

Design of Wireless Autonomous Datalogger IC's [

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Monografía

Design of Wireless Autonomous Dataloggers IC's reveals the state of the art in the design of complex dataloggers, with a special focus on low power consumption. The emphasis is on autonomous dataloggers for stand-alone applications with remote reprogrammability. The book starts with a comprehensive introduction on the most important design aspects and trade-offs for miniaturized low-power telemetric dataloggers. After the general introduction follows an in-depth case study of an autonomous CMOS datalogger IC for the registration of in vivo loads on oral implants. After tackling the design of the datalogger on the system level, the design of the different building blocks is elaborated in detail, with emphasis on low power. A clear overview of the operation, the implementation, and the most important design considerations of the building blocks to achieve optimal system performance is given. Design of Wireless Autonomous Dataloggers IC's discusses the design of correlated double sampling amplifiers and sample-and-holds, binary-weighted current steering DACs, successive approximation ADCs and relaxation clock oscillators and can also be used as a manual for the design of these building blocks. Design of Wireless Autonomous Dataloggers IC's covers the complete design flow of low-power miniaturized autonomous dataloggers with a bi-directional wireless link and on-board data processing, while providing detailed insight into the most critical design issues of the different building blocks. It will allow you to design complex dataloggers faster. It is essential reading for analog design engineers and researchers in the field of miniaturized dataloggers and is also suitable as a text for an advanced course on the subject

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