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Telos

IEEE 802.15.4 Module

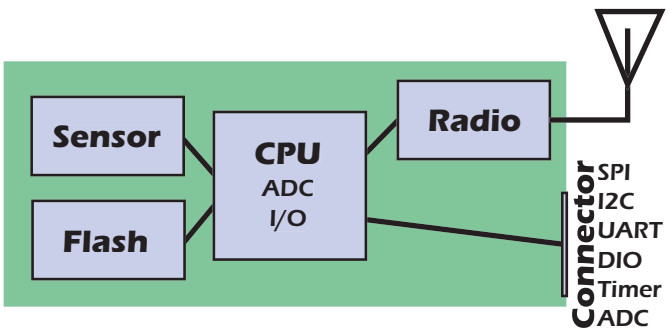
The world's first IEEE 802.15.4 compliant wireless sensor network device for use in low power applications and mesh networks

Telos is the next-generation mote platform for extremely low power, high data-rate, sensor network applications designed with the dual goal of fault tolerance and development ease. The Telos mote boasts the first IEEE 802.15.4 radio and an integrated on-board antenna providing up to 125 meter range--factors that will speed your time-to-market. Toward development ease, Telos provides an easy-to-use USB protocol for programming, debugging and data collection. Telos offers multiple battery configurations--2xAA, 2/3A, custom solutions--to match the different power requirements of development and deployment. With on-board humidity, temperature, and light sensors, Telos is part of a line of modules featuring on-board sensors to increase robustness while decreasing cost and package size.

Designed at the University of California, Berkeley, by TinyOS developers, the Telos platform offers seamless vertical integration between the hardware and the TinyOS operating system. TinyOS is a small, open-source, component-based operating system also developed at UC Berkeley. TinyOS was specifically designed to support the networked sensor regime. By leveraging their intimate knowledge of both the hardware and TinyOS layers, Moteiv can promise the highest levels of support to their customers.

Features

250kbps 2.4GHz IEEE 802.15.4 Chipcon Radio
8MHz TI MSP430 microcontroller
Integrated onboard antenna with 125m range
Integrated Humidity and Temperature Sensor
Ultra low current consumption
ADC and UART operate with MCU off (<3uA current)
Fast wakeup from sleep (<6us)
Hardware link-layer encryption and authentication
2 x AA and 2/3A battery connections
Programming and data collection via USB



Specifications

CPU	
Bus Speed	8 MHz
RAM	2 Kb
Program Space	60 Kb
External Flash	512 Kb
Serial Communications	DIO,SPI,I2C,UART
Current (active w/ Radio on)	19 mA
Current (sleep)	2.4 uA
Voltage	1.8-3.6 V
Radio	
Frequency	2400-2483 MHz
Data rate	250 kbps
Output Power	-25 to 0 dBm
Antenna Type	Inverted-F or SMA Coax
Humidity Sensor	
Humidity Accuracy	3.5% RH
Temperature Accuracy	0.5 ºC
Sampling Rate	90 Hz
Electromechanical	
Battery	2 x AA, 2/3A

Order online at http://www.moteiv.com