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| (51) International classification | :H04B 1/16, H04B 1/18, H03F 1/26, H04B 1/10, H03F 3/193 | (71)Name of Applicant : 1)NOIDA INSTITUTE OF ENGINEERING & TECHNOLOGY Address of Applicant :19, KNOWLEDGE PARK-II, INSTITUTIONAL AREA, GREATER NOIDA-201306, GAUTAM BUDDHA NAGAR, UTTAR PRADESH, INDIA Uttar Pradesh India |
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(57) Abstract :

Disclosed herein is an inductor-less low-noise amplification and high-gain wireless receiver system (100) that comprises a signal receiving unit (102) configured to receive a radio frequency signal and provide the received radio frequency signal to internal processing stages. A processing unit (104) controls signal processing and amplification operations. The processing unit (104) includes a data input module (106) receiving the radio frequency signal through a capacitive coupling element, an active impedance matching module (108) performing broadband impedance matching, a transconductance amplification module (110) converting radio frequency voltage signals into proportional current signals, a gain enhancement module (112) increasing amplification efficiency, a noise cancellation module (114) suppressing noise components, and a data signal module (116) combining amplified signals. An output module (118) generates an amplified radio frequency output signal. A sound output unit (120) produces an audible representation, and a user interface (122) displays operational information for monitoring and interaction.

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