



US 20220407518A1

(19) **United States**(12) **Patent Application Publication** (10) **Pub. No.: US 2022/0407518 A1****Lee et al.**(43) **Pub. Date: Dec. 22, 2022**(54) **ANALOG INPUT DEVICE, COMPUTING SYSTEM AND METHOD FOR RECEIVING AND PROCESSING ANALOG INPUT****G01L 1/24** (2006.01)**G06F 3/02** (2006.01)**H01H 13/14** (2006.01)(71) Applicant: **Razer (Asia-Pacific) Pte. Ltd.,**  
Singapore (SG)(52) **U.S. Cl.**CPC ..... **H03K 17/969** (2013.01); **H01H 13/83**  
(2013.01); **G01L 1/24** (2013.01); **G06F 3/0202**  
(2013.01); **H01H 13/14** (2013.01); **H01H**  
**2231/002** (2013.01); **H01H 2239/022**  
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**ABSTRACT**

An analog input device including at least one mounting panel and a matrix of analog push button assemblies mounted thereon. Each analog push button assembly including an analog pressure sensor including a pressure reception arrangement having an optical sensing sub-arrangement configured to measure an amount of light varied according to a pressure sensed at the pressure reception arrangement and an output terminal for outputting an analog signal corresponding to the amount of light measured, and a plunger element configured to exert the pressure on the pressure reception arrangement. The analog input device may include a multiplexer including an input side coupled to the push button assemblies and an output side; an analog-to-digital converter coupled to the output side of the multiplexer; a processor coupled to the analog-to-digital converter and configured to output a data packet; and a communication interface configured to transmit the data packet to a host computing device.

(21) Appl. No.: **17/894,156**(22) Filed: **Aug. 23, 2022****Related U.S. Application Data**

(63) Continuation of application No. 17/138,728, filed on Dec. 30, 2020, now Pat. No. 11,463,091, which is a continuation-in-part of application No. PCT/SG2019/050512, filed on Oct. 17, 2019.

(60) Provisional application No. 62/779,006, filed on Dec. 13, 2018.

**Publication Classification**(51) **Int. Cl.****H03K 17/969** (2006.01)**H01H 13/83** (2006.01)