



## FEATURES

Handheld multi-protocol RFID reader/writer in an battery powered, ergonomic package provides your data anytime...anywhere.

Bluetooth wireless communications provides wireless connectivity up to 100 m (300') from host. USB provides tethered support up to 2 m (6').

Automatically connects to designated Bluetooth enabled Microsoft hosts including handheld computers, PDA's, PC's, laptops.

RFID enabled wireless data transfer gives access to data anytime...anywhere. Many standard RFID tags supported including EMS T-Series, LRP, HMS, TI 'Tagit', Philips Icode Sli, Icode1, Gamma, Infineon.

2 multi-color LED indicator lights provide instantly visible debug and operation feedback.

Two rubberized keys initiate operations and can be linked to macros.

Application support tools include C++ and Visual Basic sample code, automatic power saver modes, automatic host communications control via Bluetooth RF wireless communication.

64 Kbytes of onboard memory stores data when out of host communications.

Standard operating modes include Host triggered commands (master-slave) and Handheld triggered C-macro commands with immediate handheld - host data transfer.

Included configuration utility allows host identification, setup and handheld troubleshooting.

Battery charging through available standard two-unit charger.

# Your data anytime...anywhere Element™ Handheld RFID Reader/Writer



The Element Handheld RFID Reader gives companies access to their data anytime...anyplace. With Bluetooth™ wireless connectivity, this compact, lightweight reader/writer is ideal for accessing and storing data on RFID-tagged items. Typical applications include warehouse inventory, package tracking, hospital patient point-of-care functions, event registration, and other mobile data applications.

Bluetooth™ Class 1 communications allow the user more freedom because the host PDA or desktop can be located up to 300 feet away, unlike other handheld readers that are tethered to a host. And EMS has designed a 32K buffer system for the Element to assure data will be preserved for later transmission even if the Bluetooth connection is temporarily lost.

Read and write operations can be triggered from either the host or with the buttons on the Element. LED indicator lights give users instant feedback on reader operation.

The Element provides the smallest, most versatile tool for quickly reading and updating the memory on RFID tags. Small, inexpensive RFID tags can add a "database on board" to any tagged item. Unlike barcodes, RFID tags allow for storing and updating important business data to the tag so that the information is immediately available wherever the tagged item may go.

Power consumption for RFID is much lower than for barcode, so that the battery charge lasts much longer. The Element will give a full 40 hours operation under normal use—far outlasting conventional PDA's and handheld devices.

## SPECIFICATIONS

### Weight With Battery:

131 gm / 4.6 oz

### Dimensions:

3.3cm H x 10.9 cm L x 4.6 cm W  
1.3" H x 4.3" L x 1.8" W

### Operating Temperature Range

0-40 °C / 32 – 104 °F

### Storage Temperature Range

-20- 60 °C / -4-140 °F

### Humidity

5% - 95% Non-condensing

### Battery

1950 mAH Li Ion battery

### Power Consumption @5VDC:

Bluetooth communication mode:  
30 mA typical

Tag read/write: 90 mA

Reads/writes per charge:  
10,000 at 4 bytes (typical)

System standby

<1 mA

### Communication Interfaces

Bluetooth Class I

USB

### Security

Uniquely identified RFID tags mounted on assigned host computers. Configuration utility for host assignment.

### On-Board Data Storage

32 KB Memory

### RF Air Protocols

ISO 15693 (I-code Sli)

ISO 14443 A

LED 1. Red/green

Tag read/write, operation successful, user defined

LED 2. Blue/Red/Green

Bluetooth connection, battery low, user defined

### Compliances

FCC and CE

**RFID AT  
WORK™**

Continued on reverse

Continued on reverse



# Your data anytime...anywhere

## Element™ Handheld RFID Reader/Writer

### SPECIFICATIONS (continued)

*RFID Reader Programming Commands*  
ABxFast. Refer to EMS User's Manual.

#### Connections

5 pin USB.

C-Macro Editor allows 256 byte executable commands to be stored and operated on the handheld. C-Macros are callable from the host application.

#### APPLICATIONS

Hospital point-of-care.

Pharmacy prescription dispensing.

Warehouse inventory and movements.

With RFID tag memory as large as 2000 bytes, the storage of complex information such as patient history, prescription details, or tradeshow registrant data directly to the item or badge is now possible. Care providers, sales personnel and warehouse managers can rest easy that the data they are looking at is 100% correct for that person or item.

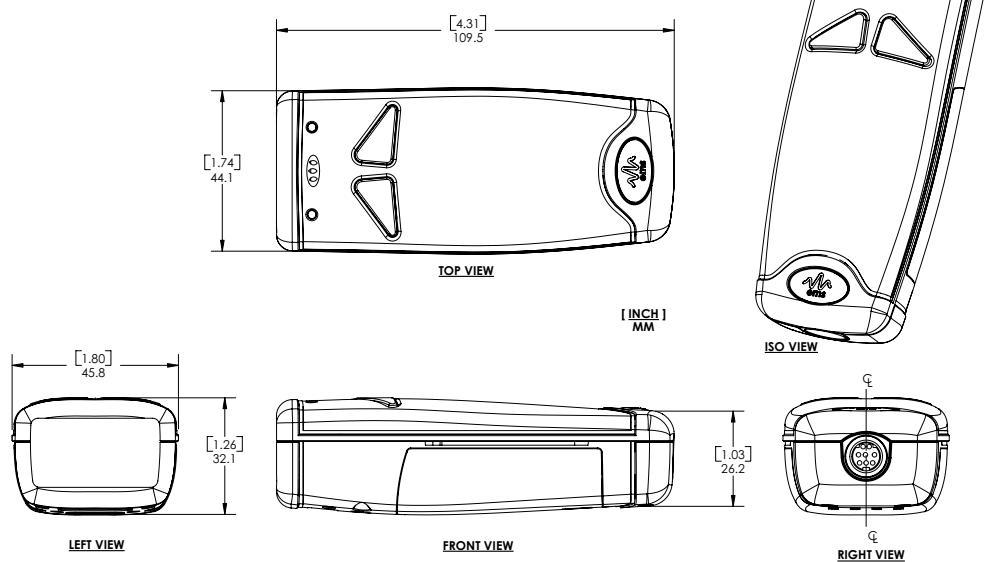
Unlike many other RFID readers, the read/write envelope of the Element is carefully controlled so that only the nearest tag will be read, eliminating any possibility of reading more distant tags at random.

Tag write operations are robust and can be performed as quickly as read commands. Visible LED indicators show when a command (such as a read or write command) is successful.

Two rubberized buttons can be assigned macros to allow the user to initiate a wide range of operations from the handheld. C-Macro™ software commands provide the integrator with easy-to-use command strings up to 256 bytes in length that can be initiated from either host or handheld device. Error checking routines assure the user that a function has occurred properly. And error data is sent back to the host as well as providing visible LED indication on the unit.

The Element operates at the universally accepted ISM Instrument frequency of 13.56 MHz, so it requires no customer FCC licensing and is approved and safe to use in all commercial and industrial environments, world-wide.

#### MECHANICAL SPECIFICATIONS



**RFID AT  
WORK™**