

## ME 2110 Mechatronics Kit Components - NI myRIO

	Component	Supplier Website	Part Number	Approx. Unit Price	# per kit	Total Price
	Small Two-Prong Connector	<a href="http://www.digikey.com">www.digikey.com</a>	277-1430-ND	\$ 2.70	4	\$ 10.80
	Small Three-Prong Connector	<a href="http://www.digikey.com">www.digikey.com</a>	277-1431-ND	\$ 4.14	3	\$ 12.42
	Large Two-Prong Connector	<a href="http://www.digikey.com">www.digikey.com</a>	277-1011-ND	\$ 1.65	6	\$ 9.90
	Encoder	<a href="http://www.digikey.com">www.digikey.com</a>	CT3002-ND	\$ 3.47	1	\$ 3.47
	Potentiometer	<a href="http://www.digikey.com">www.digikey.com</a>	987-1294-ND	\$ 0.67	1	\$ 0.67
	Pushbutton Switch	<a href="http://www.digikey.com">www.digikey.com</a>	SW627-ND	\$ 1.55	1	\$ 1.55
	Long-Arm Switch	<a href="http://www.digikey.com">www.digikey.com</a>	SW133-ND	\$ 3.04	2	\$ 6.08
	Roller Switch	<a href="http://www.digikey.com">www.digikey.com</a>	480-2393-ND	\$ 7.17	1	\$ 7.17
Complete AC Adapter, 3A	AC Adapter, 12V 3A	<a href="http://www.digikey.com">www.digikey.com</a>	993-1033-ND	\$ 25.08	1	\$ 25.08
	Plug for AC Adapter	<a href="http://www.digikey.com">www.digikey.com</a>	993-1035-ND	\$ 3.58	1	\$ 3.58
	IR Sensor	<a href="http://www.acroname.com/">http://www.acroname.com/</a>	GP2Y0A41SK0F	\$ 11.00	1	\$ 11.00
	Small DC Motor	<a href="http://www.anaheimautomation.com/">http://www.anaheimautomation.com/</a>	BDSG-37-30-12V-5000-R100	\$ 29.00	1	\$ 29.00
	Large DC Motor	<a href="http://www.anaheimautomation.com/">http://www.anaheimautomation.com/</a>	BDSG-37-40-12V-5000-R75	\$ 31.00	1	\$ 31.00
	Small Solenoid	<a href="http://www.mcmastercarr.com">www.mcmastercarr.com</a>	69905K4	\$ 26.98	1	\$ 26.98
	Large Solenoid	<a href="http://www.mcmastercarr.com">www.mcmastercarr.com</a>	69905K6	\$ 32.38	1	\$ 32.38
	6mm Tubing (per foot)	<a href="http://www.mcmastercarr.com">www.mcmastercarr.com</a>	9355T2	\$ 0.69	5	\$ 3.45
	4mm Tubing (per foot)	<a href="http://www.mcmastercarr.com">www.mcmastercarr.com</a>	5140K91	\$ 0.24	1	\$ 0.24
	Screwdriver	<a href="http://www.mcmastercarr.com">www.mcmastercarr.com</a>	52985A14	\$ 3.92	1	\$ 3.92
	Plastic Bag	<a href="http://www.mcmastercarr.com">www.mcmastercarr.com</a>	14545T19	\$ 13.55	1	\$ 13.55
Complete Pneumatic Valve (x2)	Pneumatic Valve	<a href="http://www.grainger.com">www.grainger.com</a>	6JJ52	\$ 54.05	2	\$ 108.10
	6mm Fitting	<a href="http://www.festo.com/cms/en-us_us/index.htm">http://www.festo.com/cms/en-us_us/index.htm</a>	QS-G1/8-6	\$ 2.07	4	\$ 8.29
Complete Needle Valve	Needle Valve	<a href="http://www.grainger.com">www.grainger.com</a>	4KB92	\$ 30.35	1	\$ 30.35
	6mm Fitting	<a href="http://www.festo.com/cms/en-us_us/index.htm">http://www.festo.com/cms/en-us_us/index.htm</a>	QS-G1/8-6	\$ 2.07	2	\$ 4.14
	Tubing Push-In T-Connector	<a href="http://www.festo.com/cms/en-us_us/index.htm">http://www.festo.com/cms/en-us_us/index.htm</a>	QST-B-6-20	\$ 2.67	1	\$ 2.67
Complete Air Tank	Air Tank (comes with 2 Tank Mounts)	<a href="http://www.festo.com/cms/en-us_us/index.htm">http://www.festo.com/cms/en-us_us/index.htm</a>	CRVZS-0.4	\$ 85.90	1	\$ 85.90
	Tank Mount (Fixing Clip)	<a href="http://www.festo.com/cms/en-us_us/index.htm">http://www.festo.com/cms/en-us_us/index.htm</a>	348166	N/A	2	N/A
	Brass Adapter (Reducing Nipple)	<a href="http://www.festo.com/cms/en-us_us/index.htm">http://www.festo.com/cms/en-us_us/index.htm</a>	NPFB-R-G14-G18-MF	\$ 0.86	2	\$ 1.71
	OK-1/4 Sealing Ring	<a href="http://www.festo.com/cms/en-us_us/index.htm">http://www.festo.com/cms/en-us_us/index.htm</a>	OK-1/4 531772	\$ 0.40	2	\$ 0.80
	Distributor	<a href="http://www.festo.com/cms/en-us_us/index.htm">http://www.festo.com/cms/en-us_us/index.htm</a>	FR-1/8-A/I	\$ 3.96	1	\$ 3.96
	1-Way 4mm Fitting	<a href="http://www.festo.com/cms/en-us_us/index.htm">http://www.festo.com/cms/en-us_us/index.htm</a>	QSK-G1/8-4	\$ 5.76	1	\$ 5.76
	6mm Fitting	<a href="http://www.festo.com/cms/en-us_us/index.htm">http://www.festo.com/cms/en-us_us/index.htm</a>	QS-G1/8-6	\$ 2.07	1	\$ 2.07
	Pressure Gauge, NPT 1/8"	<a href="http://www.festo.com/cms/en-us_us/index.htm">http://www.festo.com/cms/en-us_us/index.htm</a>	MA-40-10-1/8	\$ 10.99	1	\$ 10.99
	OL-1/8 Sealing Ring	<a href="http://www.festo.com/cms/en-us_us/index.htm">http://www.festo.com/cms/en-us_us/index.htm</a>	OL-1/8 33840	\$ 0.44	1	\$ 0.44
Complete Pneumatic Actuator (x2)	Standard Cylinder	<a href="http://www.festo.com/cms/en-us_us/index.htm">http://www.festo.com/cms/en-us_us/index.htm</a>	ESNU-20-50-P-A	\$ 44.09	2	\$ 88.17
	6mm Fitting	<a href="http://www.festo.com/cms/en-us_us/index.htm">http://www.festo.com/cms/en-us_us/index.htm</a>	QS-G1/8-6	\$ 2.07	2	\$ 4.14
	Coupler Nut, M22x1.5 Thin *	<a href="http://www.festo.com/cms/en-us_us/index.htm">http://www.festo.com/cms/en-us_us/index.htm</a>	MSK-M22X1.5	N/A	2	N/A
	Coupler Nut, M22x1.5 Thin *	<a href="http://www.mcmastercarr.com">www.mcmastercarr.com</a>	90326A150 (10-pack)	-	2	\$ 7.90
	Piston Rod Nut, M8x1.25	<a href="http://www.mcmastercarr.com">www.mcmastercarr.com</a>	90591A161 (100-pack)	-	2	\$ 5.07
myRIO	myRIO Controller	<a href="http://sine.ni.com/nips/cds/view/p/lang/en/nid/211694">http://sine.ni.com/nips/cds/view/p/lang/en/nid/211694</a>	NI myRIO-1900	~ \$250	1	~ \$250
	myRIO USB Cable	<a href="http://www.digikey.com">www.digikey.com</a>	Q361-ND	\$ 2.15	1	\$ 2.15
	myRIO Power Adapter, 12V 1.5A	<a href="http://www.digikey.com">www.digikey.com</a>	237-1393-ND	\$ 11.45	1	\$ 11.45
Expansion Boards	Driver and Sensor Boards	Contact Arto Kivila (arto@gatech.edu)			1 of each	~ \$50
Complete Ribbon Cable	Cable	<a href="http://www.mouser.com">www.mouser.com</a>	517-3365/34FT	\$ 0.74	1	\$ 0.74
	Female End	<a href="http://www.digikey.com">www.digikey.com</a>	S9313-ND	\$ 1.48	1	\$ 1.48
	Male End	<a href="http://www.digikey.com">www.digikey.com</a>	732-5457-ND	\$ 5.68	1	\$ 5.68

\* Either line is suitable as replacement component.

### Instructions for Replacing Damaged or Lost Components:

- 1.) Order the item(s) from the appropriate website. Ship them to yourself.
- 2.) When the item(s) arrive, email your TA and arrange to return the replacement item(s).
- 3.) Once you have replaced all of your damaged or lost items, be sure to obtain confirmation that your Mechatronics kit is complete.

Note: Pneumatics components from Festo must be purchased from supplier TSI Solutions (<http://4tsi.com/>). Email them at [sales@4tsi.com](mailto:sales@4tsi.com) or fill out the form at <http://4tsi.com/request-a-quote/> for a quote, including the desired part names, part numbers, and quantities.