

## AIT 101 - What is AIT?

### Linear Bar Code

The vertical black lines and white spaces printed on an item, label, or document. Linear bar codes normally store 17-20 alphanumeric characters and are used in retail stores to identify items that can be referenced to price and other inventory data. Bar code read error rate is extremely low (1 in 3.4 million).



### CMB - Contact Memory Button

A compact device the size of a watch battery, a contact memory button is something like a floppy disk in a can. CMBs cost 600 times more than bar codes but can store up to 8 MB of information, and will survive most types of environmental damage. Contact buttons are especially useful in applications where space is limited and access to current data is critical.



### 2D Symbol

The inkblot on your CAC card is an example. 2D symbols carry 100 times (about 1500 characters) more data than a linear bar code and are readable even when part of it has been damaged. The error rate for the 2D symbol is 1 in 7.1 million reads.



### RFID - Active Radio Frequency ID

RFID can remotely identify, categorize, and locate materiel automatically (without human intervention). When used in conjunction with hand-held interrogators, RFID tags provide “in the box” visibility. Data is digitally stored on RFID tags (radio transceivers with memory units). Data capacity of the tag is up to 128 Kilobytes and information can be retrieved from distances of up to 300 feet away using electronic interrogators to identify tag location and relay the data via wired or wireless means. Infrastructure is expensive to install and maintain.



### **OMC - Optical Memory Card**

Uses the same basic technology as a CD-ROM. The OMC is the size of a credit card, can store up to 2.4 MB of useable data, and is disposable. It uses WORM (Write Once Read Many) technology. Because the device cannot be erased, this feature provides a permanent audit trail for recorded data. It withstands harsh environments and is relatively inexpensive.



### **RFID - Passive Radio Frequency ID**

This tag differs from active tags by requiring external activation from an RF field which generates sufficient power to transmit a return signal. This capability is far less expensive than the active tag but has a short read range and data capacity is very small.

