

MiniTalker® MKIV For Container Security & Sensing Devices

The MiniTalker® is an intelligent wireless mesh network sensor node for use in Shipping Containers, Local and Remote Interrogation, Remote Sensing, Environmental Monitoring, Maintaining a History of Events and Actions, and Access Control; all in Real-Time GMT.

Specifications



Processor: ATmega128, 8MHz RISC; w/64K Memory; plus 256K EEPROM; and Real-Time Clock (GMT).

Radio: 868MHz or 915MHz ISM Band. With whip antenna, range is 200 meters in free air, unobstructed.

External Interfaces: USB; Interrupts; I²C; and Analog signal line to an internal A/D Converter.

External Connection: USB, Sensor I/O Connector, and Alternative External dc Power Plug (see figure below).

Power Requirement: Selection of either external source from 3vdc to 7.5vdc, or internally mounted D Cell Batteries providing 4.5vdc. Battery life can be > 2 years, depending upon the "sleep time" that is User-determined.

Environment: Operating Temperature -20°C to 70°C; Relative Humidity 20% - 80%.

Controls: DC Power Select Switch, Processor Reset Switch, Diagnostic LED Indicators. On-Board integrated Sensors for Temperature and Battery Voltage Level Monitor, External Connection of Multiple I²C-Based Digital Sensors or Analog Sensors and Interrupts.

Embedded software: Each member of the MachineTalker® family of products runs the SMMP® Operating System software with its Application Programming Interface used to configure general operating parameters, including power management profiles, sensor/alarm thresholds, mesh network routing profiles, and radio frequency selection.

Applications: The SMMP® software permits groups of Talkers® to automatically form mesh networks or "Communities" wherein they operate as intelligent peers, each with a pre-programmed purpose. Talkers® can be made to acquire and process sensor data; retain Identity representing its location or purpose; store bulk information like a shipping manifest; share results with or report on status of its Community peers; determine parametric thresholds for alarms; and connect to modems or gateways or web servers as links for global interaction.

