3 Digi-Key #MCP1701AT-3302I/MBCT-ND
1	U3	RFM69W	RFM69W-S2	<a href="http://lowpowerlab.com/shop/RFM69W">http://lowpowerlab.com/shop/RFM69W</a>
1	U1	4Mbit Flash	W25X40CLSNIG	IC FLASH 4MBIT 104MHZ 8SOIC Digi-Key #W25X40CLSNIG-ND

Note that all parts are "or equivalent". These are the parts I tested with, but you can probably substitute parts with no impact on performance. For instance, any 0805 package 10k resistor would be fine.