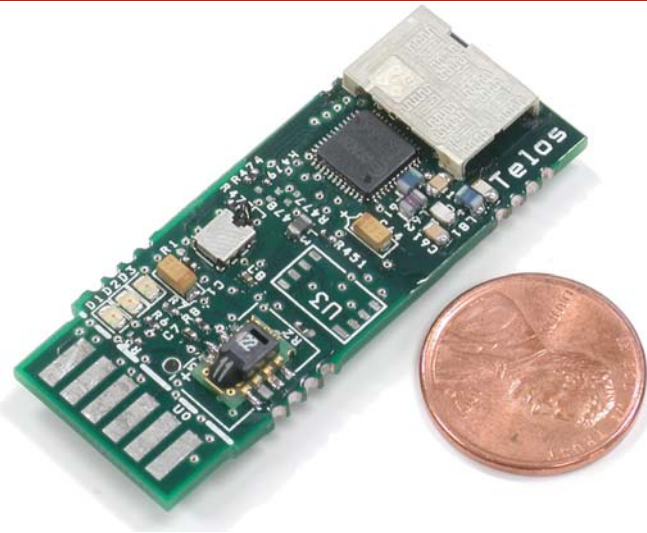




Telos

IEEE 802.15.4 Mote

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



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 802.15.4 radio and an integrated on-board antenna providing up to 50 meter range--factors that will speed your time-to-market and simplify environmentally-sealed packaging. Toward development ease, Telos provides an easy-to-use USB protocol for programming, debugging and data collection. Telos offers multiple battery configurations--AA, 2/3A, and coin cell--to match the different power requirements of development and deployment. With on-board humidity and temperature sensors, Telos is part of a line of motes 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
- 20MHz Motorola HCS08 microcontroller with 4K RAM
- Integrated onboard antenna
- Integrated Humidity and Temperature Sensor
- Low current consumption
- Fast wakeup from sleep (100us)
- Hardware link-layer encryption and authentication
- AA, 2/3A, and coin cell battery connections
- Programming and data collection via USB

Specifications

CPU	
Bus Speed	20 MHz
RAM	4 Kb
Program Space	60 Kb
External Flash	256 Kb
Serial Communications	DIO,SPI,I2C,UART
Current (active w/ Radio on)	19 mA
Current (sleep)	0.7 uA
Voltage	1.8-3.6 V
Radio	
Frequency	2400-2483 MHz
Data rate	250 kbps
Output Power	-25 to 0 dBm
Antenna Gain	+3 dBi
Humidity Sensor	
Humidity Accuracy	3.5% RH
Temperature Accuracy	0.5 °C
Sampling Rate	90 Hz
Electromechanical	
Battery	AA, 2/3A, coin cell

