

Dual Button – PTS645 – Trēo™ Module

Module Features

- C&K PTS645
- RoHS Compliant
- Software Library
- NightShade Trēo™ Compatible
- Breakout Headers

PTS645 Features

(from C&K)

- 100,000 Cycle Life Expectancy
- 160g Actuation Force

Applications

- Control Panel
- Mobile Device

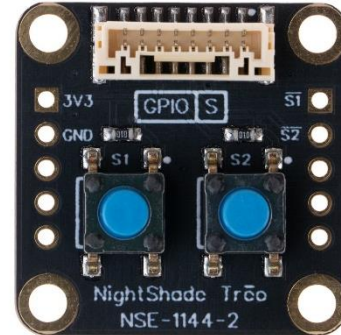
Trēo™ Compatibility

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 PTS645 Trēo™ Module is a Dual Button module that features C&K's PTS645 tactile button switch. . This module is a part of the NightShade Treo system, patent pending.

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1 Summary

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

2 What is Trēo™?

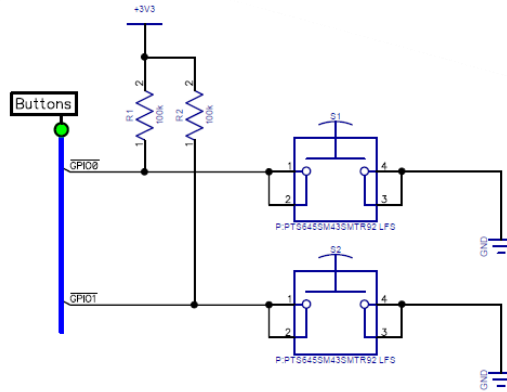
NightShade Trēo is a system of electronic modules that have standardized mechanical, electrical, and software interfaces. It provides you with a way to quickly develop electronic systems around microprocessor development boards. The grid attachment system, common connector/cabling, and extensive cross-platform 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	-20°C	-	+85°C

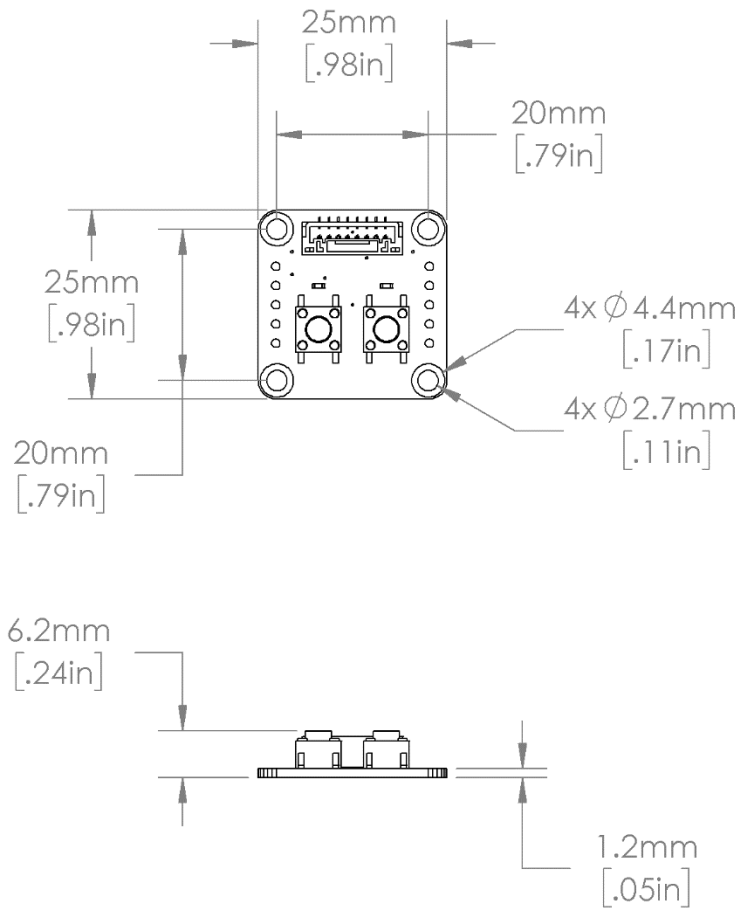
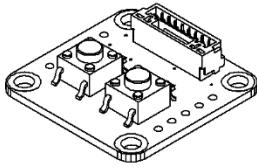
4 Electrical Schematic



Breakout Headers



5 Mechanical Outline



6 Example Arduino Program

```
/******  
DigitalInput - NightShade_Treo by NightShade Electronics  
  
This sketch demonstrates the functionality of the  
NightShade Trēo digital input modules like buttons and  
switches. It prints any change 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");  
  }  
}
```

