

System Cost		520.14									
Module Name	Module Group	Module Cost	Module Quantity	Module Total Cost	Item Name	Consumable? (y/n)	Item Description	Item Unit Cost	Item Quantity	Item Total Cost	Item Vendor
Infrastructure Modules											
Chassis Module	Pilot	51.32	1	51.32	Foam Sheet	n	FOAMULAR 250 2 in. x 2 ft. x 8 ft. Tongue and Groove R-10 Insulation Sheathing	20.85	1	20.85	Home Depot
					Large Zip Ties	y	25 Pack 24" Cable Ties Heavy Duty 160lb 9mm x 24" Long Cable Ties Zip Ties	12.49	1	12.49	Amazon Prime
					Small Zip Ties	y	Install Bay BCT8S Cable Tie 8-Inch 18-Pounds Thin, Black (100-Pack)	4.84	1	4.84	Amazon Prime
					Tape	y	Devek Premium Gaffer Tape Matte Cloth With Rubber Adhesive 12.5 Mil Thick 4 Inch x 10 Yards White	13.14	1	13.14	Amazon Prime
Grow Basin Module	Pilot	39.95	1	39.95	Basin	n	Commercial 3351GRA Bus/Utility Box, 7.125gal, Gray (RCP3351GRA)	13.96	1	13.96	Amazon Prime
					Tray	n	Use Foam From Chassis	0	1	0	None
					Water Manifold	n	Use Foam From Chassis	0	1	0	None
					Horticubes	y	Oasis Horticultubes 2 Pack	25.99	1	25.99	Amazon
Arduino Controller Module	Pilot	35.32	1	35.32	Arduino Uno	n	MakerBest Hight Quality Compatible Arduino UNO R3 ATmega328P Development Kits	9.99	1	9.99	Amazon Prime
					USB A-to-B Cable	n	Included in Arduino Uno Item	0	1	0	None
					Barrel Jack Cable	n	Sinddy High Quality 10pack 10 inch(30cm) 2.1 x 5.5mm DC Power Pigtail MALE	6.14	1	6.14	Amazon Prime
					Screw Shield	n	Interface Development Tools Screw Shield	10.5	1	10.5	Amazon
					12" Red Hookup Wire	n	Included in Wiring Starter Pack Pilot Module	0	3	0	None
					Relay Shield	n	XCSOURCE® Four channel Relay Shield 5V 4 Channel 4CH Relay Shield Module for Arduino TE315	8.69	1	8.69	Amazon Prime
					6-Channel Power Strip	n	AmazonBasics 6-Outlet Surge Protector Power Strip, 790 Joule - White	9.99	1	9.99	Amazon Prime
Power Module	Pilot	40.91	1	40.91	12V-30A Power Supply	n	NEWSTYLE 12v 30a Dc Universal Regulated Switching Power Supply 360w for CCTV, Radio, Computer Project	19.98	1	19.98	Amazon Prime
					2' Extension Cable	n	SF Cable, 2ft Ultra Low Profile Angle NEMA 5-15P to 5-15R with 24 inches 16/3 AWG SJT	8.95	1	8.95	Amazon Prime
					12" Red Hook-up Wire	n	Included in Wiring Starter Pack Pilot Module	0	1	0	None
					5-Channel Easy Connector	n	Included in Wiring Starter Pack Pilot Module	0	2	0	None
					30A Fuse	y	Included in 12" Black Inline Fuse Hook-Up Wire Item	0	1	0	None
					12" Black Inline Fuse Hook-up Wire	n	Replacement In-line Inline in Line ATM ATP Fuse Holder 30a Rated Black Mini 14-16 Ga Equivalent to Littlefuse 0fhm0001zxj Inline Low Profile Waterproof. Fsn15	1.99	1	1.99	Amazon
LCD Display Module	Pilot	11.9	1	11.9	LCD RGB Backlight	n	Grove - LCD RGB Backlight	11.9	1	11.9	Mouser
					Jumper Wire Assortment	y	Included in Wiring Starter Pack Pilot Module	0	4	0	None
Sensor Modules											
Air Temperature & Humidity Sensor Module	Pilot	23.95	1	23.95	Temperature & Humidity Sensor	n	AM2315 - Encased I2C Temperature/Humidity Sensor for Raspberry Pi/ Arduino	23.95	1	23.95	Amazon Prime
Manual Nutrient Sensor Module	Pilot	21.75	1	21.75	EC Meter	n	#VALUE!	21.75	1	21.75	Amazon Prime
Manual pH Sensor Module	Pilot	5.5	1	5.5	pH Strip	y	Litmus pH Test Strips, Universal Application (pH 1-14), 2 Packs of 100 Strips	5.5	1	5.5	Amazon Prime

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Actuator Modules											
Grow Light Module	Pilot	72.98	1	72.98	Grow Light	n	Erligpowht 45W LED Red Blue Hanging Light for Indoor Plant	34.99	1	34.99	Amazon Prime
					Long Black Jumper Wire	n	Included in Wiring Starter Pack Pilot Module	0	1	0	None
					Long Blue Jumper Wire	n	Included in Wiring Starter Pack Pilot Module	0	1	0	None
					Powerswitch Tail	n	PowerSwitch Tail II	37.99	1	37.99	Amazon Prime
Air Vent Module	Pilot	26.64	1	26.64	Fan	n	Bgears b-Blaster 120mm 2 Ball Bearing High Speed Extreme Airflow Fan	10.89	1	10.89	Amazon Prime
					Fan Guard	n	5 Pcs Silver Tone Axial Fan Grill Protector 12cm Metal Finger Guards	5.45	1	5.45	Amazon Prime
					Louver	n	Lambro 2676W White Plastic Louvered Vent, 4-Inch	5.15	2	10.3	Amazon Prime
					Humidifier	n	Ellen Tool Mini Portable Bottle Cap Air Humidifier with USB Cable for Office Home (Blue)	9.29	1	9.29	Amazon Prime
Humidifier Module	Pilot	16.96	1	16.96	Micro-USB Cable	n	Included in Humidifier Item	0	1	0	Amazon Prime
					Humidifier Wick	y	Included in Humidifier Item	0	1	0	Amazon Prime
					Humidifier Reservoir	n	Use Recycled Water Bottle	0	1	0	None
					2-Channel Easy Connector	n	Included in Wiring Starter Pack Pilot Module	0	2	0	Amazon Prime
Water Circulation Module	Pilot	7.99	1	7.99	Inline 12V-to-5V Step-down Regulator	n	Nextrox DC/DC Converter 12V Step Down to 5V 3A Power Supply Module	7.67	1	7.67	Amazon Prime
					Water Circulation Pump	n	VicTsing 80 GPH (300L/H) Submersible Water Pump For Pond, Aquarium, Fish Tank Fountain Water Pump Hydroponics with 4.9ft (1.5m) Power Cord	7.99	1	7.99	Amazon Prime
					Air Pump	n	Tetra Whisper Air Pump (Non-UL)	6.99	1	6.99	Amazon
					Air Stone	n	uxcell® Aquarium Fish Tank Bubble Diffusers Maker Round Air Stones	1.49	1	1.49	Amazon
Water Aeration Module	Pilot	12.58	1	12.58	Air Tubing	n	Lee's Airline Tubing, 8-Foot, Standard	4.1	1	4.1	Amazon Prime
					Peristaltic Pump	n	Homecube 12V DC Peristaltic Liquid Pump Miniature Dosing Pump Hose Pump for Aquarium Lab Analytical Water	17.99	1	17.99	Amazon Prime
					Food Safe Tubing	n	White SiliconeTubing, 1/8"ID, 3/16"OD, 1/32" Wall, 10' Length	9.71	1	9.71	Amazon Prime
					Mini-Grabber Cable	n	Elenco Mini-Grabber to Mini-Grabber Test Lead Set	8.99	1	8.99	Amazon Prime
Manual pH Doser Module	Pilot	21.68	1	21.68	Storage Bottle	n	Nalgene Wide Mouth Rectangular Bottle (64-Ounce)	11.99	1	11.99	Amazon Prime
					pH Up Solution & pH Down Solution	y	Hydroponic pH Up and Down Control Kit - 2 pints (16oz each)	14.69	1	14.69	Amazon Prime
					Pipettes	y	KINGLAKE® Plastic Graduated Transfer Pipettes 3ML Pack of 100 Makeup Tool 100% Customer Satisfaction Guarantee	6.99	1	6.99	Amazon Prime
					Nutrients	y	General Hydroponics KoolBloom for Gardening, 4-Ounce	12.2	1	12.2	Amazon Prime
Manual Nutrient Doser Module	Pilot	12.2	1	12.2	Nutrients	y	General Hydroponics KoolBloom for Gardening, 4-Ounce	12.2	1	12.2	Amazon Prime

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Assembly Modules											
Wiring Starter Pack Module	Pilot	60.94	1	60.94	Red Hookup Wire	y	Grand General 55241 Red 14-Gauge Primary Wire	6.49	1	6.49	Amazon
					Black Hookup Wire	y	Grand General 55240 Black 14-Gauge Primary Wire	6.49	1	6.49	Amazon
					Jumper Wire Assortment	y	Honbay® 120pcs Multicolored 40pin Male to Female, 40pin Male to Male, 40pin Female to Female Breadboard Jumper Wires Ribbon Cables Kit	7.97	1	7.97	Amazon
					Easy Connector Assortment	y	Wago (25) 222-412 (25) 222-413 (20) 222-415 Lever-Nut Assortment Pack	39.99	1	39.99	Amazon
Tool Starter Pack Module	Pilot	39.28	0	0	Wire Stripper	n	Bastex, 2 in 1 Self Adjusting Wire Cutting Stripper Tool. Duckbill/Eagle Nose Pliers Adjustable Cable Wire Stripper/Cutter. 0.2mm-3.3mm cutting range. for small electrical, automotive Repair	12.99	1	12.99	Amazon Prime
					Wire Cutter	n	Hakko CHP-170 Micro Soft Wire Cutter, 1.5mm Stand-off, Flush Cut, 2.5mm Hardened Carbon Steel Construction, 21-Degree Angled Jaw, 8mm Jaw Length, 16 Gauge Maximum Cutting Capacity	4.97	1	4.97	Amazon Prime
					Small Screwdriver Set	n	TEKTON 2974 Long Precision Screwdriver Set, 6-Piece	9.37	1	9.37	Amazon Prime
					Large Screwdriver Set	n	Stanley 60-020 2-Piece Standard Fluted Screwdriver Set	2	1	2	Amazon Prime
					Utility Knife	n	Bills Bargain House Utility Knife with Stainless Steel Breakaway Blades, Pack of 12	9.95	1	9.95	Amazon Prime
Kitting Module	Pilot	8.89	1	8.89	Antistatic Bags	n	Antistatic Bags, Resealable, 8X12, 10 Pack	8.89	1	8.89	Amazon Prime