

**FULL SWING VOLTAGE CONVERSION CIRCUIT AND
OPERATION UNIT, CHIP, HASH BOARD, AND COMPUTING
DEVICE USING SAME**

ABSTRACT

The invention provides a full swing voltage conversion circuit and an operation unit, a chip, a hash board, and a computing device using the same. The full swing voltage conversion circuit comprises: an input terminal for inputting a first level signal; an output terminal for outputting a second level signal; a differential input unit for inverting the first level signal of the input terminal, and outputting a differential input signal; a conversion unit for converting a first level of the differential input signal into the second level signal; and an output driving unit for outputting the second level signal to the output terminal; wherein the full swing voltage conversion circuit further comprises an auxiliary pull-down unit between the input terminal and the conversion unit for receiving a feedback signal from the output driving unit to improve capability of the conversion unit in recognizing the differential input signal, such that the full swing voltage conversion circuit of the invention can convert from inputting a low voltage to outputting a high voltage.

Fig. 3