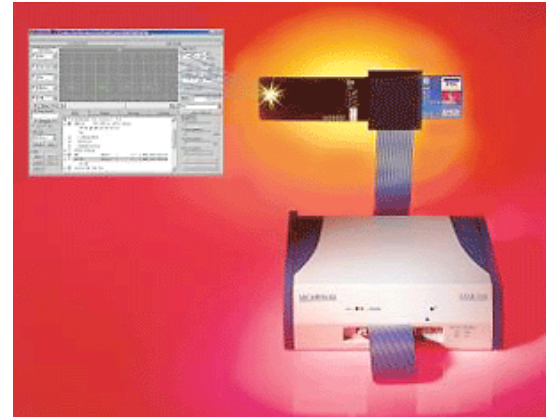


# STAR-3150

## Smart Card Analyzer

- **Smart card emulator.**
- **Protocol analyzer.**
- **MicroSmart™ technology.**

**Complete and ideal test tool, the STAR3150 combines two products :**



### Smart card simulation

Used to test terminal protocols and applications, or during the design of the smart card, the STAR 3150 allows the simulation of an asynchronous smart card through a rich set of APIs. You can develop and test your application (protocol T=0 or T=1) even without a smart card available as well as a variety of configurations, at any clock speed and any baudrate with the embedded **MicroSmart** technology. The STAR 3150 can be tailored according to your needs to test the terminal functionality with different configurations : FI/DI factor, guard time adjustment, direct or inverse convention.

### Protocol analyzer

The STAR 3150 traps all transitions on all signals between the ICC and the terminal, and is therefore a perfect tool for **protocol analysis**. With a **resolution of 50 ns**, and an **unlimited** trace depth, you can observe the finest glitch on any contact of the ICC. Moreover, you will capture start bit, end of character and parity errors. The direction of the transaction (ICC to IFD or IFD to ICC) is automatically detected. Clock and Vcc measurement, capture of ATR, and PPS are other features of the powerful STAR 3150. You can find and fix quickly any error in the protocol or the application.

The STAR 3150 smart card emulator and protocol analyzer functions may be used **simultaneously**.

As the other STAR family products, the STAR 3150 is an open system. TCP/IP communication offers high-speed transfer of data between a host and the STAR 3150.

Multiple applications can be embedded in the STAR. These applications can be developed either in high level language, on a standard C compiler/debugger on PC, or in embedded environment if real time is needed. Multiple transmission formats are implemented for easy file and data exchange.

### Support

As with any Micropross product, you benefit from our **hot line** and **free software update** for one year.

Note : All specifications are subject to change without notice



Tricom Card Technologies, Inc.,  
2340 Sepulveda Blvd., Suite E  
Torrance, CA 90501 U.S.A.

<http://tricomcard.com>  
sales@tricomcard.com  
Phone : 310-784-0585, Fax : 310-891-0938

## Logic and protocol analyzer

Signal capture on all contacts (precision 50 ns).

### MicroSmart™ technology:

- Runs with clock up to 20 MHz .
- Setting of Fi and Di factors
- ETU counter
- Serialization of data with utmost respect to the standards, even in case of clock frequency shifts.
- Automatic baudrate
- Character serialization up to 1Mbps

**Captures other events:** parity error, ETU change, clock detection, start bit, completion of character.

Unlimited capture depth.

Immediate sense of the transaction direction (ICC to IFD or IFD to ICC).

Clock frequency measure (1 to 20 MHz, precision 0,1 %).

Vcc measure (2 to 6.5 V, precision 0,1 V).

Programmable Trigger OUT condition to trigger other measurement instruments.

Trace can be triggered on Trigger IN input.

## ICC emulator

Send and receive up to 400 kbs

Protocol T=0, T=1, or out of standard

Programmable FI / DI

Programmable guardtime, with a 1 clock precision (0 to 65000 ETU)

Transmit and receive error generation (protocol and application): parity, guard times, ETU, T=1 blocks, APDU

Programmable number of character repetitions to the terminal (in case of error)

ETU counter available

## Probe

Single side gold contacts

Test points for oscilloscope

Virtually no interference

Status Leds: Vcc and Card detected.

## Miscellaneous

High logic level on I/O corresponds to the Vcc voltage applied to the card.

Over current protection on all pins.

4 input/1 output available on DB9 female connector, plus power supply available (+5V,+12V,-12V - 85mA)

TTL Trigger In and Out (BNC) for external instrumentation.

Status LEDs on front panel.

### Two serial ports:

Up to 115200 bps

**Ethernet port** (10 baseT - RJ45) for TCP/IP: provides standard sockets interface and FTP client.

### USB port 1.1

512 kB of User **Flash memory**: Multiple applications can be homed in this area

**RAM** : 64 MB SDRAM

Trace buffer of 4 000 000 events. Events can be downloaded in real-time to STARSCOPE for further analyze.

**User EEPROM**: 128 words (16 bits): nonvolatile storage convenient for remote inventory, configuration parameters

Power On LED, User defined bicolor LED

Power supply: 11 to 15v DC, 750 mA max.

Dimensions (W x L x H): 156 mm x 170 mm x 60 mm

Weight: 750g

Free one-year warranty, software update and technical support.

Supplied with: probes for smart cards & GSM,

Note : All specifications are subject to change without notice



Tricom Card Technologies, Inc.,  
2340 Sepulveda Blvd., Suite E  
Torrance, CA 90501 U.S.A.

<http://tricomcard.com>  
sales@tricomcard.com  
Phone : 310-784-0585, Fax : 310-891-0938

STARSCOPE software package, power supply, serial cable, application examples with sources, communication DLL, CardSimulator OCX, documentation.

Note : All specifications are subject to change without notice



Tricom Card Technologies, Inc.,  
2340 Sepulveda Blvd., Suite E  
Torrance, CA 90501 U.S.A.

<http://tricomcard.com>  
sales@tricomcard.com  
Phone : 310-784-0585, Fax : 310-891-0938