

TITLE OF INVENTION: DEVICE AND METHOD FOR ACQUIRING AND PROCESSING ELECTROENCEPHALOGRAPHY SIGNAL

ABSTRACT

Provided are a device and method for acquiring and processing an electroencephalogram signal. The device includes an analog front-end processing circuit including an analog front-end chip, a frequency division circuit connected to an external clock with a first clock frequency, and a control unit. The analog front-end chip is configured to take a clock signal with the first clock frequency from an external clock as a clock input, acquire an EEG signal to obtain an analog EEG signal, convert the analog EEG signal into a digital EEG signal, and transmit the digital EEG signal to the control unit. The frequency division circuit is configured to perform N-fold frequency division on a clock crystal oscillator of the external clock to obtain a clock signal with a target clock frequency, where N is an even multiple of 2 and $N=f_1/f_g$, where f_1 represents the first clock frequency, and f_g represents the target clock frequency. The control unit is configured to take the clock signal with the target clock frequency obtained after frequency division by the frequency division circuit as a clock input, and perform data processing on the digital EEG signal from the analog front-end chip.

FIG. 2