

(19) **United States**

(12) **Patent Application Publication**
LEE et al.

(10) **Pub. No.: US 2022/0376683 A1**

(43) **Pub. Date: Nov. 24, 2022**

(54) **VOLTAGE CONTROLLED OSCILLATOR
AND CONTROL METHOD THEREOF, P2P
INTERFACE CIRCUIT, ELECTRONIC
DEVICE**

(30) **Foreign Application Priority Data**

Nov. 5, 2020 (CN) 202011225732.2

Publication Classification

(51) **Int. Cl.**
H03K 3/03 (2006.01)

(52) **U.S. Cl.**
CPC **H03K 3/0322** (2013.01); **H03K 5/00**
(2013.01)

(71) Applicants: **Beijing ESWIN Computing
Technology Co., Ltd.**, Beijing (CN);
**Hefei ESWIN IC Technology Co.,
Ltd.**, Hefei (CN)

(72) Inventors: **Dongmyung LEE**, Beijing (CN);
Donghoon BAEK, Beijing (CN);
Jangjin NAM, Beijing (CN)

(21) Appl. No.: **17/421,688**

(22) PCT Filed: **May 13, 2021**

(86) PCT No.: **PCT/CN2021/093603**

§ 371 (c)(1),

(2) Date: **Jul. 8, 2021**

(57) **ABSTRACT**

This disclosure provides a voltage controlled oscillator and a control method thereof, a P2P interface circuit, an electronic device, and relates to the field of voltage controlled oscillation technology. The voltage controlled oscillator includes N stages of delay units, and the delay unit of each stage includes: a first inverter, a second inverter, a third inverter, and a fourth inverter; both the second inverter and the third inverter are electrically connected to a frequency control terminal, and whether to activate the second inverter and the third inverter is controlled by the frequency control terminal.

