

**Abstract:** A CMOS digitally programmable active lossless inductor realization is proposed. The proposed inductor is based on current and voltage followers and uses R-2R ladder to provide digital tuning of the inductance value. The followers support the use of the simulated inductor for applications in few MHz range. Whereas the use of R-2R provide an additional advantage of realizing high inductance value suitable for very low frequency applications. The proposed inductor is used in synthesizing cascadable biquadratic filters. Simulation results are presented.