



BATTERY ASSISTED PASSIVE TAGS



FEATURES

- Small size
- Read/Write range reliable up to 30 meters
- Ultra low quiescent current for long battery life
- Microcontroller based for easy custom applications
- I²C bus for easy implementation of additional functionality
- 3 Volt operation

Battery Assisted Passive Tags

Alien Technology® long-range, high performance 2450 MHz (microwave) frequency Battery Assisted Passive (BAP) system fills the gap between shorter range passive systems and high-cost active RFID systems. The system includes three tag models for asset tracking and cold chain management applications, with tags optimized for maximum sensitivity and orientation insensitivity. Alien® BAP tags can also be applied to metal and liquid environments.

Alien Technology has developed the long range battery powered backscatter tag with intermediate frequency (IF) channels and the ability to monitor inputs and control outputs even when not in the presence of an RF Field.

Originally designed for government military applications this tag has tremendous range for a backscatter tag. Because it uses the low power backscatter technology, a small battery will provide many years of operation. The tag can be interfaced with any external sensor such as temperature sensors, tamper indicators, shock sensors, etc.

This read/write device has a rich command set allowing for flexibility in memory allocation, I/O allocation, and standalone data logging options.

Application Examples:

- Long range identification
- Vehicle-asset tracking
- Security / access systems
- Supply chain automation
- Cold chain management (Temperature Logging)
- Passive tag data storage for hierarchical asset tracking systems

PRODUCT SPECIFICATIONS

FREQUENCY:

2450 MHz (ISM Band)

IF FREQUENCY: 2 MHz

BIT RATE:

16k bits/second

RANGE:

Up to 30 Meters

MEMORY:

4K bytes non-volatile read/write
(ALB-2482 & ALB-2484)

I/O:

Real time clock & On-board temperature sensor (ALB-2484)

Range -55° C to 125° C

Accuracy +/- 2.0° C

POWER SOURCE:

3 volt 220mA/h lithium battery

OPERATING TEMP:

-25° C to +70° C

STORAGE TEMP:

-40° C to +85° C

MECHANICAL SHOCK:

IEC 68-2-27

VIBRATION: IEC 68-2-6

DIMENSIONS: 8cm (length) x 2.5cm
(width) x 1.5cm (depth)

The BAP tag is NOT an active transmitter (only reflecting the Readers RF energy for communication), so the tag is RF quiet. Since it is not an intentional radiator (and does not require FCC certification), customization of the tag for particular applications can be done quickly.

Optional capabilities are:

- Analog and Digital I/O
- External sensors including temperature and humidity
- Extended memory
- Tamper detection
- Shock and vibration sensing

Alien Technology offers a range of low-cost tags that have been optimized for a variety of applications including asset tracking and cold chain management.

Choose from the following specifications:

ALB-2480 tag

- 12 byte asset tracking ID
- Long range (up to 30 meters)
- Same write range as read
- Low cost microwave tag

ALB-2482 tag

- 12 byte asset tracking ID
- 4K byte non-volatile RAM
- Long range (up to 30 meters)
- Same write range as read
- Low cost microwave tag

ALB-2484 tag

- 12 byte asset tracking ID
- 4K byte non-volatile RAM
- Real Time Clock (RTC)
- Onboard Temperature Sensor
- Long range (up to 30 meters)
- Same write range as read
- Low cost microwave tag

Contact your Alien Technology sales representative for information on selecting the products that are best suited to your industry and application.



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