

(19) United States

(12) Patent Application Publication (10) Pub. No.: US 2024/0214010 A1 Sittler et al.

Jun. 27, 2024 (43) **Pub. Date:**

(54) METHOD FOR DEMODULATING A RF **SIGNAL**

(71) Applicant: STMicroelectronics (Grand Ouest) SAS, Le Mans (FR)

Inventors: Francois Sittler, Thorigne-Fouillard (FR); Patrick Guyard, Noyal sur

Vilaine (FR)

Appl. No.: 18/392,372 (21)

Filed: Dec. 21, 2023 (22)

(30)Foreign Application Priority Data

Dec. 22, 2022 (EP) 22306990.7

Publication Classification

(51) Int. Cl. H04B 1/00 (2006.01)H04B 1/16 (2006.01) (52) U.S. Cl.

CPC H04B 1/0096 (2013.01); H04B 1/0014 (2013.01); H04B 1/1607 (2013.01)

(57)ABSTRACT

The present disclosure relates to a method for demodulating a RF signal comprising the steps of: detecting if an analog to digital converter (ADC) of a Near Zero Intermediate Frequency (NZIF) receiver is in a clipping state; and if yes: determining and storing a first value (RSSI1) representative of the energy of a received signal demodulated by the Near Zero Intermediate Frequency (NZIF) receiver using a first intermediate frequency (IF1); determining and storing a second value (RSSI2) representative of the energy of the received signal demodulated by the Near Zero Intermediate Frequency (NZIF) receiver using a second intermediate frequency (IF2) corresponding to the opposite value of the first intermediate frequency (IF1), selecting the intermediate frequency corresponding to the lowest value of said first and second values.

