

Preface

This book studies CMOS continuous-time adaptive equalizers for high-speed serial links. Continuous-time equalizers have been widely used in different data transmission applications such as short- and long-distance copper communications, in printed circuit board transmissions and short-haul optical communications through plastic optical fibers (POF). The equalizer compensates the bandwidth limitation of the communication channel to reach the required transmission speed.

CMOS Continuous-Time Adaptive Equalizers for High-Speed Serial Links first explores the theoretical fundamentals of continuous-time adaptive equalizers. After this, different structures are proposed for the different blocks that constitute it and a complete continuous-time adaptive equalizer is designed. The main objectives are low-voltage supply, low-power consumption, and high-speed operation. Experimental measurements certify the correct operation of the proposed equalization approach. Finally, a cost-effective CMOS receiver which includes the proposed continuous-time adaptive equalizer is designed for 1.25 Gb/s optical communications through 50-m length, 1-mm diameter POF.

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