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Nota di contenuto	Front Cover; Contents; Preface; Preface to Laser Beam Scanning (1985); Preface to Optical Scanning (1991); Preface to Handbook of Optical and Laser Scanning (2004); Cover Image; Acknowledgments; Editors; Contributors; Chapter 1 - Characterization of Laser Beams: The M2 Model; Chapter 2 - Optical Systems for Laser Scanners; Chapter 3 - Image Quality for Scanning and Digital Imaging Systems; Chapter 4 - Polygonal Scanners: Components, Performance, and Design; Chapter 5 - Motors and Controllers (Drivers) for High-Performance Polygonal Scanners; Chapter 6 - Bearings for Rotary Scanners Chapter 7 - Pre-Objective Polygonal Scanning Chapter 8 - Galvanometric and Resonant Scanners; Chapter 9 - Flexural Pivots for

Oscillatory Scanners; Chapter 10 - Holographic Barcode Scanners: Applications, Performance, and Design; Chapter 11 - Acousto-Optic Scanners and Modulators; Chapter 12 - Electro-Optical Scanners; Chapter 13 - Piezo Scanning; Chapter 14 - Optical Disk Scanning Technology; Chapter 15 - CTP Scanning Systems; Chapter 16 - Synchronous Laser Line Scanners for Undersea Imaging Applications; Back Cover

Sommario/riassunto

"Preface Optical and laser scanning is the controlled deflection of light, visible or invisible. The aim of Handbook of Optical and Laser Scanning is to provide engineers, scientists, managerial technologists, and students with a resource to be used as a reference for understanding the fundamentals of optical scanning technology. This text has evolved from three previous books, Laser Beam Scanning (1985), Optical Scanning (1991), and Handbook of Optical and Laser Scanning (2004). Since their publication, many advances have occurred in optical scanning, requiring updating of previous material and introduction of additional scanning technologies. This new edition also adds a few chapters on scanning applications illustrating the practical use of scanning technology. Optical and laser scanning is a topic that is extremely broad in scope. It encompasses the mechanisms that control the deflection of light, optical systems that work with these mechanisms to perform scanning functions and factors that affect the fidelity of the images generated or obtained from the scanning systems. Each of these subtopics is addressed in this book from a variety of perspectives. A scanning system can be an input or output system or a combination of both. Input systems acquire images in either two or three dimensions. These systems can operate at a fixed wavelength or over a broad spectrum. They can reacquire the original light source by gathering either the specular or diffuse reflection or by fluorescing the image and acquiring the fluoresced light. Output systems direct light to produce images for applications such as marking, visual projection, and hard copy output. Ladar and many inspection systems use the same optical path to both illuminate the scene and acquire the image"--
