

Addressing
Techniques of
**LIQUID
CRYSTAL
DISPLAYS**

Temkar N. Ruckmongathan

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An image is generated by the simultaneous application of scanning and data waveforms to row and column electrodes in flat panel displays. This book is a comprehensive guide to addressing techniques that are based on the nonlinear response of pixels in LCDs. Addressing techniques are introduced with a strong theoretical basis and supported by detailed analysis and examples, as well as information given on drivers to enable the practical implementation of the techniques discussed in the book.

Key features:

- Provides an introduction to liquid crystals and some electro-optic effects based on the properties of liquid crystals.
- Includes recent work on Bit Slice Addressing, Multibit Slice Addressing and Mirco Pulse Width Modulation to drive displays with short response times.
- Compares the various addressing techniques on offer, enabling designers to make an informed choice of an addressing technique for a specific end use.
- Presents a range of addressing techniques that are based on line-by-line addressing, multiline addressing and methods to display greyscales.
- Features an in-depth analysis of hybrid addressing techniques and addressing techniques based on wavelets.
- Covers the latest research on backlight switching to reduce power consumption of an LCD without any compromise on image quality, as well as recent developments on the cross-pair method to display greyscales.

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