

1. Record Nr.	UNINA9910461127303321
Autore	Bertolotti Ivan Cibrario
Titolo	Real-time embedded systems : open-source operating systems perspective // Ivan Cibrario Bertolotti, Gabriele Manduchi
Pubbl/distr/stampa	Boca Raton, Fla. : , : CRC Press, , 2012
ISBN	1-351-83348-0 1-315-21759-7 1-280-12205-6 9786613525918 1-4398-4161-6
Edizione	[1st edition]
Descrizione fisica	1 online resource (522 p.)
Collana	Embedded systems
Altri autori (Persone)	ManduchiGabriele
Disciplina	006.22
Soggetti	Embedded computer systems 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	Front Cover; Foreword; The Authors; Acknowledgments; Dedication; List of Figures; List of Tables; Contents; 1. Introduction; I. Concurrent Programming Concepts; 2. A Case Study: Vision Control; 3. Real-Time Concurrent Programming Principles; 4. Deadlock; 5. Interprocess Communication Based on Shared Variables; 6. Interprocess Communication Based on Message Passing; 7. Interprocess Communication Primitives in POSIX/Linux; 8. Interprocess Communication Primitives in FreeRTOS; 9. Network Communication; 10. Lock and Wait-Free Communication; II. Real-Time Scheduling Analysis 11. Real-Time Scheduling Based on the Cyclic Executive 12. Real-Time, Task-Based Scheduling; 13. Schedulability Analysis Based on Utilization; 14. Schedulability Analysis Based on Response Time Analysis; 15. Task Interactions and Blocking; 16. Self-Suspension and Schedulability Analysis; III. Advanced Topics; 17. Internal Structure of FreeRTOS; 18. Internal Structures and Operating Principles of Linux Real-Time Extensions; 19. OS Abstraction Layer; 20. Control Theory and Digital Signal Processing Primer; Bibliography

## Sommario/riassunto

From the Foreword: "...the presentation of real-time scheduling is probably the best in terms of clarity I have ever read in the professional literature. Easy to understand, which is important for busy professionals keen to acquire (or refresh) new knowledge without being bogged down in a convoluted narrative and an excessive detail overload. The authors managed to largely avoid theoretical-only presentation of the subject, which frequently affects books on operating systems. ... an indispensable [resource] to gain a t

---