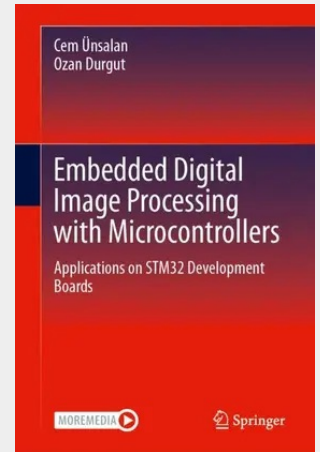


Embedded Digital Image Processing with Microcontrollers

Applications on STM32 Development Boards

This textbook introduces basic and advanced embedded digital image processing methods through practical applications on STMicroelectronics STM32 development boards. This hands-on text covers traditional and neural-network-based digital image processing methods implemented on microcontrollers and is designed for undergraduate courses in microcontroller and embedded digital image processing systems. Following the learning-by-doing approach, the book will enable students to grasp embedded digital image processing concepts through real-world examples, providing them with the design and implementation skills needed for a competitive job market. By using a programming environment that enables students to easily access and modify microcontroller properties, the material enables rapid implementation of the developed system. Students are guided in implementing digital image processing methods that are deployed and tested on microcontrollers throughout the book, with the underlying theory also emphasized. Sample codes are available for download for both readers and instructors. Additionally, this book serves as an excellent reference for practicing engineers and electronics hobbyists.- Teaches the embedded digital image processing system design skills needed for today's job market;- Follows the learning-by-doing approach and provides illustrated examples and projects;- Explores practical applications on STM boards and introduces the TensorFlow Lite Micro platform;- Includes a GitHub repository with code, libraries, and examples.

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112,50 €

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vorbestellbar, Erscheinungstermin ca. Dezember 2026

Artikelnummer: 9783032355010

Medium: Buch

ISBN: 978-3-032-35501-0

Verlag: Springer Nature Switzerland AG

Erscheinungstermin: 25.12.2026

Sprache(n): Englisch

Auflage: Erscheinungsjahr 2026

Produktform: Gebunden

Seiten: 478

Format (B x H): 155 x 235 mm

