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WANG et al.(10) **Pub. No.: US 2023/0231589 A1**(43) **Pub. Date: Jul. 20, 2023**(54) **PATTERN DETECTION BASED PARAMETER ADAPTATION**(52) **U.S. Cl.**CPC **H04B 1/16** (2013.01)(71) Applicant: **Rambus Inc.**, San Jose, CA (US)(72) Inventors: **Nanyan WANG**, Cupertino, CA (US);
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(57)

ABSTRACT(21) Appl. No.: **18/096,661**(22) Filed: **Jan. 13, 2023****Related U.S. Application Data**

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(2006.01)

An integrated circuit that includes a feedback loop to adapt receiver parameters. The feedback loop includes a receiver to sample a signal and produce a sampled signal sequence. The feedback loop also includes a first pattern counter to detect and count occurrences of a first pattern in the sampled signal sequence, and a second pattern counter to detect and count occurrences of a second pattern in the sampled signal sequence. Control circuitry coupled to the receiver adapts a parameter value of the receiver to minimize a difference between a first ratio and a second ratio. The first ratio is a target ratio. The second ratio is between a first counted number of occurrences of the first pattern in the sampled signal sequence and a second counted number of occurrences of the second pattern in the sample signal sequence.

