



PURCHASE REQUEST

Dept./Office: **DABE**PR #: **GF-2021-10-01391**Date: **10-21-2021**Section/End-User: **Lorbert G. Mazo**Category: **Electronics supplies**Funding Source: **General Fund - MOOE**Project Title/Code: **VSU-IP-2021-4**

Item #	Item Description	Unit	Qty	Unit Cost	PAR/ICS	Total Cost
1	DC & Stepper Motor HAT	set	1	2,000.00		2,000.00
Specification: <ul style="list-style-type: none"> • 4 H-Bridges: TB6612 chipset provides 1.2A per bridge with thermal shutdown protection. • Can run motors on 4.5VDC to 13.5VDC. • Up to 4 bi-directional DC motors with individual 8-bit speed selection • Up to 2 stepper motors (unipolar or bipolar) with single coil, double coil, interleaved or micro-stepping. • Big terminal block connectors to easily hook up wires (18-26AWG) and power • Polarity protected 2-pin terminal block and jumper to connect external 5-12VDC power • for Raspberry Pi - Mini Kit 						
2	Digital Load Cell Sensor Weighing Scale Kit Assembly	set	5	480.00		2,400.00
Specification: <ul style="list-style-type: none"> • HX711 module uses 24 high precision A/D converter chip hx711; • Sturdy aluminum alloy construction with strain gauges pre-attached with strain relieved wires. • Accurately measures forces from 0-5kg (0-11 lb). - On-chip active low noise PGA with selectable gain of 32, 64 and 128. - • On-chip power supply regulator for load-cell and ADC analog power supply, on-chip oscillator requiring no external component with optional external crystal. • Simple digital control and serial interface: pin-driven controls, no programming needed, selectable 10SPS or 80SPS output data rate. 						
3	Heat Shrink Tube Tubing Sleeve Wrap Wire Cable	set	1	360.00		360.00
Specification: <ul style="list-style-type: none"> • 100Pcs/Set • 7 Color Polyolefin Material 						
4	Hex Nut Spacing Screw Male Female Threaded Pillar	set	1	400.00		400.00
Specification: <ul style="list-style-type: none"> • 200Pcs/Set M3 • for PCB PC Motherboard • Nickel Plated 						
5	High Torque Bipolar Stepper Motor	set	2	1,200.00		2,400.00

Specification:

- Motor Type: Bipolar Stepper
- Step Angle: 1.8 deg.
- Holding Torque: 65Ncm(92oz.in)
- Rated Current/phase: 2.1A
- Phase Resistance: 1.6ohms
- Inductance: 3mH+/-20%(1KHz)
- Number of Leads: 4

6	Male+Female Plug Connector Power Supply Jack Adapter For CCTV Camera	set	1	460.00		460.00
---	---	-----	---	--------	--	--------

Specification:

- Female Jack Description: No electrical tap, No splicing, no crimping, but only a small screw driver.
- Male Jack Description: 2.1 x 5.5mm CCTV Camera DC Power Plug Connector. DC Power Plug with plastic construction and strain relief. This 2.1 x 5.5mm Power Plug features one power connector end DC plug male to another end terminal for CCTV camera connected.

7	Mini voltage regulator	set	1	180.00		180.00
---	-------------------------------	-----	---	--------	--	--------

Specification:

- High voltage and high current resettable fuse, overcurrent automatic disconnection, power off for cooling for a few seconds fuses automatic recovery
- Operating voltage: DC3V-35V
- Control power: Maximum 90W
- Quiescent current: 0.01A(Standby)
- PWM duty cycle: 1%-100%
- PWM frequency: 10khz

8	Mux Breakout - 8 Channel	set	2	900.00		1,800.00
---	---------------------------------	-----	---	--------	--	----------

Specification:

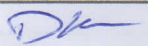

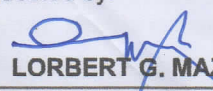
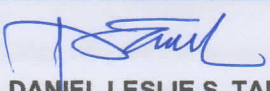
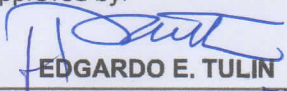
- Operating Voltage: 1.65V - 5.5V
- Operating Temperature: -40 - 85° C
- I2C Address: 0x70 (default) up to 0x77
- 10x Qwiic Connectors
 - 2x Pass Through (Daisy Chain)
 - 8x Channels

9	Parallel Beam Electronic Load Cell Scale Weighting Sensor	set	5	590.00		2,950.00
---	--	-----	---	--------	--	----------

Specification:

- Limit range: 0-100g
- Theoretical accuracy range: 100g
- Accuracy: 0.020%, 0.010%
- Comprehensive error: $\pm 0.03\%$ F.S
- Output impedance: 405 ± 6
- Input impedance: 350 ± 6
- Use temperature: - 10? to +40 ?

<ul style="list-style-type: none"> • Safety overload range: 120% • Limit overload range: 150% • Non-linearity: 0.02%.S • Hysteresis: 0.02% F.S • Installation type: parallel installation • Sensitivity: 2.0±0.2mv/v 						
10	Potentiometer Variable Resistor 25 Turn	set	1	375.00		375.00
Specification: <ul style="list-style-type: none"> • 25pcs/set • 2K Ohm Trim Pot Trimmer 						
11	Sauna Heater Stove Heating Element	set	2	3,450.00		6,900.00
Specification: <ul style="list-style-type: none"> • Material: 304 Stainless Steel • Power: 2670W • Voltage: 220V/380V • Sauna type: Wet or Dry 						
12	Soldering Iron Kit set with carrying bag	set	1	1,200.00		1,200.00
Specification: <ul style="list-style-type: none"> • Work Voltage: 220V • Power: 60W • Temp Rang: 200? - 450 ? • Tweezers: ESD-15, Length 4.7inches • Soldering Iron Stand: Steel • Tips Model: 5 pcs, 900M series • Desoldering Pump: Plastic and aluminum alloy • Carrying bag: Fabric • The working temperature is continuously adjustable between 200~450?. 						
13	Solid State Relays	set	5	270.00		1,350.00
Specification: <ul style="list-style-type: none"> • Input Voltage : 3-32V DC • Output Voltage : 24-380V AC • Rated Load Current : 40A • Input Voltage : 3-32V DC • Output Voltage : 24-380V AC • Rated Load Current : 60A • Rated Load Current : 100A 						
14	Stranded Wire Kit	set	1	1,950.00		1,950.00
Specification: <ul style="list-style-type: none"> • #20awg (5 colors Mix) 						

• Silicone Wire Rubber Insulated Electrical Wire Hook-up Wire						
15	Wire Connector	set	1	1,935.00		1,935.00
Specification: <ul style="list-style-type: none"> • 95 PCS/set • Mini Quick Connector Universal Compact Terminal Block Plug-in Electrical Wire 						
TOTAL						26,660.00
Purpose: for research						
Checked by:  DIONESIO P. ESTUPA MICHAEL ANTHONY JAY B. REGIS				Funds Available:  ALICIA M. FLORES		
TWG - Electronics supplies				HEAD, BUDGET OFFICE		
Signature:	Requested by: 		Noted by: 		Approved by: 	
Printed Name:	LORBERT G. MAZO		DANIEL LESLIE S. TAN		EDGARDO E. TULIN	
Designation:	END USER		UNIT HEAD, PROJECT LEADER		PRESIDENT, VSU	