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THE DIGITAL I/O HANDBOOK

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Digital I/O **Explained**

Renowned technical author Jon Titus and the President and CEO of Sealevel Systems, Tom O'Hanlan, clearly explain real-world digital input/output implementation from both a hardware and software perspective. Whether you are a practicing engineer or a student, The Digital I/O Handbook will provide helpful insight you will use again and again.

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Chapter Listing

Click on a chapter title link below, to read that chapter. New chapters will be released monthly,
starting with the first chapter in June, 2006.

Chapter 1 – Logic Principles

- Introduction to digital electronics

- Current Sinks and sources

- Buffers and drivers

- Latches

- Negative and positive logic

- All in the family

Chapter 2 – Digital Outputs

- Introduction to output ports

- Simple on/off control

- Using drivers and buffers

- Relay basics

- Relays handle more power

- Optical isolation

- Solid state relays

- Control bits and bytes with software

Chapter 3 – Digital Inputs

- Introduction to input ports

- Basic TTL inputs

- Circuit isolation

- Current sinks and sources

- LED considerations

- Monitor high voltages

- Sense bits with software

- Flags

- Put it all together

- A final note about I/O ports

Chapter 4 – Sensor Interfacing

- Example 1: Thermal switch

- Example 2: Level switch

- Example 3: Hall-effect proximity switch

- Example 4: Photoelectric sensor

- Example 5: Shaft encoder

- Example 6: Output more than 8 bits

Appendix

- Switch and Relay Configurations

Glossary

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