

1. Record Nr.	UNINA9910451938003321
Titolo	High-speed optical transceivers [[electronic resource]] : integrated circuits designs and optical devices techniques // Yuyu Liu, Huazhong Yang, [editors]
Pubbl/distr/stampa	Hackensack, NJ, : World Scientific, c2006
ISBN	1-281-91940-3 9786611919405 981-277-434-3
Descrizione fisica	1 online resource (244 p.)
Collana	Selected topics in electronics and systems ; ; vol. 39
Altri autori (Persone)	LiuYuyu YangHuazhong
Disciplina	621.382/7
Soggetti	Optical communications Integrated circuits - Design and construction Electronic books.
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references.
Nota di contenuto	CONTENTS ; Preface ; Design Considerations for Integrated Modulator Drivers in Silicon Germanium Technology ; 1. Introduction ; 2. Driver Architecture ; 3. Circuit Details ; 4. Tail Current Bias Generation & Distribution ; 5. Simulated Performance ; 6. Experimental Results 7. Conclusions References ; Compact Low-Noise Pulse Generating Lasers with Repetition Rates of 10 to 50 GHz ; 1. Introduction ; 2. Er:Yb:glass ; 3. Challenges - Q-switched mode locking (QML) ; 4. Results ; 5. Conclusion ; References Integrated Wide-Band CMOS Duobinary Transmitter for Optical Communication Systems 1. Introduction ; 2. Duobinary Theory ; 3. System and Circuits ; 4. IC Fabrication ; 5. Tested Results ; 6. Conclusion ; Reference

A 10 Gb/S Equalizer with Integrated Clock and Data Recovery for Optical Communication Systems

1. Introduction ; 2. Circuit design ; 3. Fabrication and packaging ; 4. Measurement results ; 5. Conclusion ; References

Equalizer Architectures for 40-Gb/s Optical Systems Limited by Polarization-Mode Dispersion

1. Introduction ; 2. Polarization-Mode Dispersion (PMD) ; 3. PMD Compensation Methods ; 4. System Model ; 5. Equalizer Architectures ; 6. Simulation Methodology ; 7. Simulation Results ; 8. Conclusions

Sommario/riassunto

This book explores the unique advantages and large inherent transmission capacity of optical fiber communication systems. The long-term and high-risk research challenges of optical transceivers are analyzed with a view to sustaining the seemingly insatiable demand for bandwidth. A broad coverage of topics relating to the design of high-speed optical devices and integrated circuits, oriented to low power, low cost, and small area, is discussed. Written by specialists with many years of research and engineering experience in the field of optical fiber communication, this book is essential for
