

## Appendix A: Bibliography

- "256K I<sup>2</sup>C<sup>™</sup> CMOS Serial EEPROM." *Parallax*. N.p., n.d. Web. 29 Nov. 2013.  
<<http://www.parallax.com/sites/default/files/downloads/602-00032-24LC256-EEPROM-Datasheet.pdf>>.
- "2A, 28V INPUT, STEP DOWN DC/DC CONVERTER WITH ECO-MODE<sup>™</sup>." *Texas Instruments*. N.p., n.d. Web. 29 Nov. 2013.  
<<http://www.ti.com/lit/ds/slus851c/slus851c.pdf>>.
- "5000-C Details." *The Energy Detective*. N.p., n.d. Web. 01 Dec. 2013.  
<<http://www.theenergydetective.com/5000c>>.
- "A beginner's guide to switching regulators." *DimensionEngineering*. N.p., n.d. Web. 30 Nov. 2013. <<http://www.dimensionengineering.com/info/switching-regulators>>.
- "AVR40DEV Using Analog to Digital Converter (ADC) – PIC Microcontroller Tutorial." *ExtremeElectronics*. N.p., 21 July 2010. Web. 29 Nov. 2013.  
<<http://extremeelectronics.co.in/microchip-pic-tutorials/using-analog-to-digital-converter-%E2%80%93-pic-microcontroller-tutorial/>>.
- Baker, Bonnie. "How delta-sigma ADCs work, Part 1." *Texas Instruments*. Analog Applications Journal, n.d. Web. 29 Nov 2013.  
<<http://www.ti.com/lit/an/slyt423/slyt423.pdf>>.
- Brain, Marshall. "How Oscillators Work." *HowStuffWorks*. Discovery, n.d. Web. 01 Dec. 2013.  
<<http://electronics.howstuffworks.com/oscillator2.htm>>.
- Brain, Marshall. "How Radio Works." *HowStuffWorks*. Discovery, n.d. Web. 01 Dec. 2013.  
<<http://electronics.howstuffworks.com/radio7.htm>>.
- "Chapter 3 - Direct (TRF) Radio Receivers." *Radio Receivers*. Mikro Elektronika, 2003. Web. 01 Dec. 2013. <<http://www.mikroe.com/old/books/rrbook/chapter3/chapter3e.htm>>.
- "Conserve Insight<sup>™</sup>." *Belkin*. Belkin International, 2013. Web. 01 Dec. 2013.  
<<http://www.belkin.com/us/F7C005-Belkin/p/P-F7C005/>>.
- "Documentation." *Linx Technologies*. LINX Technologies, 2012. Web. 01 Dec. 2013.  
<<http://www.linxtechnologies.com/en/support/manuals>>.
- Dowdey, Sarah. "How Carbon Footprints Work." *HowStuffWorks*. Discovery, n.d. Web. 01 Dec. 2013. <<http://science.howstuffworks.com/environmental/green-science/carbon-footprint1.htm>>.
- "Electric Meter." *HowStuffWorks*. N.p., n.d. Web. 20 Oct. 2013.
- Hou, Feng and Yu, Percy "Implementation of a Single-Phase Electronic Watt-Hour Meter Using the MSP430AFE2xx"  
*Texas Instruments Application Report SLAA494* – May 2013

< <http://www.ti.com/lit/an/slaa494/slaa494.pdf>>

Mehta, Dhaval. "•••> Electronics in DAM's way." : *Interfacing Touch Screen with microcontroller*. N.p., 21 Apr. 2011. Web. 30 Nov. 2013.  
<<http://mehtadhaval.blogspot.com/2011/04/touch-screen-interfacing-with.html>>.

Mesganaw, Mekre and Venkat, Kripasagar. "Energy Measurement Results for CTs and Shunt on a TI Designed Meter Using MSP430AFE2xx Devices"  
*Texas Instruments Application Report SLAA536* – July 2012  
< <http://www.ti.com/lit/an/slaa536/slaa536.pdf>>

"NT Series Transceiver Module." *Linx Technologies*. N.p., n.d. Web. 29 Nov. 2013.  
<<https://www.linxtechnologies.com/resources/data-guides/trm-xxx-nt.pdf>>.

"OET -- Radio Frequency Safety." *OET -- Radio Frequency Safety*. Federal Communications Commission, 4 Aug. 2010. Web. 01 Dec. 2013.  
<<http://transition.fcc.gov/oet/rfsafety/background.html>>.

"P3 - Kill A Watt Wireless." *P3 - Kill A Watt Wireless*. P3 International, 2013. Web. 01 Dec. 2013. <<http://www.p3international.com/products/p4200.html>>.

"Propeller™ P8X32A Datasheet Rev 1.4 6/14/2011 Propeller™ P8X32A Datasheet ." *Parallax Propeller*. N.p., n.d. Web. 29 Nov. 2013.  
<[http://www.parallax.com/sites/default/files/downloads/P8X32A-Propeller-Datasheet-v1.4.0\\_0.pdf](http://www.parallax.com/sites/default/files/downloads/P8X32A-Propeller-Datasheet-v1.4.0_0.pdf)>.

"RF Feature Articles." *RF Basics*. Digi International Inc., n.d. Web. 01 Dec. 2013.  
<<http://www.digi.com/technology/rf-articles/rf-basics>>.

Sanchez, Eduardo. "A VGA Display Controller." *Logic Systems Laboratory*. N.p., n.d. Web. 29 Nov. 2013.  
<[http://lslwww.epfl.ch/pages/teaching/cours\\_lsl/ca\\_es/VGA.pdf](http://lslwww.epfl.ch/pages/teaching/cours_lsl/ca_es/VGA.pdf)>.

"State Energy CO2 Emissions | Resources | State and Local | US EPA." *EPA*. Environmental Protection Agency, 12 Sept. 2013. Web. 01 Dec. 2013.  
<[http://epa.gov/statelocalclimate/resources/state\\_energyco2inv.html](http://epa.gov/statelocalclimate/resources/state_energyco2inv.html)>.

"SwitchCraft." *SwitchCraft*. N.p., n.d. Web. 29 Nov. 2013.  
<[http://www.switchcraft.com/Drawings/rasm712px\\_cd.pdf](http://www.switchcraft.com/Drawings/rasm712px_cd.pdf)>.

Tam, Kes. "Current-Transformer Phase-Shift Compensation and Calibration"  
*Texas Instruments Application Report SLAA122* – February 2001  
< <http://www.ti.com/lit/an/slaa122/slaa122.pdf>>

"Ultra-Small, Low-Power, 12-Bit Analog-to-Digital Converter with Internal Reference." *Texas Instruments*. Texas Instruments, n.d. Web. 29 Nov 2013.  
<<http://www.mouser.com/ds/2/405/sbas473c-125660.pdf>>.

- "USB Serial, RS232 to RS485, RS232 to RS422, USB to RS485, USB to RS422, Serial PCI, PCMCIA, Serial Wireless, Serial Bluetooth and serial Ethernet, Serial Adapters. The One Stop Shop for serial data applications.." *Manufacturer of Serial Communication adapters and USB, RS232 and RS485 Converters including Bluetooth and Ethernet serial data devices*. N.p., n.d. Web. 30 Nov. 2013.  
<[http://www.usconverters.com/index.php?main\\_page=page&id=61&chapter=0](http://www.usconverters.com/index.php?main_page=page&id=61&chapter=0)>.
- "Using the I2C Bus." *I2C Tutorial*. Robot Electronics, n.d. Web. 30 Nov. 2013.  
<[http://www.robot-electronics.co.uk/acatalog/I2C\\_Tutorial.html](http://www.robot-electronics.co.uk/acatalog/I2C_Tutorial.html)>.

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