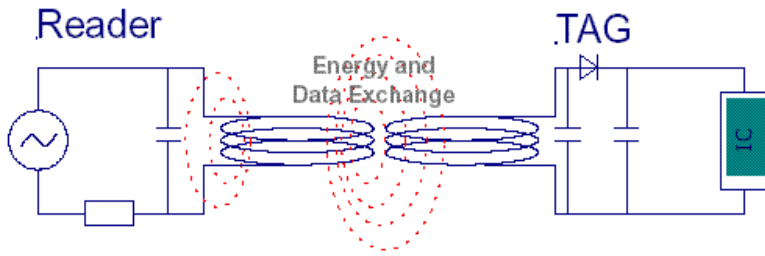


Radio Frequency Identification. RFID is often discussed in connection with the surveillance or tracking of goods, where it is seen as a valuable alternative to bar code systems, but its uses are almost unlimited. The basic concept of RFID is simple. RFID systems consist of a tag or transponder, a reader, and a computer to process the data from the tag and to handle the protocol when many tags must be identified at the same time.

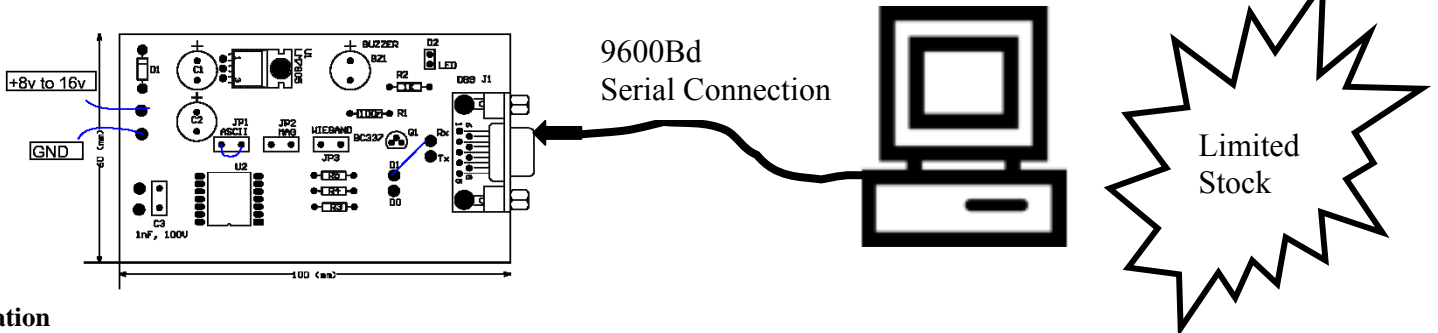


An RFID System typically has the following components:

- Transponder (or Tag)
- Reader/Writer (Interrogator) • Antenna or Coil
- Host computer to collect and process the tag/transponder data

Purpose of Adilam Technologies RFID Starter Kit

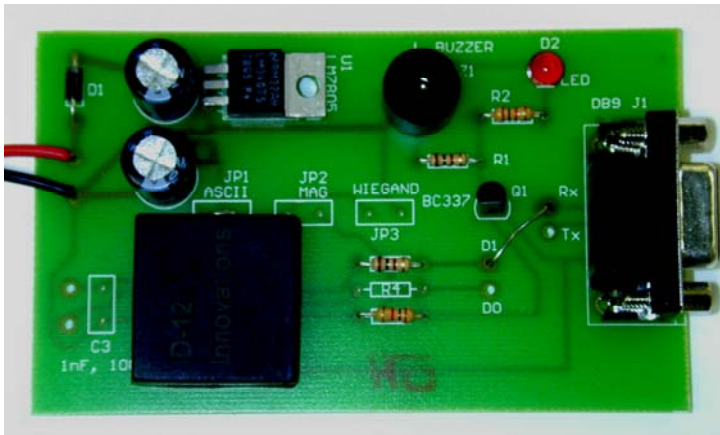
The purpose of this kit is to demonstrate “RFID In Action” using Sokymat RFID tags and an ID12 Reader Module. The Starter kit is offered as very low cost RFID reader system, an alternative to those costing hundreds even thousands of dollars.



Operation

The RFID reader PCB is supplied with 8v to 16v and a DB9 serial cable is connected to the serial port of a PC (not supplied)

ID12 reader module will continuously supply 125KHz RF energy to power an RFID tag IC, when a tag is within 10 to 25mm of the ID12 module (read range). Once the tag is powered up, it works as sophisticated radio transmitter and receiver that sends encoded data to the reader by damping the incoming radio frequency power field. The reader acknowledges and logs the signal by decoding and demodulating the signal (like AM radio demodulation) sent by the tag IC. The reader then sends the process data via its UART (serial port).



Example of Sokymat RFID tags (Some styles not available)

What Serial Data is sent when a tag is detected?

When the tag is detected by the ID12 Module it will send 16 bytes of data to the serial port of the PC at 9600 Baud, N, 8,1

02 (1byte)	10 ASCII Hex Data Characters (5bytes)	2 ASCII char's Checksum (1byte)	CR (1byte)	LF (1byte)	03 (1byte)
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How can I view this data? What does it look like?

Using Hyper-terminal set to Com1 or 2 at 9600 baud, N, 8, 1 (no flow control) the data will be display on the Hyper-terminal screen

☺ 041A21EE34E5 E5 = Checksum ☺ = 02 ASCII ♥ = 03 ASCII

Additional Information

The complete User Manual, Visual Basic software and all relevant documentation is available on the [Evaluation Kits FAQ](#) page.

Adilam Technologies supplies a range RFID components:

- Complete RFID transponders and tags from **Sokymat Identification**
- Reader IC's and modules from **Philips Semiconductors, Sokymat Identification** and Rafronics
- Complete RFID reader solutions from **Global Identification** (a sister company of Sokymat ID)