

Dual Switch - JS202011 - Trēo™ Module

Module Features

- C&K JS202011
- RoHS Compliant
- Software Library
- NightShade Trēo™ Compatible
- Breakout Headers

JS202011 Features

(from C&K)

• 5,000 Cycle Life Expectancy

Applications

- Control Panel
- Mobile Device

Trēo[™] Compatibility

Electrical

Communication	GPIO
Max Current, 3.3V	1mA
Max Current, 5V	0mA

Mechanical

- 25mm x 25mm Outline
- 20mm x 20mm Hole Pattern
- M2.5 Mounting Holes



Description

The JS202011 Trēo[™] Module is a Dual Switch module that features C&K's JS202011 slide switch. This module is a part of the NightShade Treo system, patent pending.

Table of Contents

1	Summary	2
2	What is Trēo™?	2
3	Electrical Characteristics	2
4	Electrical Schematic	3
5	Mechanical Outline	4
6	Example Arduino Program	5
7	Library Overview (C++ & Python)	6



1 Summary

This module is operated using the NightShade_Treo_DigitalInput library. The input is monitored with the read() method. Each switch is handled independently in software.

2 What is Trēo[™]?

NightShade Trēo is a system of electronic modules that have standardized mechanical, electrical, and software interfaces. It provides you with a way to quickly develop electronic systems around microprocessor development boards. The grid attachment system, common connector/cabling, and extensive cross-platform software library allow you more time to focus on your application. Trēo is supported with detailed documentation and CAD models for each device.

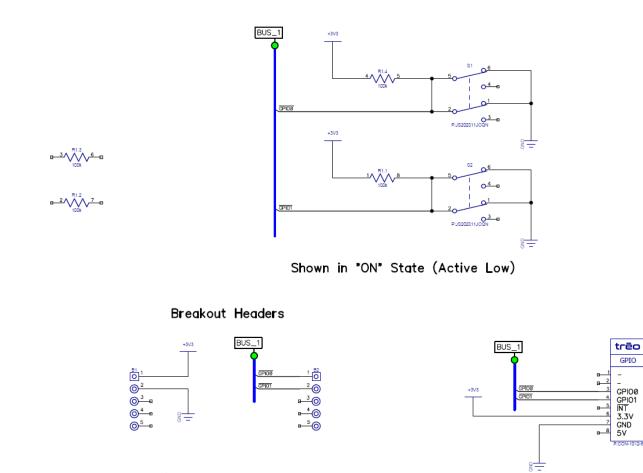
Learn more about Trēo here.

3 Electrical Characteristics

	Minimum	Nominal	Maximum
Voltages			
V _{i/o} (GPIO)	-0.3V	-	3.6V
V _{3.3V}	3.1V	3.3V	3.5V
Operating Temperature	-25°C	-	+85°C

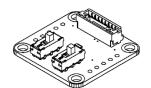


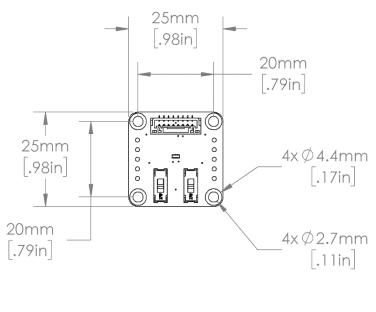
4 Electrical Schematic

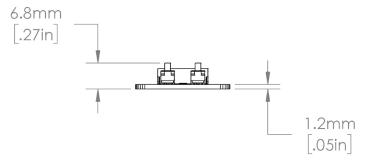




5 Mechanical Outline









6 Example Arduino Program

```
DigitalInput - NightShade Treo by NightShade Electronics
 This sketch demonstrates the functionality of the
 NightShade Treo digital input modules like buttons and
 switches. It prints any chance in state to Serial at
 115200 baudrate.
 Created by Aaron D. Liebold
 on February 15, 2021
 Links:
 NightShade Trēo System: https://nightshade.net/treo
 Distributed under the MIT license
 Copyright (C) 2021 NightShade Electronics
 https://opensource.org/licenses/MIT
// Include NightShade Treo Library
#include <NightShade Treo.h>
// Declare Objects (Dual Input Device - GPIO0: D5, GPIO1: D4)
NightShade_Treo_DigitalInput input0(5);
NightShade Treo DigitalInput input1(4);
void setup() {
 Serial.begin(115200); // Initialize Serial at 115200 baud
}
void loop() {
 if (input0.read()) {
   Serial.println("Input0 Activated!");
   while (input0.read()); // Wait until input is released
   Serial.println("Input0 Deactivated!\n");
 }
 if (input1.read()) {
   Serial.println("Input1 Activated!");
   while (input1.read()); // Wait until input is released
   Serial.println("Input1 Deactivated!\n");
 }
}
```



7 Library Overview (C++ & Python)

C++ Class

NightShade_Treo_DigitalInput <classObject>();

Python Module

<classObject> = NightShade_Treo.DigitalInput()

7.1 Constructors

NightShade_Treo_DigitalInput(int gpioPin)

Creates a DigitalInput object.

Arguments: gpioPin

Integer of the GPIO pin

Returns: Nothing

7.2 Methods

read()

Reads the input value. This method debounces the input by waiting for three consecutive reads of the same value. The reads are taken at 50us

Arguments:

None

Returns:

Input value (int) on (true)/off (false)

nightshade.net