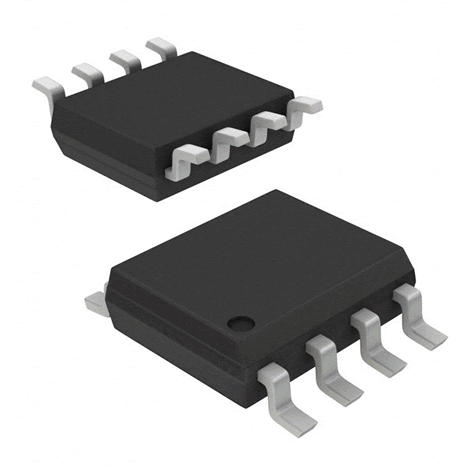
Use this page to submit a proposal for your **Independent Study Project**. You have read the underlying philosophy of the activity (<http://darcy.rsgc.on.ca/ACES/ISPs/Hardware.html>), explored various topics of pursuit and have understood the assessment criteria (<http://darcy.rsgc.on.ca/ACES/ISPs/ISPEvaluation.docx>).

**1. Your Name:**

**2. Project Title:**

**3. Provide a brief description of the project:**

**4. Provide specific digikey SMD part descriptions**

(<https://www.digikey.ca/>)

My commitment to you is to provide you with the SMD components you require for your ISP. For this **I need the most accurate list of Digikey parts data possible**. Add, edit or remove the respective parts below.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Part** | **Package** | **#** | **Digikey Part Number** | **Comments** |
| AVR uC? | eg. 8-SOIC | 1 | [ATTINY85-20SU-ND](https://www.digikey.ca/product-detail/en/microchip-technology/ATTINY85-20SU/ATTINY85-20SU-ND/735470) |  |
| Shift Register | 16-SOIC | 1 | [296-4618-5-ND](https://www.digikey.ca/product-detail/en/texas-instruments/SN74AHC595D/296-4618-5-ND/375884) |  |
| USB Micro B |  | 1 | [609-4613-1-ND](https://www.digikey.ca/product-detail/en/amphenol-icc-fci/10118192-0001LF/609-4613-1-ND/2785378) |  |
| Passive | 1206 | 1 |  |  |
| Passive | 1206 |  |  |  |
| Passive | 1206 |  |  |  |
| FFC |  | 1 | [WM10537-ND](https://www.digikey.ca/product-detail/en/molex-llc/0152670205/WM10537-ND/4427086) |  |
| FFC Connector |  | 1 | [WM10939CT-ND](https://www.digikey.ca/product-detail/en/molex-llc/0522070660/WM10939CT-ND/5170941) |  |
| LED (RG) | 1206 |  | [160-2026-2-ND](https://www.digikey.ca/product-detail/en/lite-on-inc/LTST-C235KGKRKT/160-2026-2-ND/3198718) |  |
| SMD 7-SegDis |  |  | [516-3011-1-ND](https://www.digikey.ca/product-detail/en/broadcom-limited/HDSM-283C/516-3011-1-ND/4240292) |  |
| Momentary PB |  |  | [CKN9104CT-ND](https://www.digikey.ca/products/en?keywords=CKN9104CT-nd" \t "_blank) |  |
| 555? | 8-SOIC |  | [LM555CMXFSCT-ND](https://www.digikey.ca/product-detail/en/on-semiconductor/LM555CMX/LM555CMXFSCT-ND/3042804) |  |
| 4511? |  |  |  |  |
|  |  |  |  |  |

**5. Provide additional SLIM CAD case details (Staple sketch if necessary)**

**NOTE: Be sure to check ALL the applicable boxes on the reverse.**

Please check all boxes corresponding to the concepts and skills you intend to exploit in this project.

|  |  |  |  |
| --- | --- | --- | --- |
| **Hardware Components** | **Software Techniques** | **Power** | **Skills** |
| □ resistors  □ capacitors  □ potentiometers □ transistors □ diodes  □ push buttons  □ switches  □ LDRs □ thermistor  □ temperature sensor  □ proximity sensor □ IR (infrared) □ Radio Frequency (RF) □ Bluetooth □ OpAmps  □ voltage regulators  □ MOSFETs  □ surface mount parts  □ Logic ICs (40xx) □ shift registers  □ Specialty ICs (555,MSGEQ7, H-Bridge, LM3914, etc.)  □ Real Time Clock (RTC)  □ ATtiny85 □ LEDs (single, Bi, RGB)  □ 7-segment display □ Alphanumeric display  □ Bargraph  □ LED Matrix  □ LCD Panel  □ Graphics Panel  □ DC motor  □ servo motor  □ stepper motor  □ solenoid  □ microphone  □ audio line in  □ speaker  □ magnets  □ point-to-point board  □ perma-proto board  □ custom PCB  □ OTHER | □ High-Level  □ Assembly  □ Arrays  □ Structs  □ bitwise operators  □ I2C (TWI)  □ Libraries  □ ADC  □ PWM  □ Serial Comm. (ISP)  □ Debouncing  □ LookUp Table  □ Polling □ Persistence of Vision  □ Interrupts  □ Recursion  □ ISP  □ EEPROM  □ Processing  □ Charlieplexing  □ Timing related □ UML Design  □ OTHER | □ Batteries  □ AC/DC Adapter  □ Transformers  □ coils/chokes  □ 12V  □ 24V  □ solar  □ manual  □ Peltier tiles  □ OTHER | □ reading a schematic  □ through hole soldering  □ surface mount soldering  □ printed circuit board layout and manufacturing □ DMM Debugging  ☑ CAD  □ 3D printing  □ acrylic fabrication ☑ Word □ Excel □ Time-management □ Fritzing  □ Presentation Overview  ☑ video creation  ☑ technical writing  □ OTHER |
| **Engineering Fields** |
| □ electrical  □ computer  □ mechanical  □ software  □ OTHER |