

# GlobalStrap Specifications:

## Applications:

This device can be used as an “electronic padlock”. Users can use this tool for real time monitoring of any (hole? Lock with eyelets? ) locking mechanism. The device monitors the strap integrity, with detection against tamper and cutting events.

## Operating Environment:

- Case is made from a tough Polycarbonate and the inner electronics are environmentally sealed using TPE(Thermoplastic Elastomer), insuring product longevity.
- Operating temperature range is from -40 C to 80 C.
- Expected shelf life is 3 years. Operating lifetime is 1 year.
- Device is asleep, until a strap is inserted, once awake it was join with its associated AMU.

## Compatibility:

GlobalStrap can communicate with any of the GlobalTrak Asset Monitoring Units (AMU). Does it make sense just to copy the RSN data sheet for this?

## Communications:

- Can communicate with any AMU using a star network configuration.
- The ZigBee protocol is used, operating in the 2.4 GHz range.
- Ember’s EM250 System-on-Chip(SoC), incorporates Ember’s radio transceiver and Cambridge Consultants RISC XAP 16-bit processor all on one chip.
- Tx Power is 5dBm, Rx sensitivity is -95dBm.

## Mechanical:

- 2.14” X 3.49” X 1.35”.
- 54mm X 88mm X 34mm.
- Environmentally sealed using TPE (for now it’s an epoxy, eventually a TPE over molding of the PCB, supported in the case and the case will be sonically welded, or snap fit.

Per 2.1093.c, the RF Exposure requirements are met at 20cm. This unit contains one external oscillator at 20 MHz, with all other RF oscillators inherent to the microcontroller used in the design. The EM250 from Ember is the chip used in the design, and all data for this part can be found via Ember's website at [www.ember.com](http://www.ember.com).

PICS:







