Advanced Australasian Software
iBUTTON TAGS

Electronic Identification Systems

A Division of Accuweigh Pty Ltd

DESCRIPTION

AASoftware uses iButton tags as just one of the many options available as an **Electronic Identification System**. AASoftware has been integrating iButtons with its Weighing Management Software Packages for many years now.

Whether your site currently uses iButtons, or is considering using them for the first time, iButtons are an economical, cost effective, and prudent choice for Electronic Identification.

If you're new to iButtons, read on.

What is an iButton?

An iButton is a computer chip with a **globally unique address**, factory-lasered at time of manufacture (think of it as a URL for each iButton), enclosed in a 16mm stainless-steel case. iButtons can include read/write memory, real-time clocks, and temperature/humidity data loggers. They deliver or record data wherever needed. All this power and capability make iButtons ideal for a wide range of applications including access control, eCash transactions, asset tracking, and environmental data logging.

The Globally Unique Key - 281,000,000,000,000 Different Combinations

An iButton's 64-bit address provides a simple, secure way of identifying a person or asset. It acts like your personalised "key" to protected information. When you present the correct key to a tag reader, the desired event (like the opening of a lock or recording of data) is enabled. This is why iButtons are perfect for various access control functions like access to buildings or computers, and authorising vehicle or equipment operation.

Low Power Consumption

An iButton reader draws virtually no power in standby mode and less than 2mA during communication - making it ideal for battery-powered devices. Reading an iButton's unique address takes no more than 10ms. A typical iButton lock can operate more than 60,000 openings on a set of four AA batteries.

i

iButton

A Rugged, Long-Term Electronic ID System

iButtons bring unparalleled durability to access control applications. Sit on it, step on it, or drop it in water. There is no need to worry about destroying a key because iButtons can withstand harsh indoor or outdoor environments. The durable iButton is wear-tested to last a minimum of ten years, so you are not constantly replacing flimsy plastic access cards. For added convenience, they easily attach to a key fob, ring, or even a watch.

The unique address uses 8 bits to identify the type of iButton and 48 bits to generate a serial number. That's enough numbers to make 50,000 keys for every person on the planet!

TYPICAL EXAMPLE

690000001C687004

Name: John Doe

Vehicle Rego: 782EMI

Access Level: Driver

Company: Doe's Transport

Mobile: 0412 345 789

**AASOFTWARE DRIVER CONTROL STATION
BUILT FOR ACCUWEIGH PTY LTD**

INTERFACING

Interfacing is simple and low cost. AASoftware typically supplies the iButton tags, tag readers and a software package to store information about the person or asset (vehicle).

Interfacing an iButton to any type of electronics is easy. Information transfers between an iButton and a PC, PDA, a variety of hand-helds, or a microcontroller with a momentary contact at up to 142kbps. Simply touch the iButton to a receptor or other types of mating probes. Data transfer may be via serial, parallel, or USB.

If you wish to develop your own interfacing software, an SDK (software development kit) is also available. Free iButton and other 1-Wire software development kits address different platforms and programming language preferences. Multiple application notes and papers reduce the development burden and help ensure your success.

PLATFORM	PLATFORM	DESCRIPTION
Windows® 32 (XP, 2000, NT, ME)	1-Wire SDK*	Windows programming language-independent library. Supports all 1-Wire adapter types with traditional API* (TMEX) and Windows .NET (OW.NET) interfaces.

*Refer to Application Note 155: 1-Wire Software Resource Guide for an overview of all available APIs