VIVE Ultimate Tracker

Pogo Pin

Developer Guidelines

Ver. 1.1

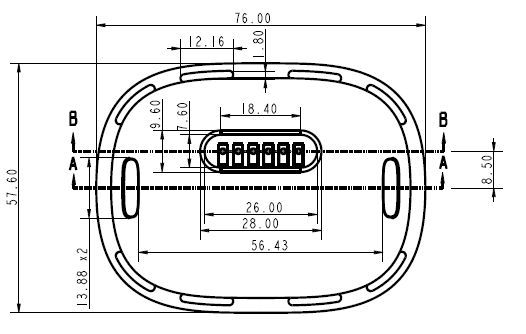
Version Control

|  |  |  |
| --- | --- | --- |
| Version Number | Version Date | Version Reason |
| 1.0 | 2023.8.16 | Initial public version for VIVE Ultimate Tracker |
| 1.1 | 2024.1.15 | Remark Radio Frequency design guideline |

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## Introduction

This document describes the development guidelines for VR accessory makers and content developers. It contains information on how to design Pogo Pin to fit with VIVE Ultimate Tracker

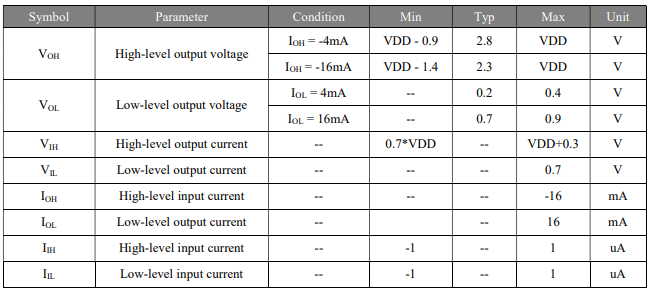


### Interface

**GPIO Pin Absolute Maximum Rating**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Symbol | Parameter | Min | Max | Unit |
| VI | Input voltage | - 0.3 | 4 | V |
| VESD | Electrostatic discharge voltage , Human Body Model | -- | 4000 | V |

**GPIO Pin Electrical Characteristics (Supply voltage VDD = 3.3 V)**



**Power Input**

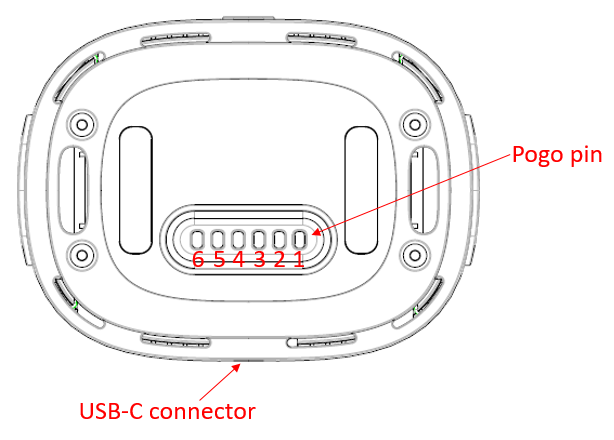
|  |  |  |
| --- | --- | --- |
|  | **Voltage requirement** | **Input current max.** |
| Pogo Pin 3 | 5V+/-5% | 1 A |

**Pin Assignment**

|  |  |  |
| --- | --- | --- |
| **Pin no.** | **Type** | **Description** |
| **1** | Digital output | General purpose output pin |
| **2** | GND | Ground |
| **3** | Digital/Power input | 1. General purpose input pin: Internal pull up resistor to VDD, Active -low (Grip button)  2. Power input pin |
| **4** | Digital input | General purpose input pin: Internal pull up resistor to VDD, Active -low (Trigger button) |
| **5** | Digital input | General purpose input pin: Internal pull up resistor to VDD, Active -low (Trackpad button) |
| **6** | Digital input | General purpose input pin: Internal pull up resistor to VDD, Active -low (Menu button) |

##### Design of Pogo Pins

* 1. **Pin definition (On VIVE Ultimate Tracker), Bottom view**

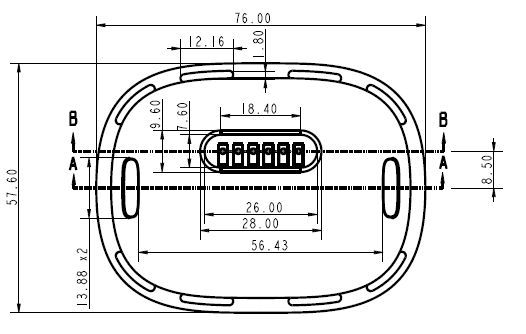


**1 2 3 4 5 6**

Pin 1

USB connector

* 1. **Pin definition (on Pogo Pin Cradle), Top view**



Pin 1

6 5 4 3 2 1

##### Mechanical Design

一張含有 寫生, 圖表, 文字, 圖畫 的圖片

自動產生的描述

### Radio frequency (RF)

To establish a stable wireless connection between the VIVE Ultimate Tracker and the dongle, the OTA performance of VIVE Ultimate Tracker cannot downgrade to more than 3dB when an accessory is attached to the VIVE Ultimate Tracker. The following are recommendations for better RF performance. The figure below illustrates the “keep out” area where only nonmetallic parts of the accessory should be inside (spherical radius=30mm and the center is antenna feed point).

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自動產生的描述

Figure: Restricted Area of Antenna

Except for essential parts, such as the 1/4’’ screw, electric connection pad (which connects with the Pogo pin), and related circuits of the electric connection pad, metal parts of the accessory should keep at least 30mm distance away from the antenna to avoid OTA performance reduction when the accessory is attached to VIVE Ultimate Tracker.